VALUE ASSESSMENT FOR INDUSTRIAL HERITAGE IN ZONGULDAK

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ABSTRACT

VALUE ASSESSMENT FOR INDUSTRIAL HERITAGE IN ZONGULDAK

Kılınç, Ayşem
M.S. in Restoration, Department of Architecture
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The aim of this thesis is to develop a value assessment method for industrial heritage in Zonguldak, one of the symbolic industrial cities in Turkey where mining has been the leading force since the discovery of hard coal in the mid-19th century. Values to decide what to conserve and why are searched during this process under the light of discussions on industrial heritage and values of the architectural conservation. Focusing on this aim, this study is structured in four parts as the survey on industrialization and industrial heritage, review and discussion of value types, research on Zonguldak, and implementation of value assessment process for the selected study area with the proposed value types.

To conclude, value assessment process is a vital step in conservation of cultural heritage. For the industrial heritage, a relatively recent concept in the conservation discipline, existing value types need to be re-assessed. This thesis performs an exemplification of value assessment for industrial heritage over a selected study area in the Zonguldak coalfield and proposes possible decisions under the light of this valuation.

Keywords: Industrialization, Industrial Heritage, Value Assessment, Zonguldak

ÖZ

ZONGULDAK'TAKİ ENDÜSTRİ MİRASININ DEĞERLENDİRİLMESİ

Kılınç, Ayşem
Yüksek Lisans, Restorasyon, Mimarlık Bölümü
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Bu tezin amacı, taşkömürünün 19. yüzyılın ortalarındaki keşfiyle birlikte Türkiye'nin sembolik sanayi kentlerinden biri haline gelen Zonguldak'taki endüstri mirası için bir değerlendirme yöntemi geliştirmektir. Koruma sürecinde neyin korunacağına ve neden korunacağına karar verilmesine yarayan değerler, endüstri mirası kavramı ve mimari koruma alanında kullanılan değer türleri tartışılarak araştırılmıştır. Bu amaç çerçevesinde, tez dört bölümde yapılandırılmıştır: endüstrileşme ve endüstri mirası kavramı üzerine yapılan kaynak araştırması, değer türlerinin gözden geçirilmesi ve tartışılması, Zonguldak'ın araştırılması ve seçilen çalışma alanı için belirlenen değerler kullanılarak değerlendirme sürecinin uygulanması.

Sonuç olarak, değerlendirme süreci kültür mirasının korunmasındaki en önemli aşamalardan biridir. Koruma alanına görece yakın zamanda girmiş olan endüstri mirası için mevcut değerler tekrar gözden geçirilmelidir. Bu tez, endüstri mirası için gerçekleştirilecek değerlendirme sürecini Zonguldak'ta seçilen çalışma alanı üzerinde örnekleyerek bu değerlendirmenin ışığında olası kararları önermektedir.

Anahtar Kelimeler: Endüstrileşme, Endüstri Mirası, Değerlendirme, Zonguldak

To my parents

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CHAPTER 1

INTRODUCTION

Industrial revolution is one of the turning points in the history of humankind that transformed both physical and social structure; and its remains are symbols of this era when the society, economy, politics and urban settlements evolved in a different way. The change in architectural environment showed itself with the emergence of new building types. In addition to monumental buildings and civil architecture that had been around for centuries, single industrial structures of different scales and complexes that were formed by these became a part of urban settlements. Industrial structures and complexes include "buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education".[1]

Spatial growth of cities and urbanization of the population gained speed with the introduction of industry and technological changes.[2] Settled areas and consumption grew in time and existing industries could not meet the demand; therefore, production facilities started to move out of the cities for larger spaces. Although some of the industrial lands found acceptance within the urban and natural landscapes, most of the time remaining industrial structures and complexes in the

[1] TICCIH, 2003, The Nizhny Tagil Charter for the Industrial Heritage, Moscow. This charter is prepared by The International Committee for the Conservation of the Industrial Heritage, TICCIH which is the world organization representing industrial heritage and is special advisor to ICOMOS on the subject. (*www.ticcih.org*, accessed on November 12, 2008)

[2] Hatt, P. K., Reiss, A. J., 2002, "Kentsel Yerleşimlerin Tarihi", *20. Yüzyıl Kenti*, ed. Bülent Duru, Ayten Alkan, İmge Kitabevi, Ankara, p.33

city centers were seen as "visually contaminated environments".[3] Another significant reason has been the high monetary value of these lands, so transformation of industrial lots have been introduced immediately under the names like "regeneration", "revitalization", or "urban renewal".

The loss of industrial structures and spaces created awareness in public, especially among the previous owners, namely employees of factories. The discussions on conservation of industrial edifices and their evaluation as cultural assets was triggered by 1950s. The term "industrial archaeology" was used for the first time by Michael Rix in 1955 and defined again by Rix in 1967 as "recording, preserving in selected cases and interpreting the sites and structures of early industrial activity, particularly the monuments of the Industrial Revolution".[4] Starting from single buildings, the concept evolved with introduction of industrial elements, sites and landscapes. Raistrick, Buchanan, Palmer and Neaverson are among the significant academicians that developed definitions, searched history of the concept, and introduced principles for survey.[5] With the rising interest in subject, international organizations such as Council of Europe, UNESCO and ICOMOS started to consider industrial heritage as a part of cultural heritage and legalized in official documents. In addition, non-governmental organizations were founded in international, national and local scales; The International Committee for the Conservation of the Industrial Heritage, TICCIH is the most important world organization that represents industrial heritage and it is the special advisor to ICOMOS on the subject.[6]

In the national scale, industrialization in Ottoman lands started in the 18th century[7], especially in port cities like İstanbul, İzmir, Thessaloniki[8], and efforts for

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[3] Urry, J., 1999, *Mekânları tüketmek*, Ayrıntı Yayınları, İstanbul, pp.256-257
[4] Raistrick, Arthur, 1986, *Industrial Archaeology: An Historical Survey*, Paladin Grafton Books, London, pp.2-3
[5] Raistrick, Arthur, 1986, *Industrial Archaeology: An Historical Survey*, Paladin Grafton Books, London; Buchanan, Robert Angus, 1972, *Industrial archaeology in the Britain*, Harmondsworth, Penguin; Palmer, Marilyn and Neaverson, Peter, 1998, *Industrial archaeology: principles and practice*, Routledge, New York.
[6] TICCIH Official website, *www.ticcih.org*, accessed on November 12, 2008; refer to Chapter 2 for further information on the subject.
[7] Genç, Mehmet, 1999, "XVIII. Yüzyılda Osmanlı Sanayiinde Gelişmeler ve Devletin Rolü", *Osmanlı*, ed. G. Eren, Volume: 3, Yeni Türkiye, Ankara, p.264
[8] Keyder, Çağlar, 1999, "Osmanlı İmparatorluğu'nda XVIII. Ve XIX. Yüzyıllarda İmalat Sanayii", *Osmanlı*, ed. G. Eren, Yeni Türkiye, Ankara, Volume: 3, p.272

establishment of industrial facilities continued for a long period of time. However, they could not compete with European products. Industrialization attempts of Ottomans failed due to many reasons such as lack of infrastructural investments, search for raw material or energy sources, transportation and communication facilities; as well as limited management experience and uneducated workforce. The organized industrial attack within Turkish borders was initiated as a part of modernization project of Turkish Republic. The financial dependency on foreign countries and agricultural production was aimed to be broken by focusing on national industry. *İzmir İktisat Kongresi* (İzmir Economic Congress), *Teşvik-i Sanayi Kanunu* (the Law for Encouragement of Industry), statism principle of the government and five-year industrialization plans were steps leading to an industrialized country.[9] Until 1950s, all of the foreign companies were bought, existing facilities and local production was encouraged, and furthermore new industrial complexes were founded around the country. These new complexes were not only located in big cities as before. Industrial settlements were created all of which are specialized in a different kind of production. Ereğli, Karabük, İskenderun, Kayseri, Zonguldak, Nazilli, and Eskişehir can be listed among these symbolic cities where heavy industry, mining, mechanics or textile was the subject of production. Industrialization was also used as a tool for introducing the "modern culture" to towns of Anatolia; it did not only bring new building types into the settlements but also contemporary daily routines, art and sports facilities.[10]

Zonguldak is one of these symbolic industrial cities in Turkey where hard coal mining has been the leading force since the foundation of Turkish Republic. Discovery of coal can be dated back to 1820s but systematic extraction activity started around 1850s.[11] Coal was the main energy source for those years and Zonguldak –as the only local hard coal quarry– has a significant importance for Ottoman State. Problems of industrial production for the 19th and early 20th centuries mentioned in the paragraph above were also valid for coal mines; problems related to

[9] İnan, Afet, 1972, *Türkiye Cumhuriyeti'nin ikinci sanayi planı*, Türk Tarih Kurumu, Ankara, pp.5-18; refer to Chapter 2 for further information,
[10] İmamoğlu, Bilge, 2009, "Seyfi Arkan ve Kömür İşçileri için Konut: Zonguldak; Üzülmez ve Kozlu", *Fabrika'da Barınmak*, ed. Ali Cengizkan, Arkadaş Yayınevi, Ankara, p.133
[11] Quataert, Donald, 2006, *Miners and the State in the Ottoman Empire: the Zonguldak coalfield, 1822-1920*, Berghahn Books, New York, p.1

administration, technology or transportation prevented full-capacity use of mines.[12] After the foundation of the Republic, projects and plans on national energy sources gained speed, and as a result, coal production in Zonguldak showed a significant increase for many decades. Although the administrative body changed due to short-term rises and falls in the production capacity (*İktisat Vekaleti, Türkiye İş Bankası, Ereğli Kömür İşletmeleri, Türkiye Kömür İşletmeleri*, and *Türkiye Taşkömürü Kurumu*); [13] it can be stated that the long-term increase in the coal production continued until mid-1970s.[14] The changing global financial systems and entrance of free market economy showed itself in privatization and shrinkage of governmental investments. 1990s were marked with shutting down of mines and compulsory retirement of many workers.[15] This rapid transformation and decline of Zonguldak coalfield can also be related to the entrance of new energy sources like hydroelectric power, natural gas, wind, geothermal etc. The fall of Zonguldak, both with its urban and social components, has been witnessed in local and national level with production decrease, closing down of mines and factories, and migration out of the coalfield. Today, abandoned industrial sites are seen as old, rusty and "ugly" by some of the local community and these sites are going through a rapid loss. Structures and complexes that have been the source of life and identity of the settlement should be re-evaluated because of being documents of a period, their places in history, social life, national politics, memory of many generations; as well as their economic potential to be reused. Their conservation is a must for this unique coalfield and settlement within the borders of Turkey.

1.1 Aim and scope of the study

The rapid and constant loss of the industrial structures (both with its physical and social elements) arouses interest on Zonguldak and conservation of its built heritage. The accepted conservation process of immovable cultural heritage basically starts with documentation, continues with analysis and assessment, and concludes with

[12] Zaman, Ekrem Murat, 2004, *Zonguldak Kömür Havzası'nın İki Yüzyılı*, TMMOB Maden Mühendisleri Odası, Ankara, pp.14-35; Quataert, 206, ibid., pp.27-45
[13] Zaman, 2004, ibid., pp.64-145
[14] Arıoğlu, Ergin and Yılmaz, Ali Osman, 2002, *Zonguldak Kömür Havzası Gerçeği*, TMMOB Maden Mühendisleri Odası Zonguldak Şubesi, Zonguldak
[15] Arıoğlu and Yılmaz, 2002, ibid.

development of related strategies and interventions. Mason proposed a chart of this process and named these three main steps as "identification and description", "assessment and analysis", and "response."[16] The "**cultural significance/value assessment**" emphasized in this chart is located in the second step and it is the scientific basis to decide what to conserve and why through physical, economic, social, cultural aspects of conservation.

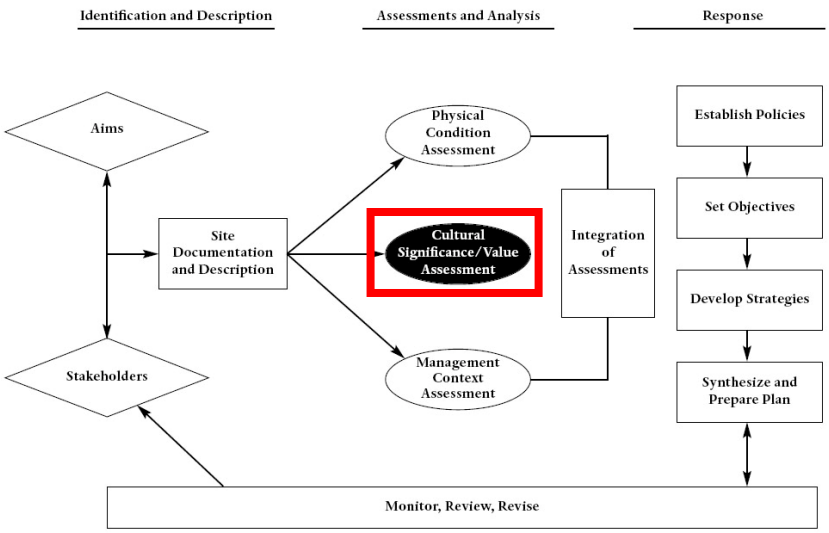

Figure 1.1 Planning process proposed by Randall Mason (Mason, 2002, p.6)

Zonguldak is chosen as the case study of this thesis for its significant place in the industrialization and modernization of Turkish Republic. Zonguldak can be interpreted as a national project where a unique mining city was formed with its physical and social infrastructure. Diversity of the built environment (different kinds of production facilities, both underground and aboveground; administrative buildings, transportation network including railway, roads, conveyors and port; service buildings such as housing, recreational areas, schools, club houses etc.) as well as communal and intellectual life of the city are the major criteria for selecting Zonguldak as the case study. There are sub-districts in the coalfield which are integrating pieces of the whole coal production process. Six of these districts are used through the comprehensive survey for being the centers of urban and industrial

[16] Mason, Randall, 2002, "Assessing values in conservation planning: methodological issues and choices", *Assessing Values of Cultural Heritage*, ed. M. De la Torre, The Getty Conservation Institute, Los Angeles, p.6

development in Zonguldak. These are Yayla neighborhood, the backyard of Zonguldak port, Üzülmez district, Karadon district, Kozlu-İncirharmanı district, and Çatalağzı district. A narrower study area is selected in the end to develop a method and test the value assessment process based on the Zonguldak case. This study area is a union of Yayla neighborhood and the backyard of Zonguldak port; two districts located next to each other and stand out with characteristics listed below:

- A remarkable zone where industrial structures can be exemplified. They contain structures belonging to industrial culture in different scales –ranging from object to site-, types and uses.
- Located in the city center within commercial, administrative, industrial and residential areas.
- Comprising both natural and manmade elements like sea, stream, green areas, as well as built environment.

This thesis aims developing a value assessment proposal for industrial structures in Zonguldak, in order to decide which values of these structures and/or complexes can be used as criteria for the conservation of this heritage type.

1.2 Sources and methodology

The literature survey of this thesis starts with theoretical study on the concept of industrialization and industrial heritage. First of all, to develop an idea on formation of industrial environment and culture, industrialization history of Europe, Ottoman State and Turkish Republic were researched through written documents (books, articles and thesis) as well as online sources. Then, emergence of the concept of industrial heritage, its definition and scope; in addition to documentation for cultural as well as industrial assets were explored thoroughly from publications of researchers, international documents, and official websites of related organizations.

The study on value assessment covers valuation process, contemporary approaches and value typologies, values in legal documents in Turkey as well as values in international documents on industrial heritage. The major sources selected for this discussion are,

- Riegl, *The Modern Cult of Monuments: Its Character and Its Origin*, 1902,
- English Heritage, *Sustaining the Historic Environment: New Perspectives on the Future*, 1997,

- Feilden and Jokilehto, *Management Guidelines for World Cultural Heritage Sites*, 1998,
- Australia Icomos, *Burra Charter*, 1998,
- Mason, "Assessing Values in Conservation Planning: methodological issues and choices*", Assessing the Values of Cultural Heritage*, 2002,
- Madran & Özgönül, *Kültürel ve Doğal Değerlerin Korunması*, 2005,
- Köksal, *İstanbul'daki Endüstri Mirası için Koruma ve Yeniden Kullanım Önerileri*, 2005.

Except the article of Riegl that is published in the first decade of the 20th century, the recent sources of 1990s and 2000s are selected because of the ever-changing definition and scope of cultural heritage. Riegl is discussed through the thesis for being the first written source on valuation of cultural objects and for being taken as a basis by all value researchers. Another common point of selected publications is their authors/organizations who are dealing with architectural conservation; which helps to conduct this analysis from a similar perspective. In addition to these sources, values in Turkish legal documents (*The Turkish Law No.2863 on the Preservation of Cultural and Natural Assets*, *Regulation regarding Inventory and Registration of Immovable Cultural and Natural Assets*, and *Principle Decision No.660 Regarding the Grouping, Maintenance and Conservation of Immovable Cultural Assets*) are also analyzed to see the current situation of the valuation system in Turkey. For a more specific approach, international documents on industrial heritage (*Recommendation No: R (90) 20 on the Protection and Conservation of the Industrial, Technical and Civil Engineering Heritage in Europe*, and *The Nizhny Tagil Charter for the Industrial Heritage*) are investigated to determine which value types are associated with industrial heritage. All of the similar and different value types listed in these documents are brought together and grouped into three due to their origins as **intrinsic values** (originating from the cultural asset itself), **extrinsic values** (attributed to cultural asset by people), and **economic values** (related to usage, economic potentials of the monument, and monetary values). Value types within each group are defined and exemplified where possible as the final step.

The literature survey on Zonguldak covers the history and current situation of the coalfield. Up-to-date general information on the city is easily obtained through governmental websites. However, the part on historical background and industrialization of Zonguldak is completed with the help of a limited number of

publications on the subject. Donald Quataert's and Ekrem Murat Zaman's books are repetitive sources for this chapter.[17] Major sources for visual documents are the archives of Türkiye Taşkömürü Kurumu, Zonguldak Municipality and Chamber of Architects Zonguldak Branch. The site survey was conducted in two phases. The first phase is a short field trip to obtain a general idea on the characteristics of the area and to collect necessary base maps to be used in the second site survey. The six zones mentioned above are chosen for future comprehensive study. The second phase is the collection of data from the industrial edifices in these six zones with record forms developed through previous literature survey.

As the final step, theoretical study on value types and site survey on industrial structures in Zonguldak is reviewed. The values listed in the third chapter are re-assessed and defined according to the background and the current state of the coalfield. Structures and sites in the limited study area (Yayla neighborhood and backyard of the port) are evaluated using charts. A conclusion specific to the study area as well as a general conclusion on the subject is presented in the end.

1.3 Structure of the thesis

This study is structured in six chapters, of which this introduction chapter is the first where aim and scope as well as sources and methodology of the study are presented.

The second chapter covers concepts of industrialization and industrial heritage. In the beginning, Industrial Revolution and industrialization process in Europe, which is the origin of the progress, is summarized. Then, industrialization in Ottoman State and Republic of Turkey is given in detail, starting from the 18th century until today, so as to indicate the position of the Turkish industrialization in regard to international development as well as locating Zonguldak within this background. In the second part, the definitions and scope of industrial heritage is investigated through international and national publications. In the third part, documentation of cultural assets in general and industrial assets specifically was studied to develop a proper

[17] Quataert, Donald, 2006, *Miners and the State in the Ottoman Empire: the Zonguldak coalfield, 1822-1920*, Berghahn Books, New York; Zaman, Ekrem Murat, 2004, *Zonguldak Kömür Havzası'nın İki Yüzyılı*, TMMOB Maden Mühendisleri Odası, Ankara.

record form for the inventory of edifices in Zonguldak. Finally, approaches to conservation of industrial heritage are explored through examples of different scales.

The third chapter covers the general frame of value assessment process in conservation of cultural heritage. In this context, valuation of cultural property is discussed and value types in the selected publications are studied. The current valuation process in Turkish legal documents and international documents on industrial heritage are also investigated. Finally, all value types that took place in the studied documents are evaluated and defined with the aim of constructing a base for value types to be used in evaluation of industrial heritage.

The fourth chapter covers a detailed research on the case study in order to reveal the historical, geographical, economical, social and cultural context of Zonguldak coalfield. The historical background of the area is summarized with the emphasis on industry. The current state of industrial structures and sites are described with the help of the data collected from selected study areas during field surveys, and the documents produced during these surveys are given in the appendix.

The fifth chapter is re-assessment of previous two chapters where a value assessment system for industrial structures in Zonguldak is formed. The value types discussed in the third chapter are re-evaluated and valuation of a limited study area is performed with a conclusion of the thesis.

CHAPTER 2

INDUSTRIALIZATION AND INDUSTRIAL HERITAGE

Change from agrarian society to industrial society took place in the late 18th century. Considerably in a short time span, unordinary alterations in agriculture, industry, trade, population, economic policy and thought occurred.[1] The most obvious factor in bringing this revolution to birth was the great progress in industry. Industrialization came with a change in architecture as well: construction techniques and used materials varied, and building types emerged for new uses. The roots of discussion of industrial heritage should be searched initially in the background of this formation that affects the whole world in time.

2.1 Industrial revolution in Europe and its effects

rev·o·lu·tion: a sudden, radical, or complete change [2]

The European Industrial Revolution took place in the late 18th and early 19th centuries with the developments in agriculture, manufacture, communication, and transportation and totally affected the existing social, economic and cultural conditions. The series of changes started in Britain and spread throughout the continent.

The beginning of a transformation from an agrarian to an industrialized economy had varied throughout Europe; Britain was the first country to become industrialized. The most important factors are her geographical location, good ports to develop the

[1] George III became heir to the throne in 1760 until his death in 1820. His reign lasted for almost 60 years - the second longest in British history. (The Official Website of the British Monarchy, *http://www.royal.gov.uk/output/page111.asp*, accessed on October 11, 2008)
[2] Merriam Webster Online Dictionary, *http://www.merriam-webster.com/dictionary/*, accessed on October 11, 2008

industry and overseas trade, and her colonies which are rich in raw materials.[3] The extremely productive and wealthy agricultural system of Britain also provided the requirements for industrialization in terms of food and raw material, labor and capital for employment in industry and services, in addition to market.[4] The industrial revolution replaced one civilization by another: the economic basis of English life was changed, population grew, low standards of consumption improved, narrow material equipment was expanded, etc.[5] Most of the researchers agreed that three technological innovations were the main impulsive force of the Industrial Revolution, which can be listed as improvements in cotton industry, development of the steam engine[6], and progress in iron founding.

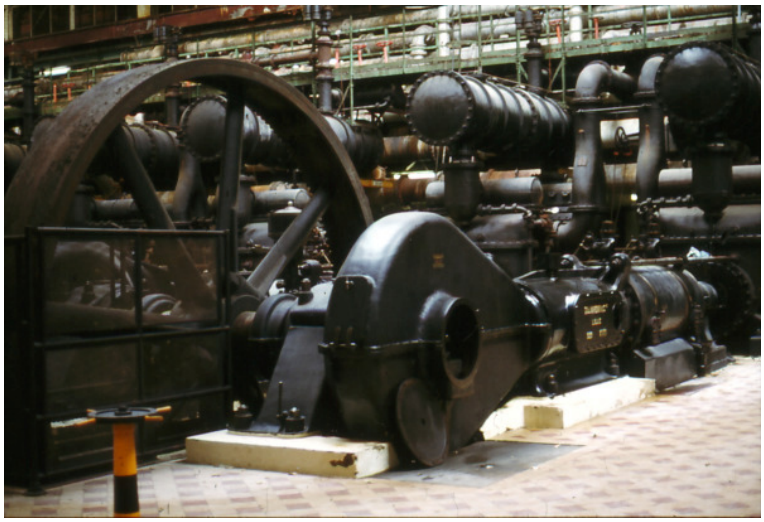

Figure 2.1 Steam engines worked by waste steam at the chemical works at Tavaux, France (Trinder, *www.erih.org*, accessed on October 11, 2008)

The raw materials used by industry also changed with the technical developments: metals replaced wood in the construction of harbors, bridges, machinery and railway tracks; coal was used instead of wood for heating and industrial establishments;

[3] Henderson, William Otto, 1961, *The industrial revolution in Europe, 1815-1914*, Quadrangle Books, Chicago, p.5
[4] O'Brian, Patrick K. and Quinault, Ronald E., ed., *The industrial revolution and British society*, 1992, Cambridge University Press, New York, p.xxiii
[5] Beales, H. L., 1967, *The Industrial Revolution, 1750-1850*, A. M. Kelley, New York, p.30
[6] The main principle of steam engine was developed by Denis Papin in 1679, in the form of a simple pressure cooker, and he continued his studies to develop a steam engine during first decade of the 18th century. ("Denis Papin", Britannica Online Encyclopedia, *www.britannica.com/EBchecked/topic/442131/Denis-Papin*, accessed on May 07, 2009)

steam engine replaced the water wheel in the factories.[7] The innovations of the period – surfaced roads, improved water and railways, new materials like iron and steel, steam power etc. – provided speed in addition to continuity of delivery and lowered the costs of transportation.[8] Especially railway systems became the major transportation network within Europe which supplies raw material and energy source for factories plus delivers finished goods to distant markets and have remained that way.

The success of the new technologies developed in Britain in the late 18th century aroused other European countries' interest.[9] European countries led by Belgium, Germany, and France had fundamental changes in their economies by the rise of industrialization and they caught Britain up in a short time.

Growing progress in production brought the desire for presenting new products and technologies. National exhibitions for encouraging manufacture and competitive export were used in Europe starting from the late 17th century and became frequent through the first decades of the 19th century.[10] International exhibitions, or world fairs, started with the first international exhibition in London, in 1851, under the name "The Great Exhibition of the Works of all Nations" and increased during mid-19th century.[11] The series of exhibitions continued with Paris 1855, London 1862, Paris 1867, Vienna 1873, Philadelphia 1876, Paris 1889, Chicago 1893 and continues.[12] The exhibitions were also famous for buildings and sites that were constructed particularly for these shows. Crystal Palace, a huge building made of iron and glass, was built for London 1851 and represents the development in construction technology. Another landmark was Eiffel Tower which was built for Paris 1889 with a complex of exhibition buildings located around. Tradition of

[7] Henderson, 1961, ibid., p.1-2
[8] O'Brien, 1994, ibid., p.253
[9] Trinder, Barrie, "The industrial revolution in Europe", *http://www.erih.net*, accessed on December 26, 2008, p.8
[10] Markus, Thomas A., 1993, *Buildings and Power: Freedom and control in the origin of modern building types*, Routledge, London, pp.221-222
[11] Rydell, Robert W., 1993, *World of Fairs: The Century-of-Progress Expositions*, The University of Chicago Press, Chicago, pp.3-5
[12] Madran, Burçak, 2000, "19. Yüzyılda Evrensel Sergiler", *Yapı*, Sayı: 225, pp.57-66

organizing international exhibitions / world fairs continues with “Expo”s that take place with different frequencies and outlines around the world.

Figure 2.2 a) Crystal Palace built for the London Exhibition, 1851 (*www.wikipeida.org*, accessed on November 01, 2008) **b)** Eiffel Tower and nearby, arranged for the Exhibition in 1889 (*www.wikipeida.org*, accessed on November 01, 2008)

All these industrialization approaches during the 19th century brought forth the social and intellectual changes of societies. Labour and capital became concentrated in large-scale manufacturing plants, many of which were located in cities.[13] That resulted in migration and the rise of the modern city. For example, Britain was transformed from a rural and small town society to an urban one with the town-population increasing 30% in fifty years.[14] One criticism to the first generation of industrial cities was their search for creating utopian settlements, which depended on manufactures but isolated from the temptations of urban life.[15] Despite the criticism, the tradition continued even today: most of the industrial sites have company dwellings and social facilities –sports fields, public spaces etc. – which are located close to factories. This is an inevitable need rather than a political strategy. From the mid-19th century, together with the development of modern settlements, large-scale public works such as supplying drinking water, electricity, gas works or constructing sewage, were undertaken in every major European city to create healthier living conditions.[16]

[13] Trinder, 2008, ibid., p.2
[14] Stevenson, John, 1992, “Social aspects of the Industrial Revolution”, *The industrial revolution and British society*, 1992, ed. O’Brian, Patrick K. and Quinault, Ronald E., Cambridge University Press, New York, p.235
[15] Trinder, 2008, ibid., p.9
[16] Trinder, 2008, ibid., p.10

To sum up, the Industrial Revolution, which emerged in Britain and outspread through Europe and world in a short time; is one of the turning points in human history that transformed economy, structure of society, urbanization and social life of its period. It still is the key concept of being financially independent in the age of consumption; therefore it is not a coincidence to see that leading countries of the world are the ones who completed their industrialization.

2.2 Industrialization in Ottoman State and Republic of Turkey

The Industrial Revolution started in Great Britain and overspread through France, Germany and all over Europe during the 18th century. Countries, which developed new production techniques and constructed many factories of different fields, came up with goods of mass production that is more than need of the European nations. They started to search for different markets and colonies. The Ottoman State of the century was dealing with wars and internal political problems, and could not catch up with European contemporaries in the progression of industry. In the 19th century, domestic production was still continuing in the State and it could not compete with the imported goods. Consequently, Ottomans became an open market for Europe and production of craftsmen decreased rapidly.[17] In order to get closer to the manufacturing system of European countries, Ottoman government made several attempts on development of industrial production starting from 1700s, concentrated in the mid-19th century.

The earliest factories were specialized in textile industry. In the first 10 years of the 18th century, new machines were bought for woolen cloth manufacture with support of the Ottoman government.[18] About 1720, a second factory was established on silk manufacture, which produced for both military use and free market, with the full financial initiative of the government.[19] Development continued with the foundation of cotton cloth, iron, paper, and tile factories. Especially cotton industry was capable

[17] Tekeli, İlhan and İlkin, Selim, 2003-2004, *Cumhuriyetin Harcı*, İstanbul Bilgi Üniversitesi, İstanbul, Volume: 1, p.26
[18] Genç, Mehmet, 1999, "XVIII. Yüzyılda Osmanlı Sanayiinde Gelişmeler ve Devletin Rolü", *Osmanlı*, ed. G. Eren, Volume: 3, Yeni Türkiye, Ankara, p.264
[19] Genç, 1999, ibid., p.264

of supplying internal needs of the State between 1770s and 1820s.[20] However, rapid development of the textile industry in Europe and expansion of foreign trade resulted in decline of cotton, silk and wool manufacture of Ottomans who could not participate in the contest.

The late 18th century attempts for industrialization were mostly aiming military and governmental production. In 1793-94, the contemporary production techniques of Europe brought into the country by Selim III.[21] In the early years of the 19th century, so called **pre-steam period**, Ottomans founded various factories: paper and cloth factories in 1805, factory for military equipments in 1816, *Dikimhane-i Amire* in 1827, in İstanbul; cloth factory and *Feshane* in 1835, in İzmir; or gunpowder factories in different cities.[22] The effort is evident but the lack of infrastructure was a serious obstacle: problem of finding raw material, difficulties in transportation, and financial troubles could not get enough attention from the State for finding a solution.[23]

Despite the emerging difficulties, introduction of new technologies gained speed towards the end of the 19th century. The problems of the first industrialization actions and continuing dependence on foreign sources forced Ottomans to a more planned industrial attack. *Tanzimat Devrimi*, administrative reforms of the 1839, resulted in improvements in politics, military, law, and education as well as industry. Industrial program of the Period is evaluated as extensive and serious by Martal despite the negative aspects.[24] The industrialization of the 19th century is grouped into two phases by both Martal and Önsoy due to role of the State:

- The First Period, mechanization movement, 1840- 1850,
- The Second Period, *Islah-ı Sanayii*, 1860-1876.[25]

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[20] Pamuk, Şevket, 1994, *Osmanlı Ekonomisi'nde Bağımlılık ve Büyüme 1820-1913*, Tarih Vakfı Yurt Yayınları, İstanbul, pp.126-127
[21] Clark, Edward C., 1998, "Osmanlı Sanayi Devrimi", *Belgelerle Türk Tarihi Dergisi*, Tarihi Araştırmalar Vakfı, İstanbul, Sayı: 14, p.70
[22] Clark, 1998, ibid., pp.70-71
[23] Clark, 1998, ibid., p.71
[24] Martal, Abdullah, 1999, "Osmanlı Sanayileşme Çabaları (XIX. Yüzyıl)", *Osmanlı*, ed. G. Eren, Yeni Türkiye, Ankara, Volume: 3, p.279
[25] Önsoy, Rıfat, 1984, "Tanzimat Dönemi Sanayileşme Politikası", *H.Ü. Edebiyat Dergisi*, Hacettepe Üniversitesi, Ankara, p.6; Martal, 1999, ibid., p.279

The **First Industrialization Period (1840-50)** was financially supported by the government to a great degree and it was much more planned than the earlier attempts. The characteristic of the period is "mechanization movement" that showed itself in establishment of many factories in big cities, especially in İstanbul, by the government and private sector.[26] Educational institutions on manufacture and engineering were also established to raise qualified workmen[27] in addition to construction of infrastructural works, such as railway or telegraph lines.[28] Almost all of the renewed or newly opened factories were working to provide the needs of the Ottoman army and the palace.[29] Since there was not enough knowledge to construct the machines for the production, most of the technical equipment as well as experienced technicians were imported from Europe.[30] Zeytinburnu Factory, which was established in 1843-45, was one of the focal points of this period, together with its manufacture plant, foreign engineers and workers, and its own educational institute.[31] However, this first period could not achieve the expected results because of many reasons: Ottoman State became indebted to European countries after the Crimean War (1853-56), gunpowder factories exploded and burned down, some factories collapsed by an earthquake and so on.[32] It is obvious that management problems, lack of experience and know-how, technological inadequacy, and deficiency of raw material accelerated the breakdown.

After the failure of the industrialization attempts in the first half of 1800s, the **Second Industrialization Period (1860-76)** came with a different approach: Ottoman State decided to take part as an organizing agent and to support private enterprise for industrialization.[33] In order to prevent the re-occurrence of previous faults, a series of precautions listed below were taken:

- Custom taxes were increased.
- *Sergi-i Umumi-i Osmani* (national public exhibition) was opened in İstanbul.

[26] Martal, 1999, ibid., p.279
[27] Önsoy, 1984, ibid., p.6
[28] Tekeli and İlkin, 2003, ibid., p.24
[29] Clark, 1998, ibid., p.74
[30] Clark, 1998, ibid., p.72
[31] Tekeli and İlkin, 2004, ibid., Volume: 3, p.139
[32] Clark, 1998, ibid., pp.70-74
[33] Martal, 1999, ibid., p.281

- *Islah-ı Sanayi Komisyonu* (commission for improvement of industry) was established.
- *Sanayi Mektebleri* (industrial education institutions) were opened to increase the quality and number of skilled workmen.[34]

These precautions aimed to draw attention to local production capacity and to prevent the competition between local manufacturers and foreigners. Taxes were re-arranged to enable export and limit import. In the 19th century Europe, exhibitions started to be opened to share the industrial developments and new products. The Ottoman State attended the first three international exhibitions in Europe: London1851, Paris 1855 and London1862; and handcrafts together with agricultural products gained the major attraction.[35] After the success of these three fairs, the State decided to open a national exhibition in İstanbul to see quality, price, and diversity of domestic products; to ascertain the problems of manufacturers; and to reward the successful ones.[36] The National Exhibition was opened by Sultan Abdülaziz in February 1863 and continued for five months with the participation of Europeans in the later months as well.[37] The exhibition triggered the establishment of *Islah-ı Sanayi Komisyonu*. The Commission worked on incorporation of craftsmen for transforming into mass production and foundation of educational institutes for training technicians.[38] Regardless of the State's and private enterprise's hard work, the second industrialization period could not maintain the expected results because of continuous instability of the economical situation and foreign trade of imported goods from Europe.[39]

Difficulty of transportation in Anatolia is another issue affecting the industrialization. There were not any usable inland waterways, existing marine transportation along the coasts were serving to minority, caravan transportation was expensive and slow, and constructed railways were not enough.[40] The railway, which was a revolutionary invention used all over Europe, was chosen as the easiest and most convenient way.

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[34] Önsoy, 1984, ibid., p.8
[35] Batur, Afife, 2000, "19. Yüzyıl Sanayi Sergileri ve Osmanlı Sergi Yapıları", *Yapı*, Sayı: 225, Yapı Endüstri Merkezi, İstanbul, pp.67-68
[36] Önsoy, 1984, ibid., p.8
[37] Martal, 1999, ibid., p.283
[38] Martal, 1999, ibid., pp.283-284
[39] Önsoy, 1984, ibid., p.12
[40] Keyder, Çağlar, 1999, "Osmanlı İmparatorluğu'nda XVIII. Ve XIX. Yüzyıllarda İmalat Sanayii", *Osmanlı*, ed. G. Eren, Yeni Türkiye, Ankara, Volume: 3, p.272

Approximately 12000 km of railway was constructed in Ottoman lands between 1851 and 1914, 1/3 of which was located in Anatolia.[41] The first railway line between İzmir and Aydın was constructed by British concessions and completed in 1866; construction of other lines had been carried by foreign companies from Britain, France, Germany and Russia until 1910s.[42] The first wave of railway construction was stopped by the starting signals of World War I and could not launch again until the foundation of Turkish Republic.

Industrialization also came up with a rapid urbanization in harbor cities such as İstanbul, İzmir, and Thessaloniki. Capital is supplied by local merchants, mainly Ottoman Greeks and Armenians, who wanted to become future manufacturers.[43] Nevertheless, most of non-Muslim business owners and workers left the country after World War I and War of Independence, and as a result, experience collected little by little for years was lost in a short time.[44]

The requirement for energy sources during these periods led to the search of coal. Together with foreign researchers, exploration gained speed in the early 19th century around Ereğli.[45] After making the discovery, mines in the Zonguldak coalfield started to operate but commercial efficiency was noticeably low because of technological inadequacy.[46] The reasons for failure in industry were also valid for coal mines. All of these industrialization efforts during the 19th century, whether successful or not, increased the number of factories. According to a limited census[47] of the 20th century, there were 269 enterprises in 1913 and 282 enterprises in 1915.[48] For both years, approximately 54% of factories were located in İstanbul whereas 22% were

[41] Quataert, Donald, "19. Yüzyılda Osmanlı İmparatorluğu'nda Demiryolları", *Tanzimattan Cumhuriyete Türkiye Ansiklopedisi*, İletişim Yayınları, İstanbul, Volume: 6, p.1630
[42] Köşgeroğlu, Emrah, 2005, *An approach for conservation of railway heritage, assessing and experiencing the İzmir-Aydın railway line*, unpublished Masters thesis submitted to Orta Doğu Teknik Üniversitesi Fen Bilimleri Enstitüsü, Ankara, p.22
[43] Keyder, 1999, ibid., p.276
[44] Keyder, 1999, ibid., p.277
[45] Önsoy, 1984, ibid., p.6
[46] Önsoy, 1984, ibid., p.7
[47] The Ottoman Ministry of Commerce and Agriculture conducted an industrial census for 1913 and 1915 which covered İstanbul, İzmir, Manisa, Bursa, İzmit, Karamürsel, Bandırma and Uşak. The census is limited to food, earth, leather, wood, textile, stationery and chemistry industries. It was published in 1917, and an edited version is re-published by A. Gündüz Ökçün in 1997.
[48] Ökçün, A. Gündüz, 1997, *Osmanlı Sanayi 1913-1915 Yılları Sanayi İstatistiki*, TC Başbakanlık Devlet İstatistik Enstitüsü, Ankara, p.13

located in İzmir. For the year 1913, 80% of the total number was private enterprise while only 8% was belonging to government. Although it is an inadequate survey, it can be stated that the most of the production facilities were located in İstanbul and İzmir, two industrial centers of Anatolia. Also, private initiatives were leading the sector and this might be the result of economical situation of the State which could not support establishment of an adequate number of factories. Despite increase in quantity, Ottoman State was still dependent on foreign production due to absence of quality.

The wrong economic policies of the Ottoman government might be seen as the primary reason for failure of industrialization. As it was stated before, the administration tried to achieve high performance in industry without infrastructural investments, searching for raw material or energy sources, constructing enough transportation and communication facilities. Furthermore, management ability and experience for founding and administration were not seriously taken into consideration. All these factors consequently led to a breakdown in time.

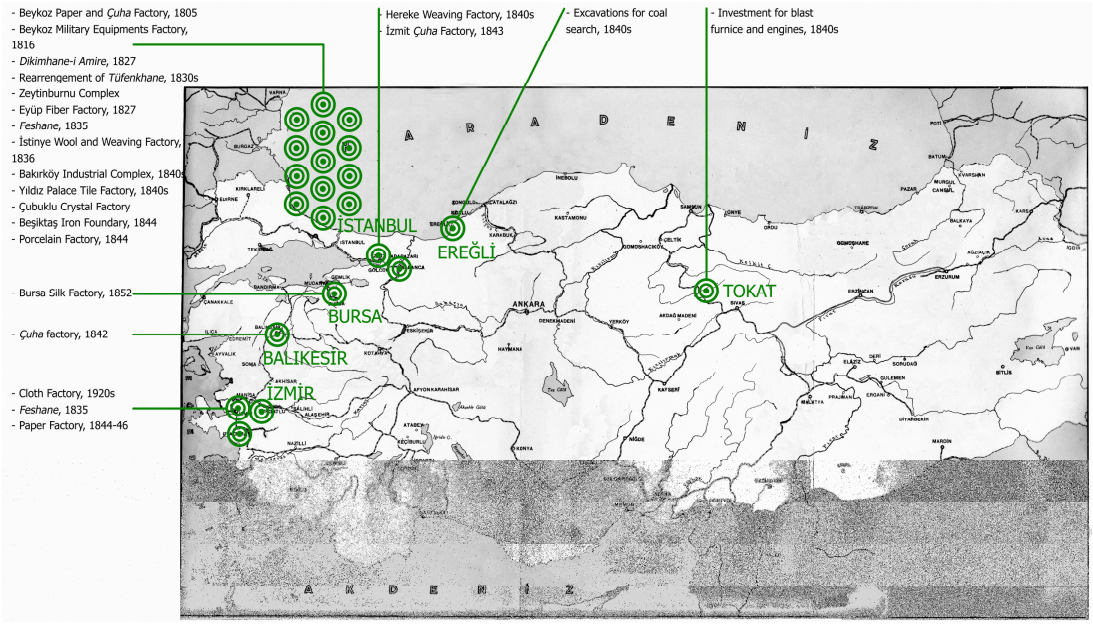

Figure 2.3 Factories and industrial complexes founded in Anatolian lands of Ottoman State during 19th century (produced over the base map from İnan [1972]; with addition of factory names and locations from Clark [1998], Önsöy [1984], Tekeli and İlkin [2003])

The Ottoman State in the beginning of the 20th century was economically ruined after many wars which could not be financed and made the State indebted to other countries. Financial and administrative failure resulted in control of foreign countries in different part of Ottoman lands. The War of Independence started to maintain a free land for citizens of Anatolia and after a long fight; the Turkish Republic was founded in 1923. Economy of the new Republic was not in a good condition. The country consumed all the sources during the War, still had a primitive agricultural production and had no industry.[49] The most important problem of Turkish Republic was the economy that was largely dependent on foreign countries and agricultural production.[50] The main concern of Mustafa Kemal and the new Republic is to make financial, social and cultural reforms to achieve economic independence. There was an urgent need for a plan to pay back the external debts, to buy foreign companies working in Turkey and to make investments for new facilities.[51]

İzmir İktisat Kongresi (İzmir Economic Congress) was organized between February 17 and March 4 of 1923 to plan the economical program of the new government before the foundation announcement of Turkish Republic. The Congress brought different people from various professions together such as farmers, workers, merchants etc.[52] The economic independence was as important as political independence. The meeting in İzmir aimed primarily to construct the economic infrastructure of the country, to promote local entrepreneurs for a rapid industrialization, and to process underground sources like mines and aboveground sources like agricultural products that can be used as raw material. Resolutions of the Congress which were taken to support these intentions can be listed briefly as follows:

- Supporting private entrepreneurs,
- Foundation of banks to provide credit for investors,
- Establishing new industries which need internal raw materials,
- Giving importance to production of daily consumption goods (flour, sugar, cotton coal, iron and fuel),

[49] Coşkun, Ali, 2003, "Cumhuriyet'in ilk yıllarında Türkiye ekonomisi", *Atatürkçü Düşünce Dergisi*, Sayı: 4, *http://www.alicoskun.net/Publications/ADD-2003-4-72.pdf* , p.72, accessed on January 16, 2008
[50] Tekeli and İlkin, 2004, ibid., Volume: 2, p.244
[51] İnan, Afet, 1972, *Türkiye Cumhuriyeti'nin ikinci sanayi planı*, Türk Tarih Kurumu, Ankara, p.19
[52] İnan, 1972, ibid., pp.9-11

- Nationalizing important establishments,
- Having the right of coasting trade –*cabotage*– at our harbors.[53]

Among the decisions of İzmir *İktisat Kongresi*, "establishment of new industries" and "giving importance to production of daily consumption goods" are the ones that guided the early industrial activities of the period. It was known that industrialization was a necessity for a rapid progress. In order to achieve the stated decisions of the Congress, ***Teşvik-i Sanayi Kanunu*** (the Law for Encouragement of Industry) was issued in 1927. With this law, the government aimed to support the private investors with some benefits to accelerate the foundation of factories, such as assignment of cheap land to local industries, tax exemptions, or different discounts in means of transportation.[54]

Towards the end of 1920s, the world faced to an important economic problem: the Great Depression.[55] The crash of stock market in the Unites States continued with failure of many banks, and downturn of production facilities. Turkish Republic, who had just started to build an economical model for itself, came across the effects of the Depression in 1930s. There were two major financial problems waiting to be solved: Ottoman heritage -including dependent economy and debts- and foreign companies. In order to survive from the crisis, politicians were compelled to choose between building infrastructure, buying foreign companies or paying debts.[56] This conflict led to the first economical planning study in June 1929.[57] The main idea of this plan is determination of industrial activities by government and implementation by private sector.[58] However, the crisis resulted in bankruptcy of private sector, so the plans completely changed and the financial support of government became an obligation in 1930s.

[53] Coşkun, 2003, ibid., p.73
[54] Coşkun, 2003, ibid., p.73
[55] **The Great Depression** was a worldwide economic crisis started in 1929 and continued through 1930s. The depression had devastating effects in the industrialized countries, especially in North America and Europe.
[56] Tekeli and İlkin, 2004, ibid., Volume: 2, p.24
[57] Tekeli and İlkin, 2004, ibid., Volume: 2, p.163
[58] Tekeli and İlkin, 2004, ibid., Volume: 2, p.172

During this decade economic, troubles of the after-war period, infrastructural inadequacies and migration of non-Muslims, who were capital owners and had a dominant role in production, decelerated industrialization.[59] The positive aspect of the period is the acceleration of railway construction. Importance of and need for a proper transportation network was known. By 1938, 3000 km of railway tracks were constructed in addition to remaining 4000 km from Ottomans.[60] The success of producing a railway system in the early years of the Republic cannot be re-achieved nearly after seventy years.

Affects of the Great Depression resulted in the emergence of two main political approaches in economy: **protectionism** and **statism**. [61] Statism entered the program of *Cumhuriyet Halk Partisi* in May 1931. The main principles of the statism are founding large scale establishments by government for the benefit of public; and guiding and protecting private sector to prevent loss of national capital.[62] Many foreign companies were purchased by the government during 1928-39 despite all financial difficulties: railways, *Haydarpaşa Liman İşletmesi* (1928), *İstanbul Rıhtım İşletmesi* (1934), *İstanbul Telefon İşletmesi* (1936), *İzmir Rıhtım ve Tramvay İşletmesi* (1937), *Ereğli Liman, Zonguldak Çatalağzı Demiryolu ve Kömür Madeni İşletmeleri* (1937), *İstanbul Elektrik İşletmesi* (1938) etc.

Statism was also one of the main principles of the **First Five-Year Industrialization Plan** which was prepared in 1933 and accepted on April 17, 1934. With this plan, well-organized industrialization started countrywide and the state entered the economic life as an administrator.[63] İnan stated the principles of the plan as:

- The industries whose raw material grows in the country or will be obtained soon are selected in the first place

[59] Sönmez, Mustafa, 1999, "75 Yılın Sanayileşme Politikaları", *75 yılda çarklardan chip'lere*, ed. O. Baydar, Türkiye Ekonomik ve Toplumsal Tarih Vakfı, İstanbul, p.2
[60] Sönmez, 1999, ibid., p.36
[61] **Protectionism**: practice of guarding economy for domestic producers through restrictions on foreign competitors. **Statism**: concentration of economic controls and planning in the hands of a highly centralized government often extending to government ownership of industry (*www.merriam-webster.com*, accessed on September 23, 2008). Boratav, Korkut, "Korumacı-Devletçi Sanayileşme (1930-1939)", *75 yılda çarklardan chip'lere*, ed. O. Baydar, Türkiye Ekonomik ve Toplumsal Tarih Vakfı, İstanbul, p.71
[62] İnan, 1972, ibid., p.17
[63] Coşkun, 2003, ibid., p.73

– Foundation of factories, which needs large capital and technical power, is provided by state or national institutions
– The production capacity of industries will be proportional to the needs and consumption of the country.[64]

The funding of this plan was mainly covered by taxes and internal debt. Statism policy was not valid only for industrial activities; state also took place in cooperatives, railway administration or nationalization of foreign companies.[65] During this period, land reform was performed as well to encourage agricultural activities.[66] Industrial production had increased slowly until 1936 because of the unfinished investments; but afterwards, it speeded up and at the end of the period, most of the targets was achieved with success.[67]

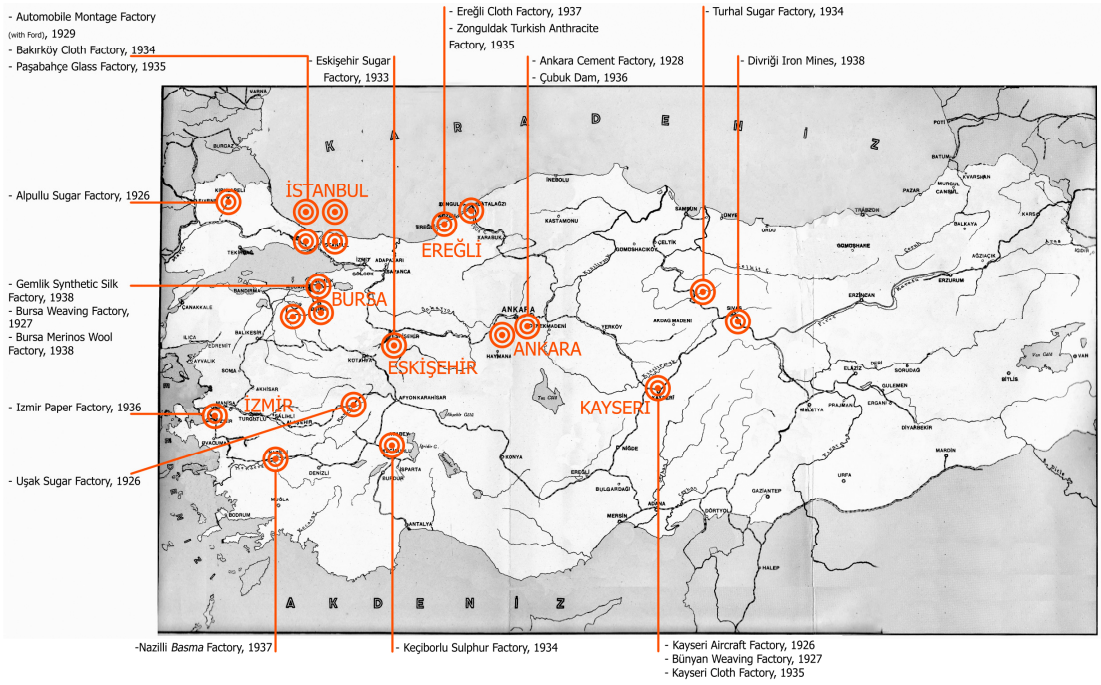

Figure 2.4 Major factories and industrial complexes founded in Turkish Republic between 1920s and 1938 (produced over the base map from İnan [1972]; with addition of factory names and locations from Coşkun [2003], Tekeli and İlkin [2003])

[64] İnan, 1972, ibid., p.16
[65] Tekeli and İlkin, 2004, ibid., Volume: 2, p.276
[66] Coşkun, 2003, ibid., p.76
[67] Sönmez, 1999, ibid., p.5

Preparation of the **Second Five-Year Industrialization Plan** started in 1936, just after the implementation of the first one. The second plan is much more comprehensive than the previous one, in terms of cases, funding, and the acts it will raise around the country. The industrial branches of the plan are listed as mining, coal production (administration of Ereğli coalfield), district power plants, domestic fuel industry and commerce, earth industry, food industry and commerce, chemistry industry, mechanic industry, and marine business.[68] Main principles of the plan were given as:

- To develop industries which are suitable for the economic condition of the country, which need large capital and technical power, and whose raw material can be found locally
- To process mines for exporting
- To obtain income for public by the sell of marine products, animals and agricultural products
- To rationalize production of coal, and to solve production problem of liquid carburant (for military use) and the heating problem of dwellings
- To establish factories as the first step of mechanic industry, for processing semi-finished products of Karabük Iron and Steel Factory[69]

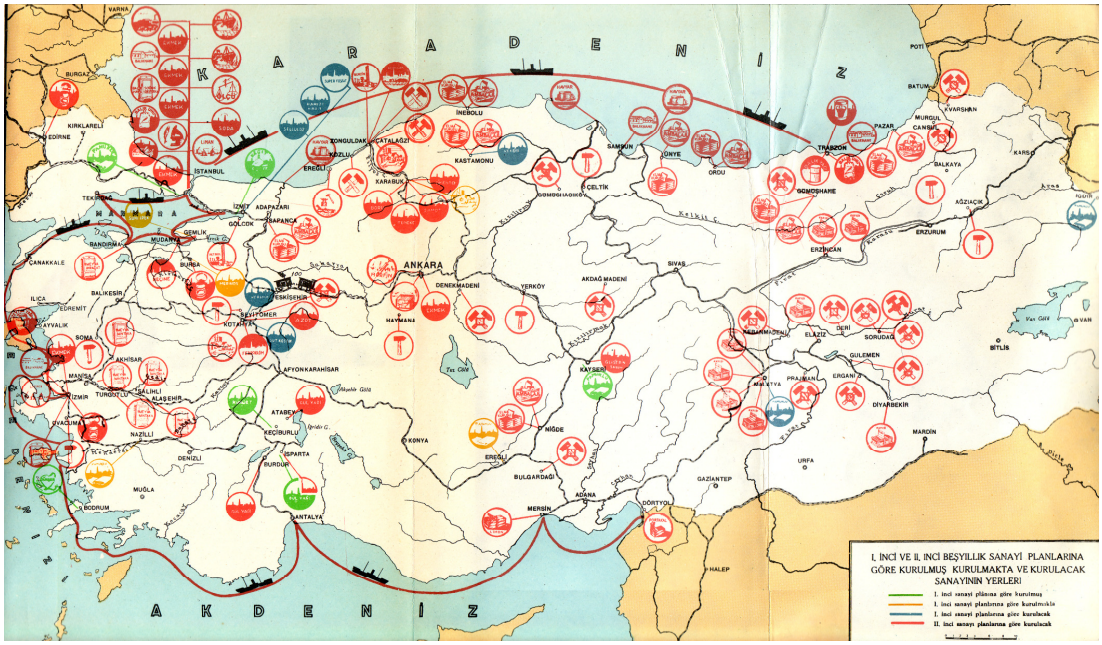

Figure 2.5 Locations of industrial facilities which were founded or will be founded according to the First and Second Five-Year Industrialization Plans (İnan, 1972)

[68] İnan, 1972, ibid., p.16
[69] İnan, 1972, ibid., pp.16-17

Approaching World War II and its effects on global economy prevented the implementation of the plan. However, from the map showing the location of possible industrial investments, it can be said that eastern, central and northern parts of Turkey were chosen as new industrial focuses while west was still holding its importance. In this way, unbalanced growth of the western parts would be compensated. Connecting south seaside to north (from İskenderun to Trabzon) by naval routes is another important infrastructural plan that would support marine transportation system.

It is a compulsion to handle economy as a prior subject to provide the continuity of a recently founded state. All industrial attempts and economic plans of the Turkish Republic in 1920s and 1930s show the importance given to economy. Infrastructural investments and established production facilities made use of the country's existing capacity efficiently in terms of both raw material and manpower. The effort of the government for a quick recovery was successful. Industrialization also used as a tool for introducing the "modern culture" to small towns of Anatolia with use of railway and factories; industrial complexes did not only bring new building types (workers' housing, cinema, clubs etc.) but also contemporary daily routines.[70]

World War II interrupted the planned development of 1930s in the area of industry. Economical situation of after-war years is grouped into two periods by Gürel Tüzün: during the first period between 1946 and 1953, previous protectionist economical policies were left behind, import was liberalized, and foreign debts increased; in the second period between 1954 and 1960, last seven years' strategy was abandoned and a new industrial approach was followed which gives priority to production of imported goods.[71] Different than industrial attempts of the last decades, private enterprises were very much supported. The significant features of the 1950s' industrialization policy are transition from manufacturing consumer goods (textile, food, ceramic etc.) to durable consumer goods (medicine, chemistry, automotive

[70] İmamoğlu, Bilge, 2009, "Seyfi Arkan ve Kömür İşçileri için Konut: Zonguldak; Üzülmez ve Kozlu", *Fabrika'da Barınmak*, ed. Ali Cengizkan, Ardadaş Yayınevi, Ankara, p.133
[71] Tüzün, Gürel, 1999, "1950-1960 Döneminde Sanayileşme", *75 yılda çarklardan chip'lere*, ed. O. Baydar, Türkiye Ekonomik ve Toplumsal Tarih Vakfı, İstanbul, p.147

etc.), increasing privatization and external dependence, in addition to concentration and centralization of capital.[72]

The 1960s came with the new planning approaches which thought of industry as the leading sector of the economy. The development plans intended to enlarge industrial activities by increasing domestic investments and to decrease foreign dependence.[73] Local production of imported goods was still occupying an important place in the agenda, and evolution to manufacture of investment goods continued. Nevertheless, vital components such as technology, capacity, quality of products, or efficiency were not considered and foreign dependency grew in time, so the attempts could not make an achievement in the end.[74]

Increasing dependency to foreign currency effected the industrialization of 1970s and 1980s. Investments were improving or receding due to existence of currency; so the financial planning policy shifted to short-term development programs.[75] Now, it was time to move one step further and establish investment goods' industry in order to complete industrialization process that consists of production of three major groups: consumer goods, durable consumer goods, and investment goods. The work started to found motor and machinery industries but political and economical crisis of the 1980s aborted the development.[76] The government stopped industrial investments and started to sell many national factories. The crisis affected the private sector as well; investments noticeably shrank and investors preferred more profitable areas like tourism, real estate or banking business.[77]

Economic problems of Turkey continued in 1990s; particularly for the field of industry, inadequate investment, necessity for restructuring and disorder in obtaining new technologies are the main issues.[78] The ambitious and efficient industrialization

[72] Sönmez, 1999, ibid., p.11
[73] Sönmez, 1999, ibid., p.12
[74] Soyak, Alkan, 1999, "Planlı Dönemde Sanayileşme", *75 yılda çarklardan chip'lere*, ed. O. Baydar, Türkiye Ekonomik ve Toplumsal Tarih Vakfı, İstanbul, p.180
[75] Sönmez, 1999, ibid., p.13; Soyak, 1999, ibid., p.167
[76] Kepenek, Yakup, 1999, "Türkiye'nin 1980 Sonrası Sanayileşme Süreci", *75 yılda çarklardan chip'lere*, ed. O. Baydar, Türkiye Ekonomik ve Toplumsal Tarih Vakfı, İstanbul, pp.230-235
[77] Kepenek, 1999, ibid., p.235; Sönmez, 1999, ibid., p.17
[78] Kepenek, 1999, ibid., p.240

attempts of the earlier periods changed in time due to many reasons. Industrial development gained and lost importance, and has fluctuated for years. Although the industrial production developed and both local and foreign companies established bases in different cities, disconnected and inconsistent improvement plans prevented the evolution of industry. Wrong political actions were also the main problem of Ottoman State and it continues after almost a century. Turkey still cannot be categorized as a completely industrialized country; unfortunately it remains mostly the center of cheap labour force.

2.3 Conservation of industrial heritage

The awareness for conservation of industrial remains arose in the mid-20th century. Cities were expanding and industrial sites, which were once located at the periphery, left in the middle of residential or commercial areas. Technology was rapidly changing and increase in demand was inevitable with the population growth in the world. Factories needed to have larger spaces to house new equipments and to multiply their production, and as a result, industry moved away from city centers. Most of the factories left their original locations and buildings were destroyed or became abandoned. Demolition of industrial buildings attracted the attention of specialists and public. Documents of an important era of human history were valuable as much as any other historical remain. So, consciousness and studies on investigation and conservation of industrial objects and/or buildings started.

2.3.1 Definition, scope and documentation of industrial heritage

The term **industrial archaeology** was used for the first time in 1955, by Michael Rix, in an article written for a journal, *Amateur Historian*; and after twelve years, the first definition of the concept was made again by Rix as "recording, preserving in selected cases and interpreting the sites and structures of early industrial activity, particularly the monuments of the Industrial Revolution".[79] The term became widespread in time and branched in order to cover different cases; many expressions

[79] Raistrick, Arthur, 1986, *Industrial Archaeology: An Historical Survey*, Paladin Grafton Books, London, pp.2-3

developed in the area of conservation such as industrial heritage, industrial monument or industrial landscape.

Industrial archaeology is basically "the organized, disciplined study of the physical remains of yesterday's industries".[80] The phrase 'organized study' is explained by Buchanan as investigating, surveying, recording, and preserving.[81] And what is meant by 'physical remains' can be thoroughly found in the Nizhny Tagil Charter.[82] "all the evidence, material and immaterial, of documents, artefacts, stratigraphy and structures, human settlements and natural and urban landscapes, created for or by industrial processes".[83] As it is understood from listing of remains and since the Industrial Revolution pioneered both social and technical changes in history of humanity, industrial archaeology requires an interdisciplinary study. As stated by Hudson; architects, engineers, social and economic historians, planners and so on, all have valuable contributions to create a better understanding of industrial past.[84]

Acceptance of industrial archaeology as an interdisciplinary scientific field and start of preservation activities originated the question: what should be protected? The search for the description of industrial monument started. Inspectorate of Ancient Monuments at the Ministry of Works in Great Britain accepted the following definition: "An **industrial monument** is any building or other fixed structure, especially of the period of the Industrial Revolution, which either alone or associated with primary plant or equipment, illustrates the beginning and development of industrial and technical processes, including means of communication".[85] The extent of definition changed more or less in time but today, the latest and the most comprehensive definition is the one in the Nizhny Tagil Charter. The document is formed by The International Committee for the Conservation of the Industrial Heritage, TICCIH (special advisor to ICOMOS on industrial heritage), which aims to

[80] Raistrick, 1986, ibid., p.4
[81] Buchanan, Robert Angus, 1972, *Industrial archaeology in the Britain*, Penguin, Harmondsworth, p.20
[82] TICCIH, 2003, The Nizhny Tagil Charter for the Industrial Heritage, Moscow. This charter is prepared by The International Committee for the Conservation of the Industrial Heritage, TICCIH which is the world organization representing industrial heritage and is special advisor to ICOMOS on the subject. (*www.ticcih.org*, accessed on November 12, 2008)
[83] TICCIH, 2003, ibid., p.2
[84] Raistrick, 1986, ibid., p.4
[85] Raistrick, 1986, ibid., p.2

study, protect, conserve and explain the remains of industrialization.[86] The final version of the definition is decided after series of meetings. Therefore,

> **Industrial heritage** consists of the remains of industrial culture which are of historical, technological, social, architectural or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education.[87]

Detailed information on the scope admits no doubt about what should be specified as industrial heritage or not. Both buildings and object as well as production facilities and social services are included. Since the formation of an industrial site produced a physical and social development around itself, it is totally acceptable to include and evaluate all the remaining evidences as a whole.

One of the most common discussions about the definition of industrial archaeology/heritage is the span of the time period that is dealt with. Many researchers agree that the historical period starts with the Industrial Revolution in the late 18th century. According to Palmer and Neaverson, industrial archaeology concentrates on the period when the manufacture at the level of domestic or craft production stopped and moved into industrial or capitalist production.[88] In the Nizhny Tagil Charter, it is also accepted that the historical period extends from the beginning of the Industrial Revolution to the present day together with emphasize on the examination of its earlier pre-industrial and proto-industrial roots.[89] However, another group of researchers argue that the beginning of the time span should be set earlier. Blockley claims that industrial monuments of the Roman Empire or manufacture techniques of the prehistoric period are equally significant to the developments of the 18th century.[90] Gülsün Tanyeli also states that industrial archaeology covers an area which includes production, equipment, and architecture

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[86] TICCIH Official Website, *www.ticcih.org*, accessed on November 12, 2008
[87] TICCIH, 2003, ibid., p.2
[88] Palmer, Marilyn and Neaverson, Peter, 1998, *Industrial archaeology: principles and practice*, Routledge, New York, p.15
[89] TICCIH, 2003, ibid., p.2
[90] Blockley, Marion, 1999, "Preservation, Restoration and Presentation of the Industrial Heritage, a case Study of the Ironbridge Gorge", *Managing Histric Sites and Buildings*, ed. D. Baker and G. Chitty, Routledge, London, p.142

of the pre-industrial period.[91] When the discussion is evaluated in the light of what is written for definition of industry, the first approach is much more acceptable. The word industry is often associated with "systematic labor" and "large personnel and capital". Transformation from small, family workshops to factories eventuated with the Industrial Revolution after 1730s. The earlier manufacture establishments are also vital to understand their time and to compare them with later examples, but industrial archaeology or industrial heritage should be considered within the era starting from the Industrial Revolution.

After deciding what should be counted within the scope of industrial heritage, documentation of existing remains come into the scene. Documentation is the first and most important step in conservation of cultural and natural heritage. Documentation of a single building is essential for future analyses and determination of interventions as well as production of a detailed restoration project. In the macro scale, documentation of cultural heritage is essential in order to find out types and quantity, and to develop a policy for its preservation. Documentation of a number of edifices within a systematic study results in a catalog which can be named as an inventory. Inventories provide a framework for the assessment of heritage significance and supply the required information to undertake measures for its future conservation activities and interpretation.[92]

The objectives of forming an inventory might change due to what it is done for. Is it just for obtaining knowledge, preparing a conservation project or using heritage as a resource for development? If the information is gathered for a specific project, questions to be asked are more or less clear. If not, it is important to collect data which can be used for different purposes and give as much as reference for further studies. Inventories of cultural heritage mostly include archaeological and urban sites, historical remains, rural architecture, urban architecture, and recently intangible heritage as well. Each country builds its own inventory system under the guidance of academicians and authorized institutions with different types of record forms for

[91] Tanyeli, Gülsün, 2000, "Endüstri arkeolojisi yapılarının korunması ve yeniden işlevlendirilmesi", *Domus m*, Aralık 2000, p.50
[92] Proulx, Michéle, *The Uranium Mining Industry of the Bancroft Area: An Environmental History and Heritage Assessment*, MA thesis submitted to Faculty of Arts and Sciences, Trent University

different types of heritage. For example, English Heritage, Canadian Heritage, Netherlands Department for Conservation, Department of the Environment, Heritage and Local Government in Ireland; Directorate of Fine Arts and Literature, Ministry of National Education and Culture in Belgium or Central Institute for Records and Documentation, Ministry for Cultural and Environmental Assets in Italy runs national programs for creating nation-wide inventories. As it was stated by M. L. Polichetti, cataloguing methods of European countries share many features but they differ in the end due to variances in cultural situations or legal systems.[93] An inventory consists of record forms/*fiche* that collects information grouped under different titles which is supported by maps, drawings and photographs as well as a list of sources. Most of the forms also require verbal description of the cultural asset written by an authorized person. Recently, together with the rapid development in information technologies, inventories are prepared using computer based systems to organize and store data and publish cultural heritage records on their websites to share information and raise the public awareness. Various approaches for arrangement of information in monument scale can be seen from Table 2.1 below for Ireland, Canada, United Kingdom and Switzerland examples. Each country developed a system to be used nationwide for documentation of cultural heritage (in different scales) and created different record forms for systematic data collection. For monuments, it can be noticed that some of the headings repeated in each form, sometimes with different words but the same content:

- Name
- Location (Address, map reference and/or geographic coordinates)
- A unique inventory/record number
- Construction date
- Persons associated with building (owner, architect, sponsor etc)
- Type / Function

[93] *Architectural heritage: inventory and documentation methods in Europe*, 1993, Proceedings, European colloquy organized by the Council of Europe and the French Ministry for Education and Culture, Direction du patrimoine, Nantes, 28-31 October 1992, p. 147

Table 2.1 Different international inventory approaches for monuments

National Inventory of Architectural Heritage Ireland, 2008	**Heritage Inventory, City of Richmond** Canada, 2008	**MIDAS Heritage, English Heritage** United Kingdom, 2005	**Swiss Inventory of Architecture** Switzerland 1992
– **Name / Address** – **Registration number** – **Date** – **Townland** – **County** – **Coordinates** – **Categories of special interest** Architectural Archaeological Technical Historical Artistic Scientific Cultural Social – **Original Use** **In Use as** **Additional Use** – **Description** – **Appraisal**	– **General information** Type of resource Common name Address Neighborhood Construction date Current Owner Designated – **Statement of significance** Description of site Statement of values Character defining elements – **History** – **Architectural significance** Architectural style Building type Name of architect/builder Design features Construction method – **Landscape significance** Landscape element Design style Designer/Creator Design attributes Construction method – **Integrity** Alterations Original location Condition Lost – **Documentation** Evaluated by Date Documentation	**Information groups** Date and period Location Investigate activity Map depiction Monument Archive and bibliography Actor and role All others **Unit of information** Primary reference number Heritage asset name Description Compiler (*organization and person*) Date of compilation Date of last update Entry type External information system Monument type Currency Evidence Material Component Prime motive power (*for industrial installations*) Craft type Construction method Protection type Right note Dimensions Condition Inscription note	– Name of the street, insurance number – Name of the building – Dates – Type – Original function, current function – Original proprietor, sponsor – Architect, contractor – Description – Historical summary – Reference to plans – Reference to sources – Photo

Architectural properties such as design, construction technique or material are asked to be filled in Canada and UK examples but Ireland and Switzerland presumably includes that information in the description part. Another aspect that differs is valorization of monuments. Ireland and Canada inventories aim to evaluate work within the record form whereas Switzerland and UK only collects information and evaluates afterwards. Although these systems have similarities and differences, it can be stated that Canada and UK institutions intended to collect as much as information possible through forms. It might seem disadvantageous during field study, spending more time for each monument, but keeping extra information will be helpful for future uses, both for institutional specialists and for others who are using the archives.

In Turkey, Ministry of Culture and Tourism, General Directorate of Cultural Assets and Museums is the responsible governmental body who deals with cultural heritage. There is no systematic inventorial study for heritage; the documentation is based on registration of cultural assets. According to "*Regulation determining procedure, principles and criteria about survey and registration of immovable and natural assets to be conserved*",[94] assets are surveyed by Ministry and evaluated by related Conservation Councils in order to be registered. Registration forms for cultural heritage are divided into three groups: sites, monuments and dwellings. In the monuments record, information is gathered within six sections. In the first section, a unique inventory number is asked for identification of monument. Then, location is given with the help of several references such as map number, address, and cadastral information. And at last, a conservation degree is proposed. Second section includes general identification information for the monument: name, owner, date and architectural period, architect, inscription and *vakfiye* and a verbal description. The third section collects information on architectural systems of the building starting with structural system and continues with external and internal structures, superstructure, and ornamentation. Preservation status and humidity are also questioned in this section; however they should not be grouped with constructional

[94] *Korunması Gerekli Taşınmaz ve Tabiat Varlıklarının Tespit ve Tescili ile İlgili Usulleri, Esasları ve Kıstasları Belirleyen Yönetmelik*, covers subjects on survey and registration of cultural and natural assets which are defined in the 3rd article and specified in the 6th article of *Kültür ve Tabiat Varlıklarını Koruma Kanunu, No. 2863*

systems of the building. It is better to discuss them under another section where condition and existing problems of the monument took place.

Another governmental institution dealing with cultural heritage is The Turkish Academy of Sciences (TÜBA). As a part of Cultural Sector Project of TÜBA, the Cultural Inventory Program[95] has been started in 2001 with the support of Ministry of Culture and Tourism. A need for an inventory is urgent because cultural and natural heritage of Turkey has never been documented in a systematic way and loss of this heritage continues rapidly. Cultural inventory is defined by TÜBA as "documenting all remains and *trace*s of every period and culture in a specific area with no selective picking up and evaluating its importance, and as a final product, transformation of collected data into an utilizable database".[96] The project includes archaeological documentation, urban archaeological documentation, urban documentation, rural documentation, ethnographical documentation and documentation with oral history. Inventories started with two pilot projects in Anatolia and continue with volunteer contribution of academicians. According to the focus of this thesis, inventory form for urban cultural assets - monuments is analyzed and headings of the form are given at the table below. Since TÜBA is in cooperation with Ministry in this project, designed inventory form includes mostly overlapping data. Differentiated parts can be listed as the more detailed visual survey (drawings and photographs), survey and evaluation of nearby environment with urban and natural elements, and collecting much more detailed data on material and elements of building. Using Global Positioning System, GPS in order to obtain precise location of the monument is another step forward in documentation, especially for the edifices which are located outside settlements and away from main roads.

Although these two approaches for documentation of cultural assets, specifically monuments, have totally different aims, they resemble in some aspects. Ministry executes a registration system for works which are evaluated to be worth conserving. On the other hand, main intend of TÜBA is to document as many cultural assets as possible in the entire country. They are not evaluating works and not offering legal

[95] *Kültür Sektörü Projesi (TÜBA-TÜKSEK) Kültür Envanteri Programı*
[96] *www.tuba.gov.tr*, accessed on January 21, 2009.

Table 2.2 National inventory approaches for monuments

Ministry of Culture and Tourism	**The Turkish Academy of Sciences** (TÜBA) **Cultural Inventory Project**	
Inventory no Map no City District Neighborhood / Village Street and door no Cadastral information Conservation degree (Monumental, Environmental) Name Proprietor Construction date Architect/contractor Inscription Architectural period *Vakfiye* Description Preservation status (Good, intermediate, bad) Structural system External structure Superstructure Internal structure Ornamentation Humidity Site Plan Photograph Owner (today) Institution responsible for maintenance Previous repairs / restorations Detailed description Technical information (water system, electricity, heating, sewage) Original use Current use Suggested use Filled in by Controller Council approval Revision Council decision Bibliography	Inventory no Photography no Drawing no Map no GPS coordinates Building/Urban element/natural element – **Settlement** City District Neighborhood Street and door no Cadastral information (Sheet, Block, Lot) – **Monument** Name Current use Character of nearby environment – **Building type** – Urban elements – Natural elements – Period – Construction date / century – Inscription – Owner – Institution responsible for maintenance – Architect/contractor – Proprietor	**PHYSICAL PROPERTIES** – Entered / Not entered – Number of floors – Structural system – Superstructure – Material of superstructure – Eave type – Plan type (for dwellings) – Main façade Finishing material Façade features Window (type, elements) Main door (type, material) – Building elements – Ornamentation – Re-used material – Technical equipment Electricity, water, sewage, heating, telephone, other – Preservation status (good, intermediate, bad, ruined) – Previous repairs/restorations – Filled in by – Controller – Date

preservation. The project executers might individually apply to local Conservation Councils for registration but the goal is to list all assets for the use of the government and people concerned.

Regarding the documentation of industrial heritage, there are two international documents on the subject that verbalize the need for a systematic survey. The first one, *Recommendation of European Council,*[97] points out the multidisciplinary character of this heritage and states that it should be taken into account during detailed surveys. Priority is given to hardly accessible sites and places which are more difficult to preserve. Study and research programs are offered to be carried on by public bodies, universities and scientific research institutions, private companies, in addition to organizations and associations dealing with this heritage. The technical people who are well-informed professionals on production techniques, know-how, tools, machines and installations are also mentioned as team members. The second international document on industrial heritage, *The Nizhny Tagil Charter for the Industrial Heritage,*[98] emphasizes the importance of identification, recording and research in the third article. It does not suggest a specific system but lists main points for constructing inventories. Identification and record of industrial heritage is stated as a must for preserving and finding out its extent, and sites at risk are implied as priorities. The Charter underlines the importance of easily searchable and freely accessible inventories and recommends computerization and online access to databases. As the single unit, a record is recommended to include physical features and condition, i.e. description, drawings, photographs, video films, relevant supporting documents and memories.

Many foreign governments develop special programs for the documentation of industrial heritage and work in collaboration with NGOs, private foundations, universities or volunteers. In Netherlands, preparation of an inventory for industrial heritage is carried out within the national Monuments Selection Project by the help

[97] Council of Europe, Committee of Ministers, *Recommendation No. R 90 (20) of the Committee of the Ministers to Member States on the Protection and Conservation of the Industrial, Technical and Civil Engineering Heritage in Europe*, 1990
[98] *The Nizhny Tagil Charter for the Industrial Heritage*, TICCIH, Moscow, 2003

of a private institution: The Netherlands Institute of Industrial Heritage.[99] The Institute was founded in 1991 with the four-year financial support of Ministry of Culture and it developed initiatives for the inventory, selection, conservation, education, information, tourism etc. relating with industrial heritage. A methodological framework was developed for systematical inventory and categorical inventory systems (for railway monuments, mining monuments, water towers and so on) which were carried out by government, private societies and universities during this four-year program.[100]

In Finland, inventory of industrial monuments gained speed after 1980s when factories in the town/city centers stopped production and moved out. The inventory of industrial monuments is carried out with research on industrial tradition of Finland in four main levels.[101]

1. Inventory of industrial environments (the national study implemented by the Ministry)
2. General inventories of culturally historical monuments and sites on municipal and provincial level (inventory of monuments in provinces and municipalities)
3. Special inventories that map sectors of industrial tradition (sectoral inventories carried out by government, planned to cooperate with other Scandinavian countries)
4. Comprehensive documentation of individual industrial environments or small group of buildings.[102]

National Park Service is legally responsible for documentation of architectural heritage in the United States. Heritage Documentation Programs (HDP) is executed mainly by HABS (Historic American Buildings Survey), and companion programs HAER (Historic American Engineering Record), HALS (Historic American Landscapes Survey), and CRGIS (Cultural Resources Geographic Information Systems).[103] HDP is carried out in partnership with state and local governments, private industry, professional societies, universities, preservation groups, and other

[99] Nijhof, Peter, 1993, "Industrial heritage in the Netherlands; the watertowers", *Architectural heritage: inventory and documentation methods in Europe*, Council of Europe Press, Strasbourg, pp.113-114
[100] Nijhof, 1993, ibid., pp.113-114
[101] Härö, Erkki, 1993, "Inventory methods of industrial heritage in Finland and examples of their practical applications", *Architectural heritage: inventory and documentation methods in Europe*, Council of Europe Press, Strasbourg, p.107
[102] Härö, 1993, ibid., pp.107-109
[103] *http://www.nps.gov/history/hdp/about.htm*, accessed on February 01, 2009

Federal agencies. Documentation of industrial heritage is also part of this nationwide program and like the rest of the monuments, a single record includes drawings, black and white photographs, color transparencies, as well as written historical and descriptive data.

There are several identification techniques of different institutions that are used for recording industrial heritage in United Kingdom. The Association of Industrial Archaeology, AIA, developed IRIS project (Index Record for Industrial Sites) in 1990s which aims to make records of industrial sites in the most basic level.[104] The project aimed to move forward by contribution of local volunteers and it was designed to meet national data standards in order to enable direct transfer to "Sites and Monuments Records" and the "National Archaeological Record".[105] This is a paper-based inventory and includes basic identification data (name, address, IRIS number), date, fixtures/machinery (as a yes/no question), site significance, components, history, associated persons and sources. Later on, this database is improved by Greater London Industrial Archaeology Society, GLIAS, and transferred to a digital media in 1999. The database is a combination of five interlinked databases which are sites, images, articles, glossary/biography and websites.[106] The GLIAS database covers a limited area, London city only, but includes records of 2160 industrial archaeology sites.

Another type of inventory has been used by the Royal Commission on the Historical Monuments of England, RCHME. This system is used for all types of buildings/sites and has four levels of recording ranging from simple visual record to fully researched and illustrated record.[107]

- Level 1 record is used to gather basic information. It includes visual record of exteriors and information to identify type location and date.
- Level 2 record gives a basic descriptive and interpretative record. It includes a full description in addition to interior and exterior photographic record.
- Level 3 recording is used for only selected monuments based on their importance or their specific management requirements (threat or research). It

[104] Palmer, Marilyn and Neaverson, Peter, 1998, *Industrial Archaeology: Principles and Practice*, Routledge, London, p.82
[105] Palmer and Neaverson, 1998, ibid. , p.82
[106] *http://www.glias.org.uk/database/database_about.htm*, accessed on February 01, 2009
[107] Palmer and Neaverson, 1998, ibid. , p.82

includes measured plans and elevations, together with dimensioned sketches of details.
- Level 4 recording requires an enhanced and integrated multi-disciplinary record of an archaeological field monument.[108]

There is no arrangement in the Turkish inventory system that offers a special record form for industrial heritage. For registration, record forms of the Ministry of Culture and Tourism are used even though they are not suitable for this purpose. Gül Köksal proposed an additional inventory form for monuments and sites of industrial heritage in her PhD thesis on conservation of industrial heritage in İstanbul.[109] The form is used together with related record forms of the Ministry. The data is collected in four main parts in this additional form: production, architectural planning, administration and analogy. In the first part, branch of production, technique, transportation system, production capacity, sector that is served, power source and components of the system are investigated to learn about the process. In the second part, architectural planning of the monument or site is investigated through list of existing buildings, architectural planning, construction technique and material; and relationship between production process and architecture. In the third part, information about founder, management and staff is collected so as to present administrative situation. As the final part, comparative analogy including similar enterprises and related buildings/sites takes place which aims see the standing of that industrial heritage among others for a proper evaluation. This form collects as much as information about the monument with both field study and archive research to fill the required parts which is a correct approach for investigating the whole background of the monument or site.

After analyzing the international and national approaches towards inventory techniques for cultural heritage in general and for industrial heritage specifically, a proposal of a survey form in the scope of this thesis can be made for documentation of industrial edifices in Zonguldak. Although, there is an urgent need for recording all edifices related to industrial past of Zonguldak, such as mines, factories, and use,

[108] *http://www.english-heritage.org.uk/server/show/conKnowledgeItem.429*, accessed on February 01, 2009, Palmer and Neaverson, 1998, ibid., pp.84-89
[109] Köksal, T. Gül, *İstanbul'daki endüstri mirası için koruma ve yeniden kullanım önerileri*, unpublished PhD Thesis, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, 2005

architecture, and production data as well as the first assessment on values of the edifice.

Table 2.3 Data to be collected in survey forms produced for Zonguldak

SITE	BUILDING
I. Identification a. Name b. Address c. Map reference d. GPS coordinates	**I. Identification** a. Name b. Address c. Map reference d. GPS coordinates
II. Inventory data a. Inventory number b. Survey date c. Photography number d. Reporters	**II. Inventory data** a. Inventory number b. Survey date c. Photography number d. Reporters
III. History and use a. Construction date b. Proprietor, Administrator c. Original function d. Current use	**III. History and use** a. Construction date b. Proprietor, Administrator c. Original function d. Current use
IV. Architectural data a. Site components b. Existing landscape c. Circulation and transportation (location and condition of existing adjacent roads, pedestrian routes, public transportation, parking provisions and problems) d. Nearby environment e. Description	**IV. Architectural data** a. Architect b. Structural system c. Material d. Architectural elements e. Condition of the building (Good, medium, bad) f. Existing landscape g. Circulation and transportation h. Nearby environment i. Description
V. Significance of the site a. Internal values: Age value, technical/technological value, originality value b. External values: Social value, cultural value, artistic/aesthetic value, rarity value c. Use values: Use value, economical/market value, continuity in use	**V. Significance of the building** a. Internal values: Age value, technical/technological value, originality value b. External values: Social value, cultural value, artistic/aesthetic value, rarity value c. Use values: Use value, economical/market value, continuity in use
VI. PHOTOGRAPHS	**VI. PHOTOGRAPHS**

transportation lines, port, workshops, administration buildings, educational buildings, dwellings etc. as well as social relations, daily life and routines, disasters or mine accidents and so; within the scope of this thesis, selected sites and structures are surveyed through proposed forms during field study. The form to be used during this survey should collect following information which combines identification, history

2.3.2 Approaches to conservation of industrial heritage

> In practice, conservation planning is reactive than proactive: heritage resources are often only recognized when under threat. [110]

The conservation of cultural and natural assets is a more familiar concept since its history dates back to the 19th century but conservation of industrial remains is relatively a new one and it has been getting accepted by academicians and public for the last forty years. Abandonment and demolishment of industrial facilities after 1950s arouse the reaction of public: people who worked in these factories for generations were opposing the loss of their history and they were trying to protect their own heritage. After these reactions, primary steps were taken by professionals and volunteers who initially aimed to prevent rapid demolition of industrial buildings. The first international congress on industrial archaeology and conservation of industrial monuments was held in Ironbridge, Britain in 1973 and participants intended to develop an appreciation of the cultural and historic value of the industrial past.[111] In time, studies of academicians increased and non-governmental organizations as well as small scale volunteer groups appeared who are working on the subject.[112] The International Committee for the Conservation of the Industrial Heritage (TICCIH) was founded right after Ironbridge meeting and it stands out among other NGOs with its collaboration with ICOMOS as being official advisor on industrial and technical heritage.

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[110] Alfrey, Judith and Putnam, Tim, 1992, *The industrial heritage: managing resources and uses*, Routledge, London, p.11

[111] Trinder, Barrie, ed., 1992, *The Blackwell Encyclopedia of Industrial Archaeology*, Blackwell Publishers, Oxford, pp.172-173

[112] The International Committee for the Conservation of the Industrial Heritage (TICCIH), European Route of Industrial Heritage (ERIH), European Federation of Associations of Industrial and Technical Heritage (E-FAITH), International Committee for the History of Technology (ICOHTEC), The Association for Industrial Archaeology (AIA) etc. are some of the national and international NGOs that are working on different aspects of industrial heritage.

Although there are a number of documents on different subjects related to conservation of cultural heritage -such as archaeological heritage, historic gardens, Islamic architectural heritage, rural architectural heritage, underwater cultural heritage, landscapes etc.- there is only one officially accepted document and one international charter waiting to be approved on industrial heritage.

"**Recommendation No. R (90) 20 on the Protection and Conservation of the Industrial, Technical and Civil Engineering Heritage in Europe**" is published by European Council in 1990. The document indicates that industrial heritage is a part of historic heritage of Europe and recommends member states to take measures for documentation, preservation and promotion of technical, industrial and civil heritage. TICCIH also prepared an international charter on conservation of industrial heritage after a series of meetings and published it in July 2003, under the name "**The Nizhny Tagil Charter for the Industrial Heritage**". The Charter make definitions and suggestions on the subjects listed below:

- Definitions (industrial heritage and industrial archaeology)
- Values of industrial heritage
- The importance of identification, recording and research
- Legal protection
- Maintenance and conservation
- Education and training
- Presentation and interpretation.[113]

Although the Charter has not approved by ICOMOS and UNESCO yet,[114] it can be considered as the only international document that sums up the key concepts about industrial heritage.

There are not any particular organizations in Turkey that are dealing with industrial heritage. **Docomomo** (Documentation and Conservation of Buildings, Sites and Neighbourhoods of the Modern Movement), a non-profit organization initiated in 1988, focuses on architectural heritage of modern movement[115] where industrial buildings of the 20th century can be counted as one of the topics. Another

[113] *The Nizhny Tagil Charter for the Industrial Heritage*, TICCIH, Moscow, 2003
[114] Draft version of the Charter is still in discussion (Icomos 2005-2008 Triennium Report of the Secretary General to the 16th General Assembly, Montreal September 7, 2008 (*http://www.international.icomos.org/quebec2008/reports/pdf/GA_2008_Report_SG_EN+FR.pdf*, accessed on February 05, 2009)
[115] *http://www.docomomo.com/general_information.htm*, accessed on February 02, 2009

organization that has studies on conservation of industrial heritage is **Chamber of Architects**. They organize local working groups on the subject, make publications –both books and articles in periodicals–, arrange exhibitions, make legal applications for registration of industrial sites and buildings, inform press about the subject etc. For example, registration of Central Scrubber in Zonguldak was accomplished by contributions of Chamber of Architects Zonguldak and Ankara branches. "**Gazhane Çevre Gönüllüleri"** is the only volunteer group in Turkey that reacted and formed a local crowd against demolition of Hasanpaşa Gasometer in İstanbul during 1990s.[116] After demonstrations and support of Chamber of Architects as well as Conservation Council, a restoration project functioning Gasometer as a cultural center was produced by İstanbul Technical University.

National or local organizations or volunteer groups have an important role in preservation and conservation of industrial heritage. In Europe, NGOs dealing with industrial and technical heritage form a network, European Federation of Associations of Industrial and Technical Heritage (E-Faith) and organize annual meetings to share experiences and look for collaboration. Although many of the groups are composed of few people, their contribution to conservation is valuable. They provide legal preservation for buildings, form industrial routes in cities, found technical museums and so. Establishment of local and national NGOs that are dealing with industrial heritage is a must in order to implement a proper inventory and future projects.

There are many projects that can be exemplified for renewal of industrial areas and buildings. Vacant sites / buildings are occupying huge areas that are located close to city centers. These can be evaluated as profitable and valuable lands and wanted to be used by local governments as well as private investors. Although there are problems associated with the re-use of industrial buildings (such as size and scale

[116] "Hasanpaşa Gazhanesi: kentli bilinciyle yaratılan örnek", *http://www.arkitera.com/haberler/2002/03/07/hasanpasa.htm*, Hızlan, D., "Kadıköy'deki Hasanpaşa Gazhanesi kültür merkezine dönüştürülmelidir", *http://hurarsiv.hurriyet.com.tr/goster/haber.aspx?id=80512&yazarid=4*, accessed on February 03, 2009

limiting the possibilities of re-use, or their negative image as run-down areas),[117] assigning new functions to these areas is the only way to maintain their survival. Size and scale of the spaces is also an advantage in one sense by having unusual space qualities and potential of them to create new spaces and uses within.

There are a number of restoration and renewal projects that are held for industrial areas. These projects differ in their starting point, scale, or function. Firstly, the projects might start with the public's reaction, or for being valuable, or by a governmental approach for urban renewal. Secondly, the scale of heritage might range from an object to huge lands that are measured in hundreds of square kilometers. Thirdly, there are many functions that can be attributed to renewed industrial buildings such as museums and cultural centers as the most common ones, together with residential, office, educational, commercial, sportive uses and so. The following examples are grouped into five according to scale of industrial asset (from urban element to regional renewals) and tried to be chosen from different functional preferences.

i. Industrial heritage: architectural elements

Structures or remains belonging to industrial processes or industrial buildings are the smallest part of architectural industrial heritage. Factory chimneys, bridges or railway tracks are also listed as urban objects belonging to industrial past and they are evidences of settlement's industrial route.

Figure 2.6 a) Chimney in Terrassa (author, October 2008) **b)** Ironbridge (*http://www.visitironbridge.co.uk/listattraction.aspx?stay=343*, accessed on February 05, 2009) **c)** Haliç-Blacksea railway (*http://www.thy.com/tr-TR/corporate/skylife/article.aspx?mkl=941*, accessed on February 05, 2009)

[117] Alfrey, Judith and Putnam, Tim, 1992, *The industrial heritage: managing resources and uses*, Routledge, London, p.16

ii. Building scale

Although most of the production facilities require more than one building to process, there are factories and small-scale power plants that are housed in a single building. Stadselectriciteit, is the electricity production facility of Izegem, a small town in Belgium. The town electricity company started to operate in 1901 and remained active until 1966.[118] This one storey masonry brick building works as a local museum for the town. It houses and exhibits the equipments and some documents related to electricity production as well a large steam engine which can be still operated for exhibitive purposes.

Another example is mNACTEC, Catalonia Science and Technology Museum which is located in Terrassa, Spain. The building was a textile factory during last century and it was restored and converted into a technology museum with few additional structures. Terrassa city, approximately 30 km from Barcelona, was an important center for textile production in Catalonia. Most of the factories and workshops were left during 1970s but different than many examples; most of the structures were restored and re-functioned by the participation of public. The city became an important cultural and touristic spot.

Figure 2.7 a) Exterior view of Izegem Museum **b)** Old maps and poster related to history of electricity in Izegem **c)** Technical equipment in the building **d)** Technical equipment in the building (author, November 2007)

[118] *http://www.musea.izegem.be/eng/stoommachinemuseum.asp*, accesssed on January 29, 2009

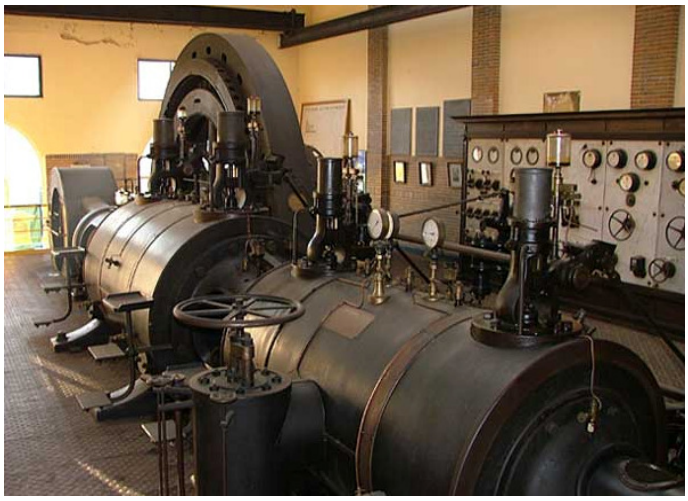

Figure 2.8 Steam engine in Izegem (*http://www.musea.izegem.be/eng/stoommachinemuseum.asp*, accessed on January 29, 2009)

Figure 2.9 Roof of mNACTEC, a typical example of Catalan architecture (*http://nuitdesmusees.culture.fr/medias/jpg/473-hd.jpg*, accessed on January 29, 2009)

Figure 2.10 a) Exterior view of entrance block, mNACTEC **b)** Exterior view of factory building **c)** Inside of the chimney **d)** Steam engine **e)** Interior of the factory building **f)** Interior of the entrance block (author, October 2008)

iii. Site scale

Industrial establishments are usually composed of a number of buildings: production buildings, administrative buildings, social infrastructure, dwellings and so on. When an industrial building is abandoned, its site becomes deserted too. In most of the cases, renewal of an industrial heritage site includes projects that are dealing with more than one building. There are many examples of renewed industrial sites but Vienna Gasometers and Santral İstanbul are the ones that are selected for their similar approaches in accommodating many functions and becoming the part of the city.

Gasometers in Vienna, Austria were built between 1896 and 1899 and they became obsolete during mid-1980s.[119] Monumental structure of these four cylindrical blocks had turned them into one of the symbols of its neighborhood in years and as a result, they were registered in 1981, while they were still in use.[120]

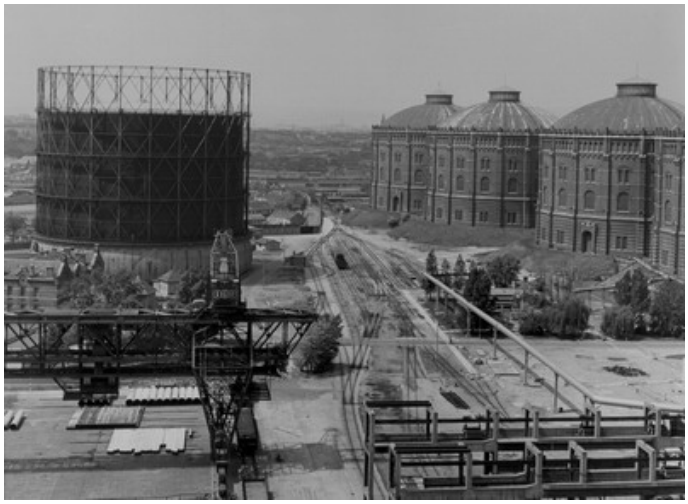

Figure 2.11 Gasometers in 1909 (*http://www.wiener-gasometer.at*, accessed on January 29, 2009)

When it was decided to create new uses for these buildings, the first step was to connect the site with existing transportation network: a new metro station was built

[119] Schleifer, Simone, ed., 2006, *Converted Spaces*, Taschen, Köln, p.49
[120] Wehdorn, Manfred, 2002, "Viyana'daki Gazometre Binalarının Yeniden Kullanımı", Tağmat, T. S., trans., *Mimarlık*, Sayı: 308, p.49

and a new connection leading to Gasometers was added to the highway.[121] Each structure was designed by different architects (Jean Nouvel, Coop Himmelblau, Manfred Wehdorn, and Willhelm Holzbauer) with different architectural approaches. Finally, this complex, including residential units, shopping mall, open areas, cinemas, offices, student dormitories etc., developed into a popular site that is used by different groups of society.

Figure 2.12 Exterior and interior views of Gasometer blocks (*http://www.wiener-gasometer.at*, accessed on January 29, 2009)

A recent Turkish example for conservation and re-use of an industrial site is Silahtarağa Power Plant in İstanbul. Being the first thermal power plant of Turkey, Silahtarağa started to operate in 1914.[122] The plant is located in the old industrial zone of İstanbul and provided electricity to the city until 1983. Group of buildings in the site –such as power plant and its additions, administration, different types of housing, cafeteria– were in a good condition and they were registered in 1991 with the decision of İstanbul Conservation Council.[123] After an interval of 15 years, restoration project of the site carried out by public and private institutions and support of non-governmental organizations. Opened in 2007, Santral İstanbul

[121] Cimcoz, Nerime, 2002, "Viyana'da Simmering Gazhanesi, Gazometreden Heterojen Yapı Tarzına Geçiş", *Arredamento Mimarlık*, Temmuz-Ağustos 2002, p.125
[122] Cengizkan, Ali, 2006, "İstanbul Silahtarağa Elektrik Santrali: Türkiye'de Fabrika ve İşçi Konutları", *Bülten*, Sayı: 45, Dosya 03, TMMOB Mimarlar Odası Ankara Şubesi, p.14
[123] Cengizkan, 2006, ibid., pp.15-17

includes Museum of Energy, spaces for contemporary artistic and cultural activities, a public library, recreation areas, residences and educational units.[124]

Figure 2.13 a) Aerial view of Santral İstanbul **b)** Exterior view of exhibition space **c)** Recreational areas **d)** Interior view of Energy Museum **e)** Residents to be used by visiting artists and tourists **f)** Interior view of Energy Museum (*http://www.santralistanbul.com*, accessed on January 29, 2009)

iv. Urban renewals

The large scale interventions on industrial heritage take place at industrial areas, usually under the name "urban renewals". Two different projects will be presented in this section, each of which differs in aim, approach and final product.

The first project is Aker River Environmental Park in Norway. The industrial formation around Aker River containing redundant and ongoing industry as well as high housing density, had produced a heavily polluted environment and government decided to prepare a project for the area.[125] Aker River Environmental Park was the result of a series of planning activities carried out by the Ministry of Environment and local government. The area was not totally cleaned from industry, some of them are still active and establishment of small scale productions are encouraged within defined standards. New uses were appointed to old industrial buildings and existing housing stock was renovated. Finally, the riverbank was cleaned and greened to form a track for inhabitants that became a densely used touristic route.

[124] *http://www.santralistanbul.com*, accessed on January 29, 2009
[125] Alfrey and Putnam, 1992, ibid., p.22

The second area, London Docklands is located along Thames River and was one of the largest docks on world where traditional port activities including ship repair, heavy engineering, food processing, warehousing and distribution were carried on.[126] The docks were started to be closed between 1960 and 1980, because of various technologic and economic changes, and left around 21 km² of derelict land in East London. The area was redeveloped in 1981 by the British government. The project was executed by London Docklands Development Corporation, LDDC, established in 1981 who envisioned a mixed-used area with a financial center being the centerpiece.[127] LDDC was a statutory body appointed and funded by central government with wide powers to acquire and dispose of land in the Docklands. It also served as the development planning authority for the area.

Figure 2.14 Akerselva, riverbank (*http://www.mostphotos.com*, accessed on January 29, 2009)

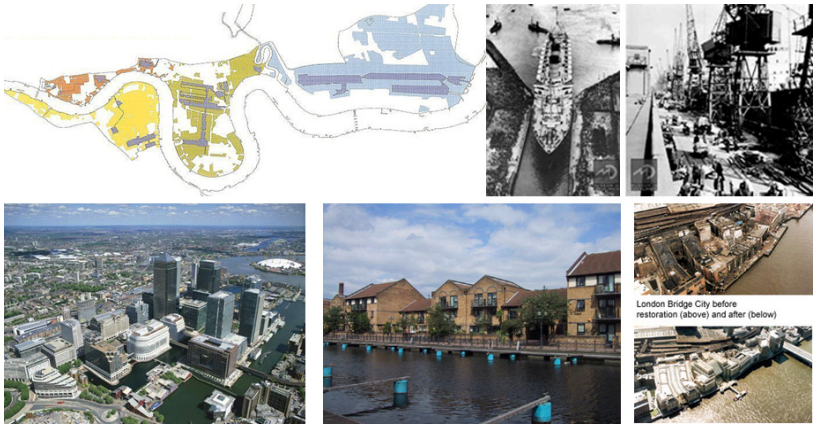

Figure 2.15 London Docklands (*http://www.lddc-history.org.uk*, accessed on December 28, 2008)

[126] *http://www.lddc-history.org.uk/beforelddc/index.html*, accessed on February 03, 2009
[127] Urkun Bowe, İlknur, 2008, *Comparative Analysis of Post Industrial Dockland Transformation Initiatives: Guidance for Policy for the Haydarpaşa Port and Surroundings*, unpublished MS thesis submitted to the Graduate School of Social Sciences, Middle East Technical University, p.26

Size of the site resulted in formation of different types of buildings and different districts within Docklands: residential neighborhoods, central business district with skyscrapers or areas with cultural activities. Infrastructure of the area, communication systems and transportation was also overhauled. Some of the industrial buildings at the site were re-functioned and conserved whereas some of them were demolished to gain land.[128]

v. Regional renewals

There are industrial regions housing a number of cities with industrial facilities. The Ruhr Valley in Germany is an example of regional transformation of industrial lands. One of the main mining and production centers of Europe since the 19th century with steel mills, coke smelters, coal mines, and chemical plants; the area was gradually abandoned in 1980s because of becoming profitless.[129] *IBA Internationale Bauausstellung* Emscher Landschaftspark was organized during 1990s in the Ruhr district and the main attempt was to set quality building and planning standards for the environmental, economic and social transformation of an old industrialized region with the help of approximately 100 projects.[130] Ruhr district includes a total of 53 towns within its boundaries and 20 of them were included in the development of Emscher Park organization.[131]

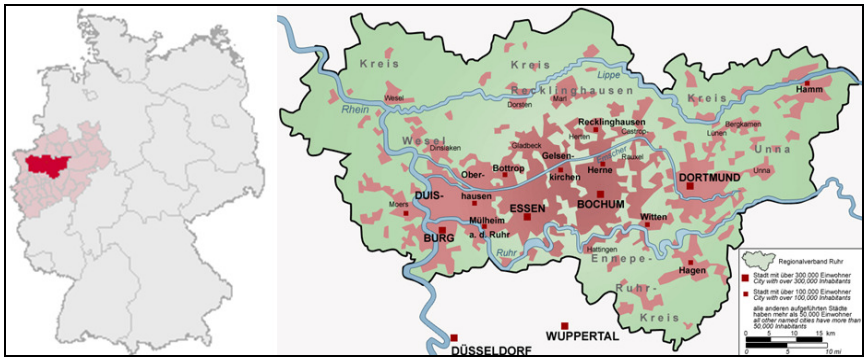

Figure 2.16 a) Ruhr Area within Germany **b)** Map of the area (*http://en.wikipedia.org/wiki/Ruhr*, accessed on December 27, 2008)

[128] Köksal, 2005, ibid., p.135
[129] Arguner, Şeyda, 2000, "Dönüşen topraklar", *Domus m*, December 2000, p.72
[130] "Landschaftspark Duisburg Nord*", http://www.latzundpartner.de/projects/detail/17*, accessed on December 26, 2008
[131] Karabaş, Burcu, 2008, "Ruhr Bölgesini Başarıyla Dönüştüren Projenin Sırları", *http://www.arkitera.com/h35430-ruhr-bolgesini-basariyla-donusturen-projenin-sirlari.html*, accessed on October 29, 2008

Figure 2.17 Landscape Park Duisburg Nord, Ruhr Area (*http://www.latzundpartner.de/projects/detail/17*, accessed on December 27, 2008)

Figure 2.18 Zollverein Coal Mines in Essen, Ruhr Area (*http://www.zollverein.de*, *http://www.arkitera.com/h35430-ruhr-bolgesini-basariyla-donusturen-projenin-sirlari.html*, accessed on December 27, 2008)

The aim of this 10-year project was to increase ecological qualities of the area and create recreation parks within.[132] The main works can be summarized as maintaining historic-technologic-architectural continuity of the area by means of a holistic approach, implementation of landscape projects, arrangement of riverbanks, providing dense public use, restoration of workers' dwellings, re-functioning of coal

[132] Köksal, 2005, ibid., p.131

mining and heavy industry structures as museums, cultural centers, recreation areas, educational purposes etc.[133]

Duisburg Nord and Zollverein Coal Mines are two projects that transform the area mainly for public use. Duisburg is much more a landscape project that uses industrial spaces for open air activities. Zollverein Coal Mine Industrial Complex in Essen has been inscribed as World Heritage Site since 2001. The site is planned as the cultural center of the city where concerts, exhibitions, festivals, or theatre and dance shows took place. Zollverein is an important part of the activities designed for Essen's "European Cultural Capital in 2010" program.

The five scales exemplified above are selected among implemented national and international projects. There are not any Turkish examples for urban and regional renewals although there are many industrial settlements and cities, such as Zonguldak, Ereğli, İskenderun, Karabük etc., were formed during Republican period. Single structures belonging to industrial processes are evaluated as cultural heritage and their togetherness should be also assessed as a value for their conservation.

[133] Köksal, 2005, ibid., p.132

CHAPTER 3

VALUE ASSESSMENT FOR CULTURAL HERITAGE

> Values are the subject of much discussion in contemporary society. In this postmodern, post-ideology, post-nation-state age, the search for values and meaning has become a pressing concern. In the field of cultural heritage conservation, values are critical to deciding what to conserve —what material goods will represent us and our past to future generations— as well as to determining how to conserve.[1]

The process of architectural conservation starts with documentation and survey, continues with analysis and assessment, and ends with implementation decisions. The second step includes analysis of physical condition and assessing cultural significance of the monument or site. One of the most crucial questions of the conservation discipline "What deserves to be conserved?" comes to the mind right in this point. Conservation of ancient monuments or significant art objects, such as Acropolis in Athens or David of Michelangelo, as well as religious buildings was approved by most of the conservators and public. Beauty of a painting or a sculpture, respect and affection for ancestors and history, or fear and respect towards religion were the main reasons for this concern which cannot be explained by a systemized valorization approach but by nameless hidden values. Erder states that this conservation effort is mainly due to religious, practical and aesthetic reasons.[2]

Values attributed the works and conservation of them are mostly because of the respect for previous generations and their labor. Sometimes vice versa is also valid; the hate for the former generation or reign resulted in demolishment of their works. It

[1] Avrami, Arica et al., 2000, *Values and Heritage Conservation*, The Getty Conservation Institute, Los Angeles, p.1
[2] Erder, Cevat, 1986, *Our Architectural Heritage: from Consciousness to Conservation*, UNESCO, Paris, p.15

is hard to say that works that are chosen as "valuable" had awarded with conservation however "invaluable" works had faced the risk of disappearance or being destroyed. Sometimes survival of a monument is achieved by deliberate conservation efforts and sometimes by accidental actions like continuous use of materials or buildings. For example, some of the conserved antique settlements can be observed as a whole today, however some of them can only be traced from re-used parts in the contemporary buildings in the surrounding settlements; or most of the traditional dwellings were not evaluated as cultural heritage once but they managed to remain during the 20th century with the help of their constant habitants. This is clearly not an intentional conservation approach but the result observed today can be still labeled as conserved cultural heritage.

In order to decide what to conserve, need for an objective systematization of value assessment was understood towards the end of the 19th century. The earliest publication on the subject was an article by Austrian art historian **Alois Riegl** in 1902 under the title *"Modern Cult of Monuments"*[3] in which he discussed the meaning of monument and the values assigned to it. Riegl divided monuments into two types: intentional monuments (monuments of art and history) and unintentional monuments, in other words historical monuments.[4] He defines **intentional monument** as "a human creation, erected for the specific purpose of keeping single human deeds or events alive in the minds of future generations."[5] According to him, **unintentional monuments** erected by people who wanted to satisfy their own practical and ideal needs and it is our modern perception, not their original purpose, which makes us to evaluate these works as monuments.[6] Developed around these definitions, Riegl grouped values into two as **commemorative values** and **present-day values**. The former, "values of the past" as explained by author, includes age value (shows itself in the monument's dated appearance), historical value (arises from stage it represents), and intentional commemorative value aiming to preserve a moment.[7] The latter, present-day values, which are formed by contemporary needs

[3] Riegl, Alois, 1982, "The Modern Cult of Monuments: Its Character and Origin", translated by K. Forster and D. Ghirardo, *Oppositions*, New York, Volume: 25, pp.21-51.
[4] Riegl, 1982, ibid., pp.21-23
[5] Riegl, 1982, ibid., p.21
[6] Riegl, 1982, ibid., p.23
[7] Riegl, 1982, ibid., pp.31-38

and practical uses, consist of two main groups: use value which gained by continuous use of monument and art value.[8] Art value is described with newness and relative-art values. Riegl describes newness value with a contradiction to age value with being completely new and non-decayed where relative art value is defined with objective and constantly changing perception of art.[9]

Discussions on value assessment started with Riegl's definition of monument and evaluation on value types. However, his study was limited with monuments in the architectural scale which is quite understandable because heritage and conservation issue of the time was focused on monuments and art works. The concept evolved in time and conservation started to deal with different scales, namely built heritage, as well as natural surrounding. Physical context of architectural heritage expanded with inclusion of monument and its immediate surrounding, complex of buildings, settlement, region, urban, natural, and rural settlement scales.[10] Value of a whole together with single edifice had been taken into consideration and historic environments as tangible records showing the flow of life are evaluated as cultural heritage as well. Civil architecture examples –such as houses, fountains, public squares etc. – and their togetherness that forms a historic settlement has become a part of heritage perception. Along with antique sites villages which had been regarded as heritage for years, towns and cities of closer centuries are also apprised for their values that provide clues for past times.

During 1990s, the concept of "intangible heritage" arouse in addition to tangible heritage that is in the agenda of conservation for a century. Intangible heritage is described in the "Convention for the Safeguarding of the Intangible Cultural Heritage" published by UNESCO in 2003 as:

> "… the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and

[8] Riegl, 1982, ibid., pp.41-42
[9] Riegl, 1982, ibid., p.42
[10] Erder, 1986, ibid., p.15

> continuity, thus promoting respect for cultural diversity and human creativity."[11]

Intangible heritage has been a part of value researches since Riegl, and its variations found themselves place in following value groupings in different titles. These values are associated with the social characteristics of the heritage and link their materialistic existence with aspects of culture, daily life, social events, and religious beliefs.

After Riegl, many researchers have continued with the studies on values assigned to cultural heritage. There have been references on values of cultural heritage in many international documents on the following decades as well. In Venice Charter (1965), "modest works of past with cultural significance" are also defined as historic monument for holding the evidence of a particular civilization, a significant development or an historic event (aesthetic, archaeological, and historic values were also mentioned in other articles).[12] Declaration of Amsterdam (1975) states that architectural heritage of Europe is a part of world's cultural heritage, and list its recommendations on integrated conservation with the use of cultural, aesthetic, use, historic, and artistic values.[13] During this century, conservation discipline developed together with rising interest towards the subject and contribution of many other disciplines. Parallel to this, definition of cultural heritage changed and diversified, so far the studies on value determination and types of values. Beside these factors, objective and ever-changing structure of valorization was also affected by different cultures. As it was stated in the Nara Document on Authenticity:

> "All judgements about values attributed to cultural properties as well as the credibility of related information sources may differ from culture to culture, and even within the same culture. It is thus not possible to base judgements of values and authenticity within fixed criteria. On the contrary, the respect due to all cultures requires that heritage properties must be considered and judged within the cultural contexts to which they belong."[14]

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[11] *Convention for the Safeguarding of the Intangible Cultural Heritage*, 17 October 2003, Paris, *http://www.unesco.org/culture/ich/index.php?pg=00102#TOC10*, accessed on March 15, 2009

[12] Venice Charter, The International Charter for the Conservation and Restoration of Monuments and Sites, 1965, ICOMOS

[13] Decleration of Amsterdam, 1975, Council of Europe

[14] The Nara Document on Authenticity, 1994, ICOMOS

As Mason stated, the change of values should be expected as part of the essential, social nature of heritage.[15] Each study evaluated cultural heritage from a different point of view and with running decades, new definitions and types has entered the area. Researchers have two approaches towards values: they rather add new types or re-evaluate / re-group the existing ones. In this chapter, evaluations of Alois Riegl, English Heritage, B. Feilden and J. Jokilehto, Burra Charter, Randall Mason, E. Madran-N. Özgönül, and Gül Köksal will be discussed to develop a proper value assessment for industrial heritage. Although recent sources of 1990s and 2000s are chosen for this discussion because of the continuously changing character of cultural heritage definition and scope, the first evaluation of Riegl in 1902, which was considered as a basis by nearly all researchers, is also taken into consideration.

3.1 An overview of value assessment studies

Riegl's article on values of cultural heritage opened the door to many researchers from different disciplines. Each academician analyzed from his/her point of view and although many types collide with each other, new approaches and new types has emerged in time. In this study, recent sources of 1990s and 2000s are chosen because of the reason explained above, and also publications of authors/organizations who are dealing with architectural conservation are chosen to analyze the subject from a similar perspective. The sources are Riegl, *The Modern Cult of Monuments: Its Character and Its Origin*, 1902; English Heritage, *Sustaining the Historic Environment: New Perspectives on the Future*, 1997; Feilden and Jokilehto, *Management Guidelines for World Cultural Heritage Sites*, 1998; Australia ICOMOS, *Burra Charter*, 1998; Mason, "Assessing Values in Conservation Planning: methodological issues and choices*", Assessing the Values of Cultural Heritage*, 2002; Madran and Özgönül, *Kültürel ve Doğal Değerlerin Korunması*, 2005, and Köksal, *İstanbul'daki Endüstri Mirası için Koruma ve Yeniden Kullanım Önerileri*, 2005.

[15] Mason, Randall, 2002, "Assessing values in conservation planning: methodological issues and choices", *Assessing Values of Cultural Heritage*, ed. M. De la Torre, The Getty Conservation Institute, Los Angeles, p.9

The first source is Riegl's article summarized above in which values are classified as commemorative and present-day values. The second source is published by English Heritage in 1997 to discuss new approaches towards historic environments. In this publication, values are grouped under six headings:

1. Cultural value of the historic environment which reflects the roots of our society and records its evolution.
2. Educational and academic value in which the historic environment can be seen as a major source of information about past.
3. Economic value gained by contribution of heritage to economic development via encouraging tourism, and supporting communities by creating good environments.
4. Resource value that can be defined by re-use of existing buildings.
5. Recreational value of historic environment which provides spaces for people's recreation and enjoyment
6. Aesthetic value of heritage that makes a major contribution to the aesthetic quality of townscapes and landscapes.[16]

The third source on value assessment is the book of Feilden and Jokilehto, written for determining guidelines for management of World Heritage Sites. Authors divided values into two groups: cultural and contemporary socio-economic values. The former group includes identity value (related to the emotional ties of society to specific objects or sites), relative artistic or technical value (based on research and the significance of technical, structural and functional concept and workmanship of the heritage), and rarity value that defines the resource's rarity, representativeness or uniqueness.[17] Identity value also covers age, tradition, continuity, memorial, legendary; wonder, sentiment, spiritual, religious; and symbolic, political, patriotic and nationalistic values.[18] Contemporary socio-economic values consist of five sub-groups: economic value (generated by the heritage resource or by conservation action), functional value (continuity of the original function or the initiation of a compatible use), educational value (its potential for cultural tourism, and the awareness of culture and the history), social value (related to traditional social activities and to compatible present-day use), and political value (related to specific events in the history of the heritage resource).[19]

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[16] *http://ihbc.org.uk/context_archive/55/historicenvironment_dir/historicenvironment_2.htm*, accessed on December 23, 2008

[17] Feilden, Bernard M. and Jokilehto, Jukka, 1998, *Management Guidelines for World Heritage Sites*, ICCROM, Rome, pp.18-19

[18] Feilden and Jokilehto, 1998, ibid., pp.18-19

[19] Feilden and Jokilehto, 1998, ibid., pp.19-20

The fourth source is "Burra Charter for the conservation of places of cultural significance" of Australia ICOMOS, published in 1998. In the Charter, cultural significance of a place is defined by aesthetic, historic, scientific, and social values (i.e. political, religious, spiritual and moral benefits of the heritage). Burra Charter also states that cultural significance may change as a result of the continuing history of the place and each piece of new information can change its understanding. Another important statement of the document tells that places' values can differ due to diverse groups and individuals.[20]

In the fifth publication, "Assessing values in conservation planning: methodological issues and choices", Randall Mason makes a provisional typology which includes values highly associated with heritage sites and conservation issues and shaping the decision making process.[21] Mason divides values into two main groups: sociocultural and economic values, and then lists other types within them.

1. Sociocultural values: defined as "traditional core of conservation", and they are attached values holding special meanings for people or social groups.
    a. Historical value can be related to heritage's age, it's relation with historical people/events or its documental potential. Educational /academic value (its potential to gain knowledge about past) and artistic value (based on being unique, the best, a good example of etc.) are types of historical value.
    b. Cultural/Symbolic value refers to shared meanings associated with heritage that are not historic. Political value (use of heritage for political purposes), and craft- or work-related values are listed within.
    c. Social values make possible to perform social relations. This type of value also includes state of belonging to a social identity that derives from a specific environment, namely that cultural heritage or historic settlement.
    d. Spiritual/Religious values can originate from known religions or from wonders.
    e. Aesthetic value refers to visual qualities of heritage.
2. Economic values:
    a. Use/Market value of a heritage is its deriving goods and services that are tradable and priceable in existing markets.
    b. Nonuse/Nonmarket values, such as existence value, option value, and bequest value, cannot be traded in market so that they cannot be expressed in terms of price.[22]

[20] *The Burra Charter for the Conservation of Places of Cultural Significance*, 1999, The Australia ICOMOS.
[21] Mason, 2002, ibid., p.10
[22] Mason, 2002, ibid., pp.11-12

The sixth source is "Kültürel ve Doğal Değerlerin Korunması" by Emre Madran and Nimet Özgönül where basic concepts of conservation are defined. Authors aimed to explain all of the values briefly which are discussed by various scholars since. Continuity value, historical value, commemorative value, mythological value, artistic and technical value, authenticity value, rarity value, uniqueness value, group value, plurality value, homogeneity value, economic value, functional value, traditional value, educational value, and document values of cultural and natural heritage are clarified with appropriate examples.[23]

The last source is a PhD thesis prepared by Gül Köksal on conservation of industrial heritage in İstanbul where a model for evaluation of historic industrial buildings and sites was proposed. 17 criteria under 10 titles were set by the author and industrial heritage of İstanbul was valuated accordingly. These criteria are historical importance, functional importance, cultural importance, symbolic importance, architectural-artistic importance, rarity value, continuity in use, importance for industrial archaeology, originality value (design, material, construction technique, location, equipments), and environmental importance (regional, urban, national, international).[24] Here, different than other studies, "importance for industrial archaeology" stands out with its direct relation to the subject of this thesis. The author explains this article as "importance in terms of history of industry with regard to construction technique, production system and technology".[25] However, this criterion can be assessed as a result of a valuation process. For example, the building can have historical significance related to industrial past, or it can have a rarity value for being an ucommon example of a construction system or a proper technology. Its place within the other cases of industrial archaeology is a subject of a comparative study that can be made between national and international cases rather than a criterion to decide the values of the property.

[23] Madran, Emre and Özgönül, Nimet, 2005, *Kültürel ve Doğal Değerlerin Korunması*, TMMOB Mimarlar Odası, Ankara, pp.61-75
[24] Köksal, Gül, 2005, *İstanbul'daki endüstri mirası için koruma ve yeniden kullanım önerileri*, unpublished PhD thesis submitted to İstanbul Teknik Üniversitesi Fen Bilimleri Enstitüsü, pp.181-182
[25] Köksal, 2005, ibid., p.181

Table 3.1 Heritage value groupings of various academicians and organizations

Riegl 1903	English Heritage 1997	Burra Charter 1998	Feilden, Jokilehto 1998	Mason 2002	Madran, Özgönül 2005	Köksal 2005
- Commemorative	- Cultural	- Aesthetic	- Cultural	- Socio-cultural	- Continuity	- Historical importance
Age	- Educational and academic	- Historic	Identity	Historical	- Historic	- Functional importance
Historical	- Economic	- Scientific	Relative artistic or technical	Cultural/Symbolic	- Memory	- Cultural importance
Intentional commemorative	- Resource	- Social (including political, religious, spiritual, moral beliefs)	Rarity	Social	- Mythological	- Symbolic importance
- Present-day	- Recreational		- Contemporary socio-economic	Spiritual/Religious	- Artistic and technical	- Architectural-artistic importance
Use	- Aesthetic		Economical	Aesthetic	- Authenticity	- Rarity value
Art			Functional	- Economic	- Rarity	- Continuity in use
(Newness and relative-art)			Social	Use / Market	- Uniqueness	- Importance for industrial archaeology
			Political	Nonuse / Nonmarket	- Group	- Originality value (design, material, construction technique, location, equipments)
					- Multiplicity	
					- Homogeneity	
					- Economical	
					- Functional	
					- Traditional	
					- Educational	- Environmental importance (regional, urban, national, international)
					- Documentary	

* English Heritage and Burra Charter use listed values to define particular concepts: sustainability and cultural significance

* Economic / market values came on the scene of heritage conservation after changing financial policies in 1980s.

* Madran-Özgönül and Köksal list all possible values that can be used for heritage assessment.

All of these publications make valuable contributions to conservation discipline by analyzing different inputs from different viewpoints. Riegl is the beginning point of all studies and his classification (commemorative and present day values) is still valid since the heritage is a concept that should be assessed by its own time's and today's point of view. Feilden and Jokilehto discuss the value concept for evaluation of world cultural heritage sites,[26] and they follow Riegl's point of departure but re-name the values due to cultural and political structure of the 20th century. Burra Charter and document of English Heritage do not discuss value concept in general. They are using listed values for specific reasons: the former defines cultural significance and the latter explains sustainability over listed values. Mason creates a provisional typology with the help of previous studies in order to discuss place of values in heritage assessment. Madran-Özgönül and Köksal collect all possible values for an easier assessment and decision process. The last two lists can be reduced or expanded relatively for each subject or site to be studied since generating values depends on culture and heritage notions.

3.2 Valuation of cultural heritage in legal documents in Turkey

The Turkish Law No.2863 on the Preservation of Cultural and Natural Assets,[27] declared in 1983, is the major arrangement and support for preservation and conservation of cultural and natural heritage in the legal sense. In this Law, cultural assets are defined as:

> "All assets located underground, aboveground or underwater; related to **science, culture, religion and fine arts** of prehistoric and historic periods; which are being **subject to social life** in historic and prehistoric periods and hold **scientifically and culturally original values**."[28]

In this definition, time period, location and characteristics of the cultural heritage are tried to be specified in order to decide what to conserve among various cultural heritage nominees.

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[26] World Heritage List includes 878 properties of cultural and natural heritage with outstanding universal value. These properties include single buildings, historic sites and settlements as well as natural sites. Industrial buildings and sites are also part of this list since 1980s.

[27] Kültür ve Tabiat Varlıklarını Koruma Kanunu, No.2863 (The Turkish Law No.2863 on the Preservation of Cultural and Natural Assets), 1983, *http://www.kultur.gov.tr/teftis*, accessed on April 25, 2009

[28] The Law No.2863, 1983, ibid., Article 3

Table 3.2 Specifications used to define cultural heritage in the Law No.2863

TIME PERIOD	Prehistoric, Historic
LOCATION	Underground, Aboveground, Underwater
CHARACTERISTIC	Related to science, culture, religion and fine arts Being subject to social life Holding scientifically and culturally original values

When compared to types of values listed on previous pages, the Law points out the importance of scientifically and culturally original values, and states relation of the cultural assets to science, culture, religion, fine arts and social life of its period. However, there is a restriction on what to preserve in the 6th article where the scope of immovable cultural and natural properties are given. Here, it is noted that immovable cultural property has to be built before the end of 19th century to be considered for preservation, other wise; it has to have significance and suitable characteristics. In the following sentence, all immovable assets within the registered sites, as well as all buildings and sites related to national history by taking place during War of Independence, foundation of Turkish Republic, and all buildings used by Atatürk are listed as cultural asset without any limitation. The cultural assets, which do not worth preserving, will be decided by decision of local Conservation Councils and those assets are the ones without "architectural, historical, archaeological and other significances and features".[29]

Another legal document that includes details on valuation of cultural heritage is "Regulation regarding Inventory and Registration of Immovable Cultural and Natural Assets".[30] In the 4th article, evaluation criteria for inventory of immovable assets are listed:

- Single buildings having structural, decorative, physical stability, material, construction technique, and design specialties within **artistic, architectural, historical, aesthetic, local, archeological values** are assigned as cultural asset.
- Urban sites having single buildings (which are showing the required features of a cultural asset) with density, architectural, and historical unity.

[29] The Law No.2863, 1983, ibid., Article 6
[30] Korunması Gerekli Taşınmaz Kültür ve Tabiat Varlıklarının Tespit ve Tescili Hakkında Yönetmelik, 1987, *http://www.kultur.gov.tr/teftis*, accessed on April 25, 2009

"Principle Decision No.660 Regarding the Grouping, Maintenance and Conservation of Immovable Cultural Assets"[31] divides single buildings into two groups:

- Buildings in the 1st group: These are defined by having **historic and aesthetic values** on their own, and what mentioned here are monumental buildings. The article states that these buildings should be preserved with their **historic, symbolic, memorial and aesthetic significances**.
- Buildings in the 2nd group: These are components of urban sites, streets and silhouettes that make up **historical identity** of cities, namely examples of civil architecture. In addition to their contribution to identity, these buildings are important for reflecting the **local life style** of the area.

Table 3.3 Values in Turkish legal documents of Ministry of Culture and Tourism

	Single building	**Site**
The Law No.2863 on Preservation of Cultural and Natural Assets 1983	Scientific, cultural, religious, artistic	Social, economic, architectural, historical
Regulation regarding Inventory and Registration of Immovable Cultural and Natural Assets 1987	Artistic, architectural, historical, aesthetic, local, archaeological	Density, architectural, historical unity
Principle Decision No.660 regarding the Grouping, Maintenance and Conservation of Immovable Cultural Assets 1999	Historical, symbolic, memory, aesthetic (*for monuments*) Local life style, namely social (*for civil architecture*)	–

Briefly, value assessment issue has been on the agenda of preservation in Turkish legal papers since 1983. However, different documents make different interpretations on the subject. There is no systematic approach for value types or categorizations that can be used during assessment, and there is no systematic relation between values offered in these documents. Legal definitions and documents on valuation of immovable cultural assets are unable to form a system on values and define them to be used during inventory, registration and conservation process.

[31] (660 nolu İlke Kararı) Taşınmaz Kültür Varlıklarının Gruplandırılması, Bakım ve Onarımları, 1999, *http://www.kultur.gov.tr/teftis*, accessed on April 25, 2009

3.3 Valuation of industrial buildings and sites in international documents regarding industrial heritage

European Council's Recommendation on industrial, technical and civil engineering heritage[32] do not directly has an article on values, but mention some of them while describing the aim of the recommendation. **Technical, cultural and social values** as well as place of heritage in **collective memory** and European **identity** are listed for reasons for protection of industrial, engineering and technical heritage. **Historic and scientific values** are also mentioned in the third part, again without an explanation, where protection and conservation measures are presented.

Another international document where values of industrial heritage are mentioned is Nizhny Tagil Charter, prepared by TICCIH.[33] Here, industrial heritage is defined as "remains of industrial culture which are of **historical, technological, social, architectural or scientific value**." In the second article of the document, values of industrial heritage are listed and, different then Recommendation, described as well.

- Industrial heritage is seen as a part of a historic period and evaluated as universal whole rather than single pieces; which can be labeled as historic value.
- Social value of industrial heritage is explained over being *record of lives of* people and *providing a sense of identity*; and these can be named as document and identity values.
- Technological and scientific values are outlined as building's or site's significance in the history of industrialization.
- Rarity is interpreted as an additional value obtained by *survival of particular processes, site typologies or landscapes;* moreover, early or pioneering examples are emphasized for having exceptional value.

The value types associated with industrial heritage is listed similarly by two of the documents as technical, social, historical, and scientific besides rarity noted as an additional value. The significant point is that both documents underline the place of this heritage in collective memory and communal identity. The emphasis given to these intangible values are probably to provide the admittance and preservation of industrial edifices by local community.

[32] Council of Europe Committee of Ministers, 1990, *Recommendation No. R (90) 20 on the Protection and Conservation of the Industrial, Technical and Civil Engineering Heritage in Europe*
[33] The International Committee for the Conservation of the Industrial Heritage (TICCIH), 2003, *The Nizhny Tagil Charter for the Industrial Heritage*

3.4 Assessment of value typologies

With the light of these discussions, tangible and intangible values of cultural heritage can be grouped under three headings according to their origins as **intrinsic values, extrinsic values**, and **economic values**. All value types analyzed in this chapter are distributed into one of these groups according to their origin. Three groups of values and their content derived from previously analyzed sources can be listed below; but it should be noted that the contents of intrinsic, extrinsic, and economic values have to be re-evaluated and updated for different case studies.

1. **Intrinsic values:** These values are originating from the monument itself. They are concrete, institutional values that come from pure facts / nature of the building's own such as its construction date, history, construction technique, used materials, etc. The measurable nature of intrinsic values that grows out of structure itself allows an acceptance by everyone, there is no need for a professional or an educated viewpoint.
    a. **Age value**: Related to heritage's *age* which is defined as *the length of an existence extending from the beginning to any given time.*[34] So, the longer the existence is, the more valuable the monument becomes. Monuments of later periods are usually ignored because of this reason. For the industrial heritage, where the oldest remains dates back to the start of Industrial Revolution, the monuments of this industrial era, especially the 18th and 19th centuries, are more valued for their age.
    b. **Historical value**: History is basically a chronological record of significant events.[35] In this assessment, historical value represents the relation of cultural asset with these significant international, national, regional or local events/people/institutions in its past. The connection between this value and the monument can be obtained by two ways; whether the monument is intentionally erected after / for a historical event, or it is closely related to a historic event or a specific period in

[34] *http://www.merriam-webster.com/dictionary/age*, accessed on April 04, 2009
[35] *http://www.merriam-webster.com/dictionary/history*, accessed on April 04, 2009

history. Triumphal arches of Roman Empire are the examples of the first group whereas Taksim Square in İstanbul, the place associated with many political and student acts during 1970s, belongs to the second group. For industrial buildings, it is a rare possibility to be erected as an intentional monument; they are mostly interpreted as monuments because of their national and/or local background and their contribution to near surroundings. However, industrial heritage covers a wide range of building types and it might include intentional monuments that are associated with history as well. There are many monuments that were built to honor or remember workers, as well as to celebrate and commemorate the discovery of a mine or foundation of the facility like two different approaches from Poland and Canada are given below.

Figure 3.1 a) Monument of miners killed in a police and army attack during the strike, Wujek coal mine, Poland (*http://en.wikipedia.org/wiki/Pacification_of_Wujek*, accessed on April 04, 2009) **b)** Inverness Coal Miners' Monument for the miners who lost their lives in the coal field, Nova Scotia, Canada (*http://www.ns1763.ca/inverco/invminemem.html*, accessed on April 04, 2009) **c)** List of miners inscribed on the panel (*http://www.ns1763.ca/inverco/invminemem.html*, accessed on April 04, 2009)

c. **Technical / Artistic value**: For the cultural heritage, technical and artistic values are often used together because *technê* – as in the root of technical – is used for art, craft and skill for experience based practice[36] that comprise both value types. For industrial heritage, technical or artistic value must be searched under two headings:

[36] "episteme-technê", Stanford Encyclopedia of Philosophy, *http://plato.stanford.edu/entries/episteme-techne/*, accessed on March 21, 2009

architecture and technical equipment. In terms of architecture, this type is based on significance of technical and/or structural concept, use and choice of material, and workmanship of the heritage.[37] If it is a representative example for its structure, construction technique, workmanship or the use of material, the building can be assessed for having a technical/artistic value. In terms of technical equipment, facilities that house the machines from which technique and process can be still witnessed are listed for having this type of value (at this point, technical value can also be named as **technological value**). Sometimes, the earlier machinery is removed and changed with the recent technology but usually it continues its life with addition of up-to-date parts in time. This helps observing pieces of each period and continuity of production techniques that come together.

d. **Authenticity / Originality value**: Originality is defined as being primary, or produced at first hand; authenticity.[38] *Nara Document on Authenticity* says that conservation of cultural heritage is searched in the values and our understanding of values depends on credible and truthful information sources; and this is where authenticity appears as the main qualifying factor.[39] Nara Document lists possible information sources to judge authenticity as follows: form and design, materials and substance, use and function, traditions and techniques, location and setting, and spirit and feeling, and other internal and external factors.[40] Although it is not mentioned in the international literature, Turkish academicians consider authenticity as another type and stressed out the importance of it while assessing values of cultural heritage.[41] In order to decide whether an industrial heritage has authenticity value or not, design, material, and construction technique can be chosen from the list above. "Use and function" or "spirit and feeling" will be discussed under other types of values in use and

[37] Feiden and Jokilehto, 1998, ibid., p.19
[38] Oxford English Dictionary, *http://dictionary.oed.com*, accessed on April 13, 2009
[39] *Nara Document on Authenticity*, 1995, ICOMOS/ICCROM
[40] *Nara Document on Authenticity*, 1995, ICOMOS/ICCROM
[41] Madran & Özgönül (2005) and Köksal (2002) both listed originality value as one of the values of cultural and industrial heritage (refer to Table 3.1).

internal value groups so they are not included in this list. Other than these three criteria, authenticity of mechanical equipment should also be searched since it is a fundamental part of production process.

e. **Document value**: Remains or structures provide "evidences or information upon any subject"[42] such as construction and/or production technique, material, history, art, daily life etc. of its period, and as a result, each edifice has a document value. Each cultural – equally industrial – asset is a document with the help and as a result of each value type listed above and below.

2. **Extrinsic values:** Extrinsic values are attributed to monuments by people. These values develop with the contribution of public and with their ascriptions due to their life/generation-long experiences with the monument; as a result, they shape due to social, cultural and historical background of a settlement, society, or even an individual. These values are mostly subjective and interpreted in various ways. One of the factors affecting the extrinsic values is time as well. Previous values attributed to works change in time or new values are attributed to works like evaluation of buildings of modern architecture as works to be conserved.

   a. **Sociocultural value**: This type of value is related to links between cultural asset and society, as *social background*, *social climate*, *social duty*, *social fabric*, *social issue*, *social question*, *social virtue*, etc. and *the culture of a particular society, people, or period.*[43] Sociocultural value covers different types of values in itself, including the ones listed below such as political, religious, identity, memory, spiritual, and so. Each writer discusses content of social and cultural value in varied scopes, and group different value types with different combinations under this main title.[44] In this chapter, social and

[42] Oxford English Dictionary, *http://dictionary.oed.com*, accessed on April 13, 2009
[43] Oxford English Dictionary, *http://dictionary.oed.com*, accessed on April 13, 2009
[44] Feilden and Jokilehto locates identity and rarity value under **cultural values**, where identity covers age, tradition, continuity, memorial, legendary; wonder, sentiment, spiritual, religious; and symbolic, political, patriotic, and nationalistic values . On the other hand, educational, social and political values are listed under **contemporary socio-economic values** (Feiden and Jokilehto, 1998, ibid., pp.18-21). Burra Charter puts political, religious, spiritual and moral benefits of the heritage within social values.

cultural values will be discusses together under the title "sociocultural value" because culture and society develop together and cannot be broken apart.

b. **Political value**: Political value can be simply described as relation of heritage with political ideas/matters, and it very much overlaps with historical value. Mason places political value under cultural/symbolic value and defines it as "the use of heritage to build or sustain civil relations, governmental legitimacy, protest, or ideological causes".[45] This can be succeeded in two ways, again very parallel to historic value, a monument can be built to support these causes or an existing building/space can be associated with politic movements. The space cannot be evaluated with its physical aspects only; its formation includes social and political components as well. As Yardımcı summarizes in her thesis on transformation of urban sphere, "…space is not only the object of spatial fix but also of social, moral, and political fixes."[46] Buildings or spaces, particularly our subject cultural assets, are also part of politics by their influence in constructing national and cultural ideals and identities. For instance, archaeological remains prove the strong cultural or historical background, governmental buildings show the power of authority, or industrial buildings illustrate the dominance of machines over nature and humanity.

c. **Aesthetic value**: This type of value derives from appreciation of a special quality in style, beauty or art.[47] Aesthetics of industrial buildings and equipments are quite different from common approach toward "beautiful". The interest in machine aesthetics appeared in the 15th century with technical designs of artists, and increased after the Industrial Revolution with appreciation of machines for their

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Mason states that sociocultural values include cultural / symbolic value, social value, spiritual/religious value, and aesthetic value (The Burra Charter, 1999, The Australia ICOMOS).

[45] Mason, 2002, ibid., p. 11

[46] Yardımcı, Sinem, 2008, *Transformation of Urban Sphere: Hacıbayram Square and Its Environment, Ankara*, unpublished MS thesis submitted to Graduate School of Natural and Applied Sciences, METU, pp. 54-55

[47] Lipe, William D., 1984, "Value and meaning in cultural resources", *Approaches to Archaeological Heritage*, ed. Henry Cleere, Cambridge University Press, p.7; Mason, 2002, ibid., p.9

efficiency as well as monumentality and poetry.[48] The machine aesthetics can be grouped into three according to Brummet as m*echtech* (classical machine aesthetics), e*lectrotech* (high technology machine aesthetics), and c*haotech* (aesthetics of the decayed machine).[49]

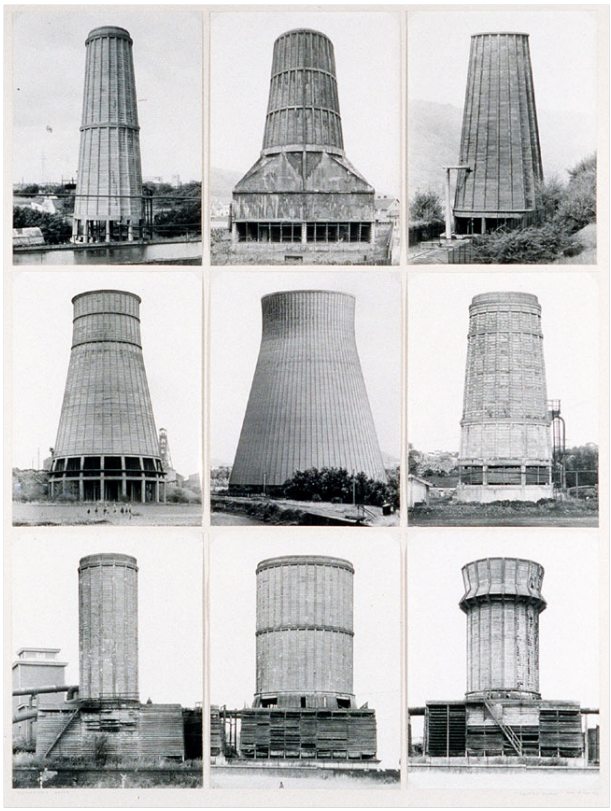

Figure 3.2 Bernd and Hilla Becher's 1972 study of concrete cooling towers. The systematic photography of industrial structures reveals their unusual aesthetic quality, and the photographers brought a new approach in art of documentary photography (*http://www.nytimes.com/2007/06/26/arts/26becher.html*, accessed on May 08, 2009)

Another researcher on the subject, Popelovà, classifies industrial structures from the perspective of their symbolic-aesthetic qualities and their monumentality is emphasized again together with engineering aesthetics that can be observed in several examples.[50]

[48] Eco, Umberto, ed., 2005, *History of Beauty*, 2005, Rizzoli, New York, pp.388-393
[49] Brummet, B., 1999, *Rhetoric of Machine Aesthetics*, Greenwood Publishing Group, p. 89
[50] Popelová, L., 2007, "The symbolic-aesthetic dimension of industrial architecture as a method of classification and evaluation: the example of bridge structures in the Czech Republic", *Acta Polytechnica*, vol. 47, No: 1, p.24

d. **Educational value**: The word education comes to the mind with the definition "the systematic instruction, schooling or training", however, it is also "culture or development of powers, formation of character".[51] The education value covers both definitions. It could be a teaching material for architecture students which shows material use, construction technique, or design of a building. Or it could, raise awareness towards history and helps to judge or accept certain cultures and behaviors as a part of a historical moment or life style. Therefore, each piece has an educational value. In addition to this, Feilden and Jokilehto indicate that educational value includes a potential for cultural tourism, through which awareness could be achieved by integrating history and present-day.[52]

e. **Symbolic value**: Definition of *symbol,* which is "*something that stands for, represents, or denotes something else (not by exact resemblance, but by vague suggestion, or by some accidental or conventional relation) (…)",*[53] can lead us in setting the boundaries of this value. Symbolic value comes on the scene through a contact with past, whether it is a personal experience or a previous knowledge obtained through cultural and historical background. This situation overlaps and sometimes covers other types of values such as historic, commemorative, political and so. Industrial buildings, above all, represent technological development, and transformation of everyday life depending on introduction of mass production. Physically, most of the time their scale and monumentality make them urban symbols, and their contribution to society results in interpretation as ideological symbols.

f. **Commemorative value**: If the cultural asset calls to remembrance, or preserve in memory, by some solemnity or celebration.[54] This kind of value is closely related to personal or public memories that are linked to a specific building or site. Commemorative value could be gained

[51] Oxford English Dictionary, *http://dictionary.oed.com/*, accessed on April 19, 2009
[52] Feilden and Jokilehto, 1998, ibid., p.20
[53] Oxford English Dictionary, *http://dictionary.oed.com/*, accessed on April 19, 2009
[54] Oxford English Dictionary, *http://dictionary.oed.com/*, accessed on April 19, 2009

in relation to historical value, where the edifice is connected to a significant event such as wars, declarations, or person like a hero, writer, politician and so. For the smaller scale, most of the owners and users share moments with the buildings like house, school or workspace throughout their lifetime. However, rather than an ordinary individual's bond, public sharing increases the appreciation of commemorative value. Different than historical value, the cultural asset does not need to be related to some historic / significant event; its connection with personal or public memories (like a neighborhood primary school serving for few generations to the local people) can be named under commemorative value.

g. **Identity value**: Feilden and Jokilehto states that identity value is related to the emotional ties of the society to specific objects or sites, and it covers age, tradition, continuity, memorial, legendary, wonder, sentiment, spiritual, religious; and symbolic, political, patriotic, and nationalistic values.[55] Among the definitions of the word "identity" given in the dictionary, two of them can be related to this value type:

> **1. a.** The quality or condition of being the same in substance, composition, nature, properties, or in particular qualities under consideration; absolute or essential sameness; oneness.
> **2. a.** The sameness of a person or thing at all times or in all circumstances; the condition or fact that a person or thing is itself and not something else; individuality, personality.[56]

In a way, identity value can be described with both definitions given above: as long as people discover their shared qualities with the cultural asset, they create a connection with it and the cultural asset becomes a part of individual's identity. Feilden and Jokilehto are partially correct by relating many other value types with identity value because a person can be attached by many different aspects: the one can share a memory with the building or site whereas the other bonds by means of religious beliefs. However, gathering all those values under a single title is not accurate because each has its own criteria to be discussed. Identity value also has a great contribution to

[55] Feilden and Jokilehto, 1998, ibid., pp.18-19
[56] Oxford English Dictionary, *http://dictionary.oed.com/*, accessed on April 19, 2009

conservation of cultural heritage; the more people regard it as a part of their identity, the more attention is paid for its preservation. The vice versa is also valid; if the society could not interpret the building or site as a part of their being, they do not pay any attention and left it to vanish. This can be exemplified through archaeological remains: a fountain in the village or "pile of stone" that standstills since Romans can be seen as constructions of strangers and rejected by villagers, or they can be owned and preserved by residents for being a part of previous inhabitants of the same lands and a part of their culture.

h. **Spiritual / Religious value**: If the space has some kind of a relation to a spiritual, religious or sacred belief/person/event, or "secular experiences of wonder",[57] it can be stated as having spiritual or religious value. Although, at first glance, it seems like this value has no connection with industry; there are cases where workers ask for safety and protection from religion in some industrial sites. For example, protective souls of Christianity have been a part of mines for years and little chapels or religious corners are formed to ask safety form God.[58]

i. **Mythological value**: This value is formed by associating the cultural asset with a myth, which is a traditional story, typically involving supernatural beings or forces.[59] For example, Mount Ida in north Aegean region of Turkey has connections with Greek legends and has a mythological value in addition to its natural significance.

j. **Relative art value**: The value attributed to the edifice for representing the aesthetic and artistic understanding of its own period as well as today's. The ever-changing structure or art results in qualifying it as *relative*. Today, industrial buildings, spaces and objects are not directly evaluated for having art value but they become source of inspiration for many artists and are used for producing art.[60]

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[57] Mason, 2002, ibid., p.12
[58] TMMOB Maden Mühendisleri Odası, *www.mmo.org.tr*, accessed on April 19, 2009
[59] Oxford English Dictionary, *http://dictionary.oed.com/*, accessed on April 19, 2009
[60] The change in aesthetic understanding and place of machine aesthetics can be followed from article on aesthetic value, which also provides a base for relative art value.

k. **Rarity value**: Some structures or remains are *seldom found, done, or occurring*[61] examples which can be assessed through other constructions of the same type, style, builder, period, region, or some combination of these.[62]

l. **Uniqueness value**: One step further of rarity, uniqueness value can be achieved for being the *only one; one and no other; single, sole, solitary*[63] example of its kind with identifying criteria listed in the previous entry.

m. **Group value**: Group value is defined by Madran and Özgönül in two different planes: vertical (like composition of different phases in archaeological areas, especially mounds) and horizontal (like Ottoman complexes that are composed of different types of buildings).[64] Industrial heritage usually does not exist as a single item; it is mostly combination of various production and service units in a form of industrial site.

n. **Plurality value**: Again defined by Madran and Özgönül, plurality value is related to quantity of a specific building type in a limited physical area.[65] This type of value cannot be used for single buildings, it should be considered in environmental scale. Being in a large number within a particular space identifies the character of a region with its social and economic aspects.[66]

3. **Economic values:** Although use value has been a subject of valuation since Riegl, values related to monetary side of cultural heritage were initiated after economic policies of last decades, especially 1980s. Consumer-oriented approach got ahead in cultural heritage management and conservation, and

[61] Oxford English Dictionary, *http://dictionary.oed.com/*, accessed on April 19, 2009
[62] Feilden and Jokilehto, 1998, ibid., p.19
[63] Oxford English Dictionary, *http://dictionary.oed.com/*, accessed on April 19, 2009
[64] Madran and Özgönül, 2005, ibid., p.70
[65] Madran and Özgönül, 2005, ibid., p.71
[66] Uçar, Meltem, 2007, *Assessment of user-ascribed values for cultural properties in relation with planning process, Case study: Tarsus*, unpublished PhD thesis submitted to Orta Doğu Teknik Üniversitesi Fen Bilimleri Enstitüsü, p.48

accordingly, marketing and "brand" gained importance.[67] Economic values are related to usage and economic potentials of the monument, as well as gaining financial advantage over heritage by its monetary values. Land cost is an important aspect of economic values since heritage assets, especially industrial heritage assets, are subject to demolition most of the time because of their valuable lands in the centers.

a. **Use / Functional value**: Heritage's ongoing or potential use, act of employing for any purpose as it is written in the dictionary.[68] The current use might be "any purpose": whether the original or a proposed, new function. Each building has an economic value by being a part of existing building stock. Some of them have been in use since their construction, and some of them were abandoned in past. Rather than constructing a new one, using the existing possible constructions, re-functioning cultural properties when they allow for appropriate functions, provide financial benefit for both the owner and the administrator. At first sight, industrial buildings that are constructed for purely utilitarian aims, might not seem be used for different functions rather than industry. However, there are a number of architects and planners who showed the possibilities for re-functioning of these buildings and areas.[69]
b. **Market value**: This type of value equals to monetary worth of structure or remains that can be tradable and priceable.[70] It can be described with worth of a physical edifice, use of it for some function or gaining money over it by paying for entry fees, souvenirs, booklets etc. Each cultural property has to have monetary value: it can be achieved by re-use for any function (revaluing existing building stock), by cultural tourism, by worth of material or land and so.

[67] Mourato, S. and Mazzanti, M., 2002, "Economic valuation of cultural heritage: evidence and prospects", *Assessing the values of cultural heritage*, Research Report, ed. M. de la Torre, The Getty Conservation Institute, Los Angeles, p.51
[68] Oxford English Dictionary, *http://dictionary.oed.com/*, accessed on April 19, 2009
[69] Refer to Section 2.2.3 for re-used industrial edifices
[70] The word market is now usually used as rate of purchase as in the "market price" or "market value", Oxford English Dictionary, *http://dictionary.oed.com/*, accessed on April 19, 2009

c. **Continuity in use**: Riegl associates use value with continual use of the monument. If the cultural asset is still in use, no matter if is it is the original function or a new one, it can still provide physical, social and economic benefits.[71] The examples for use of industrial heritage are given above, in the article on use value. The continuous use of these buildings and sites strengthen their place in public acceptance and ease the process of conservation.

To sum up; although some of the values are repeated in nearly all documents (such as aesthetic, historic, and economic values), the number of values attributed to cultural heritage can be raised infinitely or they can be grouped in various combinations with respect to approach of the researcher towards the subject. Every single value noted by the selected researchers are tried to be defined above with their relation to industrial heritage as much as possible. The key point is to re-evaluate these value types for different cases and different cultures, and develop a proper valuation system for each. Within the scope of this thesis, a value assessment system for industrial heritage in Zonguldak is tried to be developed. In order to reach this aim, historical background, culture and current situation of the city should be searched and values should be re-assessed with the light of this information.

[71] Uçar, 2007, ibid., p.50

CHAPTER 4

ZONGULDAK COALFIELD: THE CENTER OF COAL INDUSTRY IN OTTOMAN STATE AND TURKISH REPUBLIC

The city of Zonguldak, which can not be mentioned without the word “coal”, is located in the west of Blacksea Region, in the northwest of Turkey. The city is surrounded by Blacksea on the north, Bartın on the northeast, Karabük on the east, Bolu on the south and Düzce on the west. The city is composed of six districts: Zonguldak Merkez, Alaplı, Çaycuma, Devrek, Gökçebey and Karadeniz Ereğli.[1]

Figure 4.1 Zonguldak and nearby (produced after the base map obtained from *www.hgk.mil.tr,* accessed on June 03, 2008, and Yurt Ansiklopedisi, 1981, p.7708)

[1] *www.zonguldak.gov.tr*, accessed on 03 June 2008

The city is situated in a mountainous area and approximately 50% of the territory is covered with mountains which lay parallel to the coast by forming three rows.[2] There are many small rivers and streams, the longest being the Filyos Çayı, cut through mountains of Zonguldak, and most flow through valleys northward as they tumble to the sea.[3] The region is under the effect of Blacksea climate, which is rainy especially in autumn and winter.[4] 52% of the city's territory is heavily forested; and the area is a natural arboretum with many different species, including endemic vegetation.[5]

Industry is one of the leading sectors in Zonguldak with 30%[6] of the total after the service sector. Despite the regression of industrial investments especially after 1980s, the city has been one of the most important production centers of the country for years. Main areas are major metal industry and mining-quarrying, whose sector-specific shares are far larger than country share.[7] Zonguldak coalfield is among the richest mineral deposits in the eastern Mediterranean. The first band of coal appears on the east of Ereğli and continues 180-200 km to the east. The coal-bearing strata often lie roughly parallel to the coast line of Zonguldak. There are five main coal production areas, from west to east, Armutçuk, Kozlu, Üzülmez, Karadon and Amasra[8] in which the production has been continuous from Ottoman times. The coal reserves continue mostly all along the coast and the centers are chosen with regard to stratification of coal and efficiency of production and transportation. It can be clearly seen from the figure below that mining is concentrated around cities of Zonguldak and Amasra. It is also obvious that there is a considerable amount of coal under the Blacksea; but the lack of proper technology and feasibility issues make management to avoid under water mining activities.

[2] "Zonguldak", *Yurt Ansiklopedisi: Türkiye, il il, dünü, bugünü, yarını*, Anadolu Yayıncılık, İstanbul, 1981-1984, p.7709
[3] Quataert, Donald, 2006, *Miners and the state in the Ottoman Empire: the Zonguldak coalfield, 1822-1920*, Berghahn Books, New York, p.24
[4] *www.zonguldak.gov.tr*, accessed on June 03, 2008
[5] *www.zonguldak.gov.tr*, accessed on June 03, 2008
[6] Services 62%, agriculture 8%,TÜİK Gayri Safi Yurt İçi Hasıla (GSYİH 1987-2001 Dönemi), *www.dpt.gov.tr*, accessed on June 07, 2008
[7] *www.dpt.gov.tr*, accessed on June 07, 2008
[8] *www.taskomuru.gov.tr*, accessed on June 07, 2008

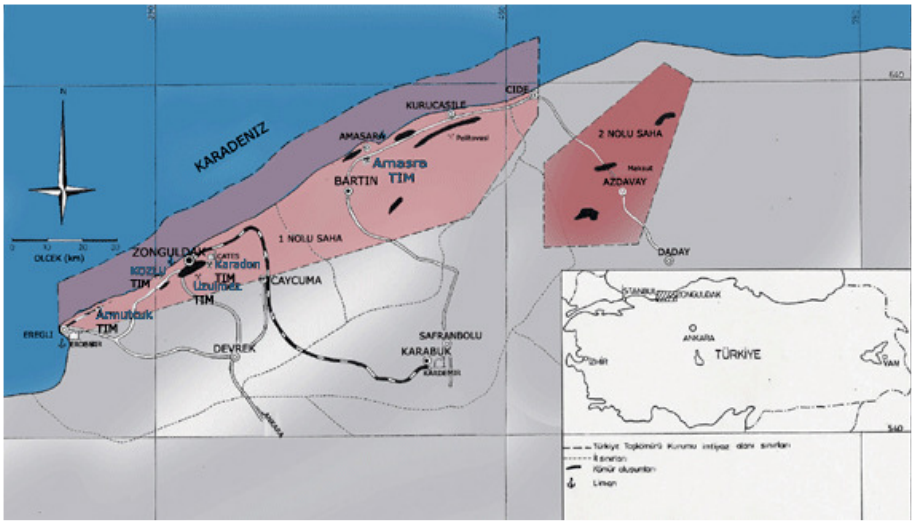

Figure 4.2 Privilege areas of Turkey Coal Corporation (*www.taskomuru.gov.tr*, accessed 07 June 2008)

Zonguldak had been one of cities in Turkey whose population increased every year. The need for workforce triggered migration not only from environs, but also from other parts of the country. However, population of Zonguldak is 615.599 according to 2000 census and speed of annual average population growth is -6.01 between 1990 and 2000.[9] This means there is a population decrease in Zonguldak for the last 10 years which can be explained by the privatization of *Türkiye Taşkömürü Kurumu, TTK* (Turkish Hard Coal Enterprise) and following shrinkage of the corporation.

The leading urban settlement of the western Blacksea, Zonguldak owes its importance to hard coal reserves. The main natural resource, basis of economy and living, as well as the reason for city's once increasing but nowadays decreasing population; coal is the main life source for the city.

4.1 Historical background of the area and industrialization

Zonguldak, which owns its very existence to coal, came into life with discovery of coal and consequently, the settlement turned into an "industrial city" after the foundation of Turkish Republic. Although the history of Zonguldak's surrounding goes back to Phrygian times, the city arose and developed by means of coal mining.

[9] *www.dpt.gov.tr*, accessed on June 07, 2008

In 1830s, Zonguldak was a bay on Blacksea coast with a small pier, around which the officers and soldiers of shipyard belonging to *Tersane-i Amire* (state navy) were living.[10] After the discovery of coal in the mid-19th century, Zonguldak became one of the foremost industrial cities and one of the main energy sources in the Ottoman State. Nevertheless, the State was in a serious economical and administrative trouble then, and importance of Zonguldak was fully understood and it gained value following 1920s.

Since the city formed and developed with coal mining; historical background of Zonguldak, which is strictly adhered to industrial growth, should be written within the boundaries of this evolvement. Industrialization of the city will be summarized under two parts during this chapter: Ottoman State between 1800s and 1920s, and Republic of Turkey from 1923 to today. Within these two headings, periodization according to state organ in charge of the control of the mines will be used in this thesis, because administrative body, which had been changed frequently since 1850s, is the most important administrative factor in Zonguldak affecting the political and industrial progress.

The need for an internal energy source was crucial for Ottomans towards the end of the 17th century. Development in manufacture and transportation gained speed in Europe with the Industrial Revolution and coal was the new energy source. Ottoman State insisted on increasing attempts to discover coal mines within its borders. After several tries[11] and false beginnings in 1820s, incessant coal production started in Zonguldak during 1850s.[12] This discovery gave the Ottomans self-sufficiency in terms of energy supply. In 1848,[13] by the order of Sultan Abdülmecid I, the boundaries of the coalfield were set by registering the locations of coal seams

[10] Zaman, Ekrem Murat, 2004, *Zonguldak Kömür Havzası'nın İki Yüzyılı*, TMMOB Maden Mühendisleri Odası, Ankara, p.14

[11] The most common story about discovery of coal is Uzun Mehmet's: Uzun Mehmet, a villager from Ereğli, discovered coal in 1829 when he came back from his military service. Quataert says that the story has many different versions published since 1903 and the latest one is developed by the Republic to spread nationalist and positivist ideas among citizens as well as encourage them for success (Quataert, 2006, ibid., pp.9-19).

[12] Quataert, 2006, ibid., p.1

[13] Quataert says that the boundaries were set in 1852 (Quataert, 2006, ibid., p.39)

between Ereğli and Amasra.[14] After the determination of borders, the first known legal arrangement in the coalfield was made by Abdülmecid I's statement: the coalfield was included in the lands of pious foundations and the management was assigned to *Hazine-i Hassa*, the Privy Purse.[15] The first mines were located in Tiran village, which is close to Ereğli and by the 1850s; mines around Kozlu had opened.[16] In the second half of the 19th century, Zonguldak started to grow around coal mines. Since the local people did not have any expertise on mining, craftsmen from Albania, Montenegro and Dalmatia were brought and the need for workmen was met from neighboring villages.[17] Appearance of mines and first industrial buildings around Kozlu, Zonguldak and Kilimli coasts were followed by Virancık, Üzülmez, and Çaydamar with increasing mining activities.[18] However, transportation in the coalfield was largely run by mules, horses, and buffalo wagons and the system remained crude until the 20th century.[19] Throughout these first years, the amount of production remained considerably low due to primitive mining technology.

Figure 4.3 Inclined planes of Armutçuk and Gelik mines, likely from 1890s or later (Quataert, 2006)

After the first years of coal mining, administration was an important problem in the coalfield. Organizational body of Zonguldak mines has been to many changes since the discovery of coal. During the first fifteen years of the field, between 1850 and

[14] Zaman, 2004, ibid., p.27
[15] Tuncer, Kadir, 1998, *Tarihten Günümüze Zonguldak'ta İşçi Sınıfının Durumu*, Göçebe Yayınları, İstanbul, pp.27-28
[16] Quataert, 2006, ibid., p.27
[17] Zaman, 2004, ibid., p.29
[18] Zaman, 2004, ibid., pp.15-16
[19] Quataert, 2006, ibid., pp.27-28

1865, administration was shifted among different people and agencies according to political situation, wars, and insufficient production. In 1849, bankers of Galata obtained rights for the management of mines until 1850 when Sultan Abdülmecid I assigned the administration to *Evkaf Nezareti*[20](Ministry of Pious Foundations).[21] At the time of Crimean War, between 1854 and 1856, administration temporarily shifted to English Coal Company.[22] Infrastructure was improved in these years by constructing the first narrow gauge lines, followed by coal chutes and inclined planes, and use of standardized pillars.[23] Towards the end of 1850s, the State was not receiving any share from the income and contracts were not complied so the management was transferred to Banker Zafiropulos in 1859, but continuing troubles caused cancellation of his contract after a year.[24] English Coal Company headed for another year after Zafiropulos but inadequate growth in the production resulted in coal export from Britain; as a result, administration passed on to *Evkaf Nezareti* over again by Sultan's order until 1865.[25]

In 1865, administration of the coalfield was transferred from *Hazine-i Hassa* to *Bahriye Nezareti* (Marine Ministry) and lasted for 43 years, which is the longest administration period of an authority in the coalfield during Ottoman State. In 1867, the region was bureaucratically constituted as a coalfield district, consisting of fourteen administrative units that provided manpower for the mines.[26] Raising problems about coal production, transportation, lack of planning etc. directed Marine Ministry to establish a commission. Dilaver Paşa arrived as the head of commission to make necessary arrangements.[27] In 1867, a 100-article administrative regulation called ***Dilaver Paşa Nizamnamesi***[28] was declared to organize all actions in the coalfield by military power. The document handled many issues such as recruitment

[20] *Evkaf Nezareti* is the owner of the properties whereas *Hazine-i Hassa* (Privy Purse, income and properties of the State) collects the income from properties' operation.
[21] Zaman, 2004, ibid., p.28
[22] Zaman, 2004, ibid., p.29
[23] Tuncer, 1998, ibid., p.29
[24] Zaman, 2004, ibid., p.30
[25] Zaman, 2004, ibid., pp.30-31
[26] Quataert, 2006, ibid., p.31
[27] Quataert, 2006, ibid., p.40
[28] Officially entitled *Nizamname-i Madeni Hümayunu Ereğli* (Ereğli Imperial Mines Regulations), later, it acquired the nickname *Dilaver Paşa Nizamnamesi*, in recognition of the chief administrator (Quataert, 2006, ibid., p.40). Although some parts of the regulation were eliminated in 1882, 1906, and 1921; it was totally cancelled in 1954 (Zaman, 2004, ibid., p.32).

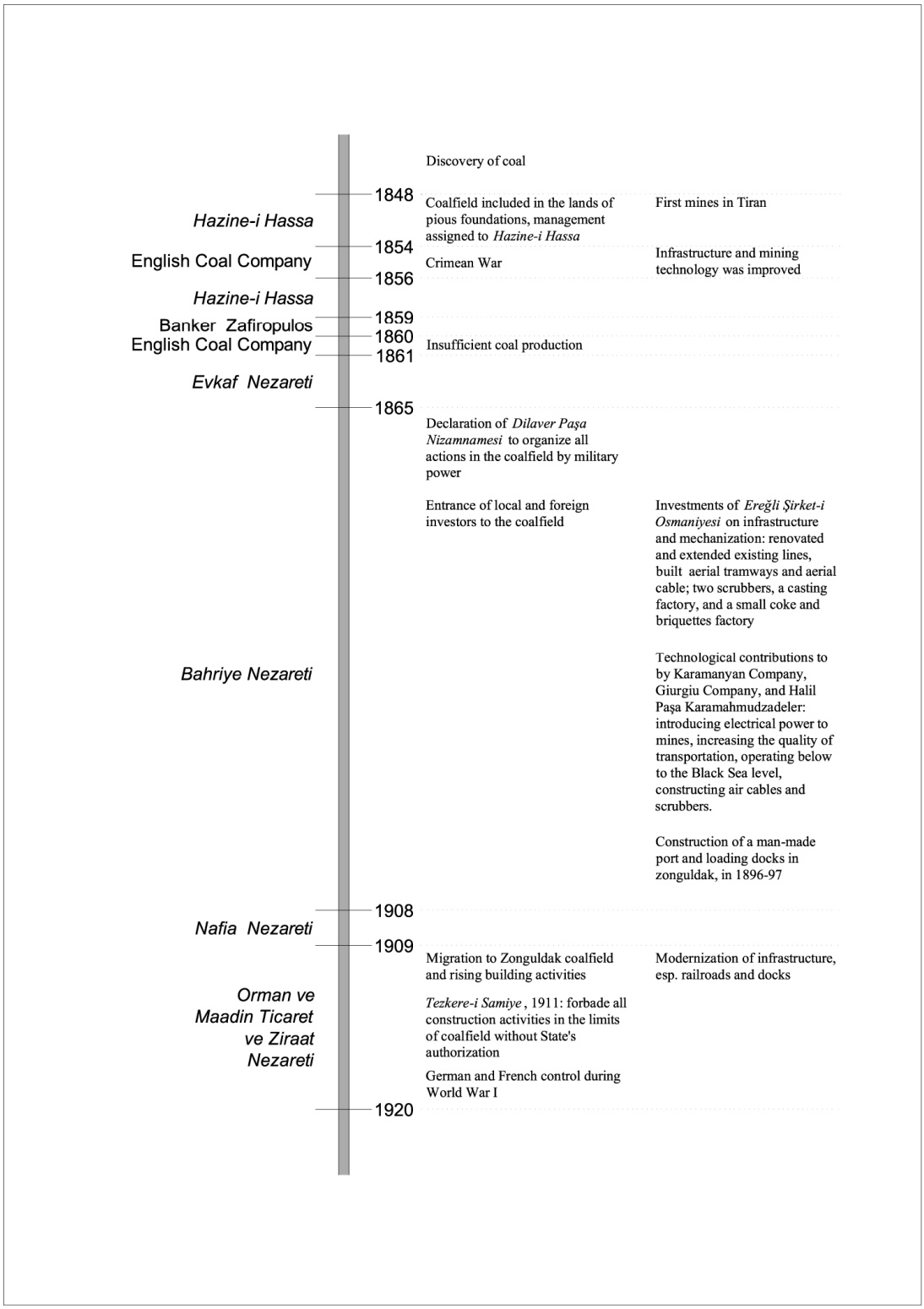

Figure 4.4 Timeline of administrative and technological history of Zonguldak coalfield from 1850s to 1920

and conditions of labor, granting and retention of mine concessions, opening of shops and stores, how to transport coal across farmers' fields, treatment of animals to be used for coal transport etc.[29] However, the ulterior purpose of the regulation was to increase coal production by resolving problems in and around the site.[30]

The economical crisis in the Ottoman State, caused by internal and external debts besides the war with Russia in 1877-78, affected the coalfield. During 1880s, miners could not get their payments from the State and they illegally started to sell coal to merchants.[31] In order to prevent bankruptcy of mines, additional legal arrangements and operation licenses were announced which resulted in entry of other local and foreign investors to the coalfield.[32] *Ereğli Şirket-i Osmaniyesi* (Ereğli Company), a French and Ottoman based partnership which is a major investment in the Ottoman Empire, entered the coal production following these arrangements. The company made investments on infrastructure and mechanization to increase production. They started by improving transportation facilities: renovated and extended existing lines, built aerial tramways from mines to port, and constructed an aerial cable of 5.2 km between Gelik and Üzülmez.[33] Ereğli Company also built two scrubbers,[34] repair shops for locomotives, wagons, and machinery; a casting factory, and a small coke and briquettes factory.[35]

Other private companies in the Zonguldak coalfield, Karamanyan Company, Giurgiu Company, and Halil Paşa Karamahmudzadeler, also made valuable technological contributions to increase the production and efficiency such as introducing electrical power to mines, increasing the quality of transportation, operating below to the Black Sea level, constructing air cables and scrubbers.[36]

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[29] Quataert, 2006, ibid., pp.40-41
[30] Zaman, 2004, ibid., p.32
[31] Zaman, 2004, ibid., p.35
[32] Aytekin, Erden Attila, 2001, *Workers of the Ereğli-Zonguldak Coal Basin, 1848-1922*, unpublished Master's thesis submitted to Bilkent University, p.13
[33] Quataert, 2006, ibid., p.29
[34] Scrubber is the building where foreign material is washed away from coal. (French: *laveur*, Turkish: *lavuar*)
[35] Aytekin, 2001, ibid., p.15
[36] Quataert, 2006, ibid., pp.30-31

During this period, necessity of a proper port for a better transportation was accepted. Although there was a natural port in Ereğli, a man-made port and loading docks were constructed in Zonguldak in 1896-97 because dominant private companies wanted a port close to their own mines.[37]

In 1908, administration of the coalfield shifted from Marine Ministry to *Nafia Nezareti* (Ministry of Public Works) and a year after to *Orman ve Maadin Ticaret ve Ziraat Nezareti* (Ministry of Commerce, Agriculture and Mines).[38] As the number of companies and production increased, migration to Zonguldak coalfield gained speed. The rising building activities around mines started to create problems, so Ottoman State announced *Tezkere-i Samiye* in 1911: this declaration indicated the importance of the coalfield and the place of its great potential value in the economy, and forbade all construction activities such as land opening or building in the limits of coalfield without State's authorization.[39]

From 1910s, the Ottoman State also worked on modernizing the existing infrastructure, especially railroads and docks.[40] Nearly after 60 years of mining, a comparatively modern infrastructure appeared in Zonguldak with efforts of both private companies and the government.

The start of World War I ended the production of French companies in Zonguldak. A war coal center was set up under the control of Germans.[41] Following the end of World War I, "Armistice of Moudros" was signed by Ottoman State in 1918; and in the March of 1920, French army sent a small troop to Zonguldak not to lose the control of coal mines and occupied the city until June 1921.[42]

Zonguldak, which was once a quarter with few houses, developed after the discovery of coal. The quarter first became village, and then a city that was growing around each mine with migration of workers all among the lands of Ottoman Empire.

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[37] Quataert, 2006, ibid., pp.29-30
[38] Quataert, 2006, ibid., p.45
[39] Zaman, 2004, ibid., p.55
[40] Quataert, 2006, ibid., p.31
[41] Aytekin, 2001, ibid., pp.23-24
[42] Yurt Ansiklopedisi, 1981, ibid., pp.7730-7731

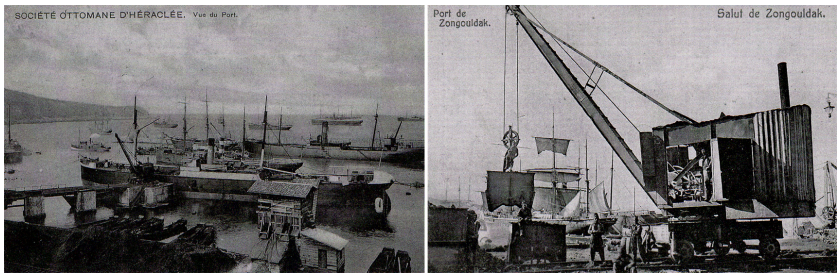

Figure 4.5 Views of Zonguldak port (Quataert, 2006)

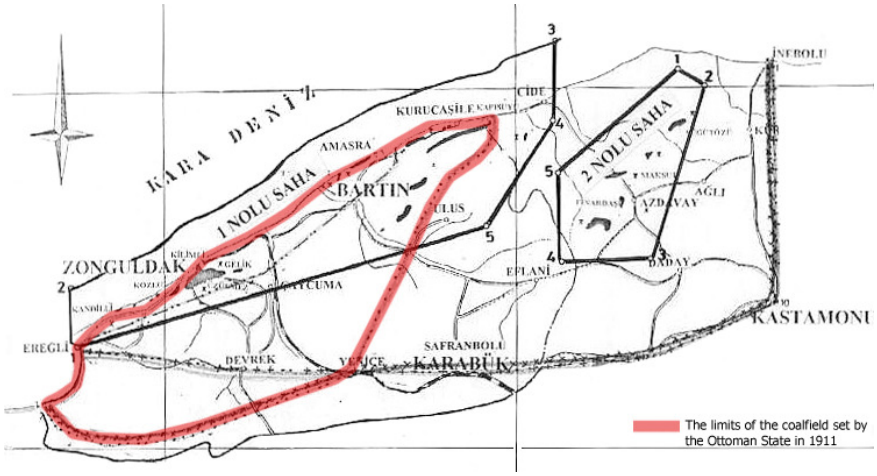

Figure 4.6 Limits of the coalfield, known as *Havza-i Fahmiye* in Ottoman State (produced from base map obtained from TTK Archive)

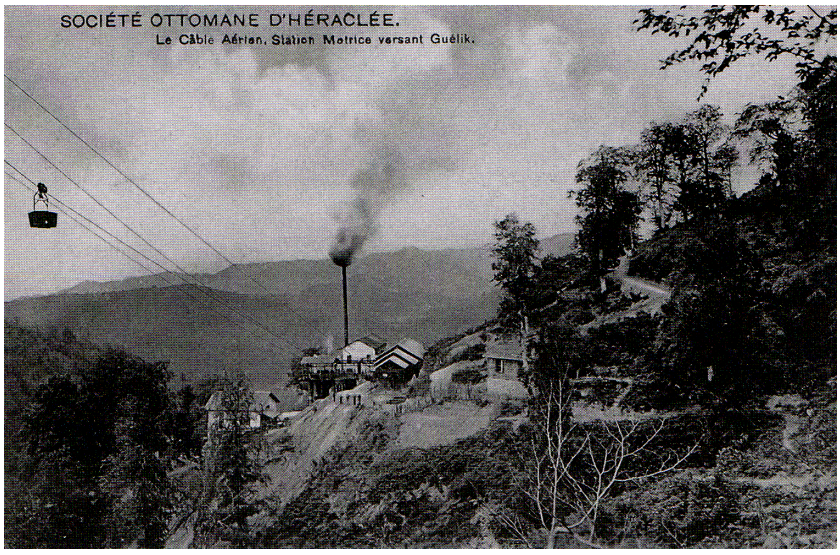

Figure 4.7 Aerial cable, main station toward Gelik, Ereğli Company, 1917 (Quataert, 2006)

Despite all the improvements in the area of coal mining, the coalfield was affected by economic and administrative problems of the Ottoman State for 75 years. Technological inadequacies, wrong management policies and lack of infrastructure reduced efficient extraction of coal. Moreover, after 1910s, a series of events -fall of the Ottoman State, World War I, Turkish War of Independence, and foundation of the Republic- almost stopped the production in Zonguldak coalfield. In 1920s, together with the new strategies of Turkish Republic, Zonguldak became the center of attraction after two decades.

Foundation of Turkish Republic started with establishment of *Türkiye Büyük Millet Meclisi*[43] in 1920. New government aimed to protect lands and natural sources of Turkey, so within this context, administration of the coalfield was assigned to *İktisat Vekaleti* (Ministry of Economy) in 1921.[44] After a long time of continuous wars, the country started to recover. The economic policy of the Republic was still in progress and Zonguldak coalfield, as one of the major production center for energy source in Turkey, was an important article in this policy. The years between 1920 and 1926 was named as "**Protectionist Period**" in Zonguldak. A mining program was announced in August 1923 including an arrangement to increase the production and means of import.[45] As a sign of the importance given generally to education and specifically to this program, the first mining engineering school of Turkey, *Yüksek Maadin ve Sanayi Mühendis Mektebi*, was founded in Zonguldak in 1924.[46]

After this transitory period, the systematic production in the coalfield started again with involvement of *Türkiye İş Bankası,* a national bank founded to support local investments. This period took place between 1926 and 1940 and "**Indirect Intervention Policy**" was dominant in the management.[47] There were three major companies in the coalfield: *Maden Kömürü TAŞ* (capital by İş Bankası), *Kozlu Kömür İşleri TAŞ* (partnership of İş Bankası and Ereğli Company), and Türk *Kömür*

[43] Turkish Grand National Assembly, Turkish abbreviation as TBMM
[44] Yurt Ansiklopedisi, 1981, ibid., p.7756
[45] Zaman, 2004, ibid., p.79
[46] *Cümhuriyetin on yılında Zonguldak ve maden kömürü havzası*, 1938, Sanayii Nefise Matbaası, İstanbul, p.138
[47] Zaman, 2004, ibid., p.80

Madenleri AŞ (Italian company).[48] These three companies performed significant investments including new technologies in coal production, establishment of Üzülmez Coke Factory, construction of scrubbers, production of first topographical map of the area.[49] The company developed planned construction activities in different parts of Zonguldak as well. Administrative, social and sports facilities in addition to housing were built in Kozlu, Kılıç and Üzülmez neighborhoods in 1930s. Some of these buildings and districts were designed by Seyfi Arkan, an important architect of the period.[50] Also, for the accommodation and rest of workers, two dormitories[51] and service facilities built in Kozlu and Üzülmez, and then around other mining areas.[52] The social infrastructure of these public housing areas were beyond their time for Turkey with tennis courts, basketball fields, cafeterias, and regularly playing cinema. Also, the architectural layout of site, floor plans and details can still be appreciated while compared to modern buildings located next to them.

Figure 4.8 a-b-c-d) Different views from Kılıç neighborhood **e-f-g-h)** Different views from Üzülmez neighborhood, (author, March 2008)

[48] Çıladır, Sina, 1977, *Zonguldak havzasında işçi hareketlerinin tarihi 1848/1940*, Yeraltı Maden-İş Yayınları, Ankara, pp.152-153

[49] Çıladır, 1977, ibid., p.153; Çıladır, Sina and Erdoğ, Fedai, 1994, *Zonguldak Türkiye'nin Kamburu Mu?* Orman Yayıncılık, Zonguldak, p.90

[50] Arkan, Seyfi, 1935, "Amele evleri, ilkokul, mutfak ve çamaşırlık binası", *Arkitekt*, Sayı: 9, pp.253-258

[51] These dormitories were constructed by law, *Kömür Havzası Amele Kanunu*, which says "...dormitories, to maintain the recreation and rest of mine workers, and bathrooms, to wash themselves up, must be constructed around every mine." (Zaman, 2004, ibid., pp.116-117). These were places where mine workers have a bath after their shift and rest, especially for those whose houses are far away from mines.

[52] Zaman, 2004, ibid., pp.116-117

Despite the investments of İş Bankası, economic crisis grew after Great Depression of 1929 affected the coalfield too. In addition, Ereğli Company kept away from investing in mining technology, so the production was below the expectations. Therefore, in 1937, French Ereğli Company was nationalized under the directorship of Etibank; which was founded to perform in field of mining, energy production and distribution.[53] During 1930s, foreign companies were still active in the coal mines: 38% of the total sale belongs to French capitalized company and 25% to Italian capitalized company in 1931.[54] Growing global crisis and World War II nearly stopped all the production in the coalfield. To achieve a greater production, in 1940, all mines in the coalfield were expropriated and transferred to *Ereğli Kömür İşletmeleri, EKİ*, a company of Etibank, as a part of nationalization policy.[55] "**Monopolist Period**" started with the administration of EKİ in the coalfield from 1940 to 1957. By early 1940s, many underground and aboveground production facilities came to the end of their economic lives because of lacking maintenance, so modern mining techniques were searched in the coalfield. By means of a "General Management Plan", which was started to be implemented in 1948, it was aimed to renew all facilities and plan future mining activities.[56] Focal point of this plan was to concentrate production by reducing number of mines and scrubbers; as a result, it was decided to leave three coal mines and six scrubbers in the whole coalfield.[57] This is the first planned production period in Zonguldak and implementation of this plan resulted in a considerable increase in the production and efficiency; amount of coal extracted from mines increased gradually for three decades.

Since the city has been forming economically and physically around coal mining, *Ereğli Kömür İşletmeleri* also worked on formation of Zonguldak city in terms of both infrastructure and superstructure. Fener, Kilimli, Karadon, Kandilli, Üzülmez, and İhsaniye are among the settlements that were chosen for housing. Yugoslavian RAT Company built 1020 worker's housing on lands of Treasury or National Forests with the help of EKİ's power over government.[58] In addition to houses, canteens

[53] Çıladır, 1977, ibid., pp.163-164
[54] Çıladır, 1977, ibid., pp.163-164
[55] Yurt Ansiklopedisi, 1981, ibid., p.7736
[56] Zaman, 2004, ibid., p.112
[57] Yurt Ansiklopedisi, 1981, ibid., p.7777
[58] Zaman, 2004, ibid., p.117

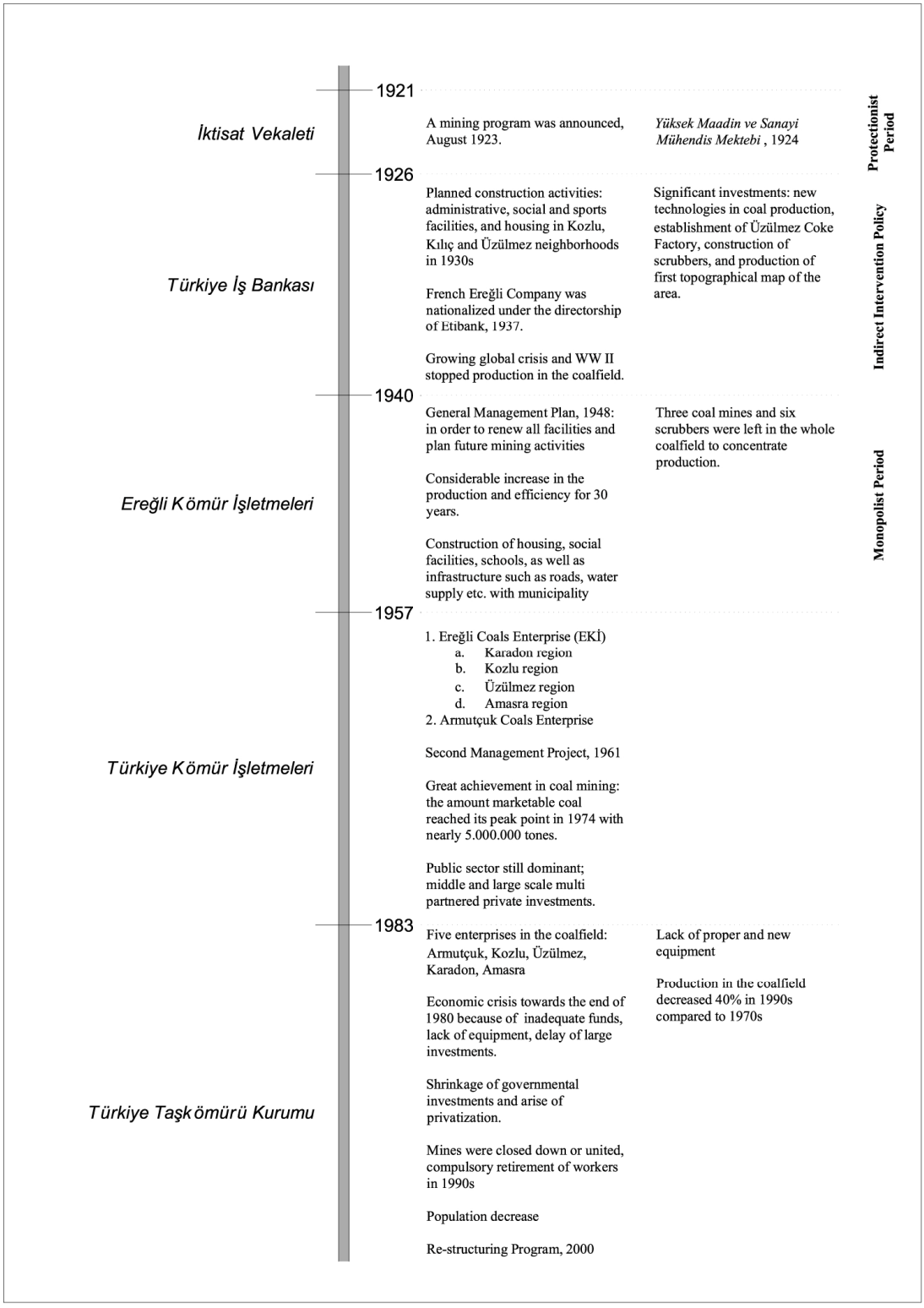

Figure 4.9 Timeline of administrative and technological history in Zonguldak coalfield from 1921 to 2000s

called "*Ekonoma*" were built to provide food and clothing to clerks and workers without any profit.[59] For a proper urbanization in Zonguldak, cooperation of local government and EKİ is also important because the company is the owner of a considerable amount of land, and the city exists with coal production in the first place. In this period, EKİ constructed numerous housing, social facilities, schools, as well as infrastructure such as roads, water supply etc. These neighborhoods formed the urban layout of Zonguldak in time.

Though EKİ worked in cooperation with governmental institutions in order to increase coal production and to construct Zonguldak, accumulated debts of municipalities and political interventions turned Etibank into a profitless organization, and coal mines became a burden for the company. In 1957, *Türkiye Kömür İşletmeleri*, TKİ (Turkey Coal Enterprise) was founded and administration of the coalfield transferred to TKİ.[60] There were two main enterprises active in the coalfield with their different production regions:

1. Ereğli Coals Enterprise (EKİ)
    a. Karadon region (Gelik, Karadon and Kilimli)
    b. Kozlu region (İncirharmanı and İhsaniye)
    c. Üzülmez region (Dilaver, Asma and Çaydamar)
    d. Amasra region
2. Armutçuk Coals Enterprise[61]

In order to deal with the financial problems of the previous administration, TKİ proposed the Second Management Project. Positive effects of planned production was experienced, so the new project was prepared in 1958 and submitted to Development Loan Fund (DLF). It was approved and started to operate in 1961, after a three-year delay.[62] Even though the production target was achieved in 1963-1964, the program was carried out until 1967.[63] Outcomes of this organized production attempts resulted in great achievement in coal mining, and the amount marketable coal reached its peak point in 1974 with nearly five million tones. Throughout 1970s, public sector was still the only force dominant in the coalfield; however private

[59] Zaman, 2004, ibid., p.118
[60] *www.taskomuru.gov.tr*, accessed on December 03, 2008
[61] Zaman, 2004, ibid., pp.130-131
[62] Zaman, 2004, ibid., pp.132-133
[63] Zaman, 2004, ibid., p.133

sector started to bend towards middle and large scale multi-partnered investments.[64] Share of the private companies would increase from these years and the government would start to lose its power on coal mines after few years.

With the changing economical approaches of 1980s, a re-arrangement in the law about governmental enterprises resulted in establishment of *Türkiye Taşkömürü Kurumu*, TTK (Turkey Hard Coal Enterprise) in 1983 and administration of the coalfield changed hands once again.[65] From 1984 on, TTK is the main administrative body in the coalfield together with its five enterprises: Armutçuk, Kozlu, Üzülmez, Karadon, and Amasra. After five years; inadequate funds, lack of equipment, delay of large investments caused an economic crisis in Zonguldak. Short term practical solutions could not help to solve problems, but only generated greater ones in time: free market economy of 1980s resulted in shrinking of governmental investments and as a result, privatization showed up. This economic situation affected TTK as well, like the rest of Turkey. During 1990s, many mines were closed down or united, in addition to compulsory retirement of workers.[66] Continuous migration to Zonguldak coalfield since Ottoman times reversed and population decreased whereas unemployment increased. Production in the coalfield decreased about 40% during 1990s compared to 1970s; and consequently, TTK became a non-profitable organization in 2000. In order to slow down and, if possible, to prevent the downfall, a five-year "Re-structuring Program" was prepared to increase production step by step.[67] When we look at the statistics published on the official website of TTK, it can be clearly seen that the plan could not achieve its aim. The amount of marketable coal was approximately 4.5 million tones during 1970s and decreased gradually in 1980s and 1990s; and it could not reach two million tones for the last five years.[68]

Internal causes of these problems resulted in serious decreases in coal production are listed in 2002 publication of Chamber of Mining Engineers, Zonguldak Branch as follows:

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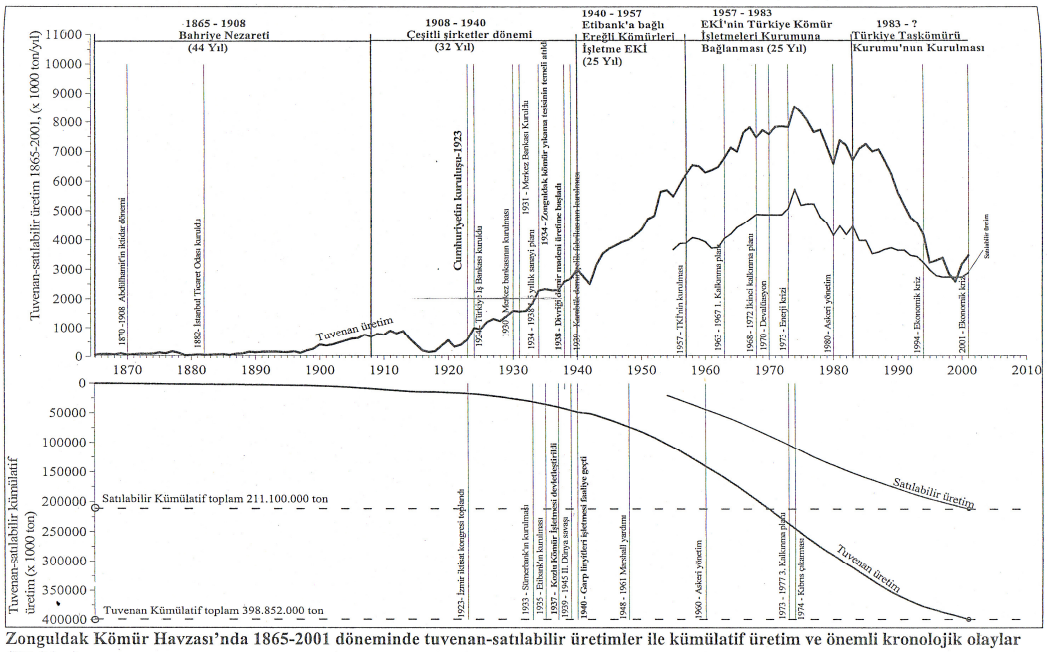
[64] Yurt Ansiklopedisi, 1981, ibid., p.7737
[65] *www.taskomuru.gov.tr*, accessed on December 03, 2008
[66] Arıoğlu, Ergin and Yılmaz, Ali Osman, 2002, *Zonguldak Kömür Havzası Gerçeği*, TMMOB Maden Mühendisleri Odası Zonguldak Şubesi, Zonguldak
[67] Zaman, 2004, ibid., p.143
[68] *www.taskomuru.gov.tr*, accessed on December 03, 2008.

1. Geological conditions: tectonic structure, thick and sloped veins, increasing production depth; administration of the coalfield
2. Administration of the coalfield: introverted management approach, inadequacies in research and development, lack of internal educational activities
3. Administration of the country: missing national policies on coal, to see coal as the only socio-economical development source of Zonguldak, free market economy and growing unregistered economy.[69]



Zonguldak Kömür Havzası'nda 1865-2001 döneminde tuvenan-satılabilir üretimler ile kümülatif üretim ve önemli kronolojik olaylar (Türkiye).

Figure 4.10 Production rates in Zonguldak coalfield from 1870s onwards (Arıoğlu, Yılmaz, 2002)

Zonguldak started as a brilliant project of Turkish Republic. With all investments, it peaked during 1970s and then decline initiated. Name of the main administrative body changed in time but EKİ/TKİ/ TTK were establishments that operated for public benefit until 1980s. The corporation has been an impulsive force for the development of the city together with its employment capacity. Infrastructural activities such as transportation, energy, communication etc. led to rapid urbanization of Zonguldak and its surrounding. After 1980s, Turkey affected by changing economical policies in the world. Governmental institutions like coal mines in Zonguldak, lost their importance and shrank, which showed in shutting down of

[69] Arıoğlu and Yılmaz, 2002, ibid.

mines and factories, decrease in population and a decline in city's life quality. Although, many new energy sources arouse in the last few decades, coal have not finished its economical life in the area of industry. A national policy on coal production, re-arrangement of TTK and private companies, and research & development projects on coal mining should be developed as soon as possible before downturn reaches bankruptcy level. Today, Zonguldak moved far away from its brilliant years and public looks for a new impulsive force to attack.

4.2 Planning attempts

Physical structure of the city, vegetation, geological formations, and legal statuses of lands bring forth problems in design and implementation of a plan in Zonguldak. First factor affecting the planning problem in Zonguldak is physical structure of the city, namely topography. As it was stated previously, Zonguldak is a mountainous area with a slope of 10% and higher in most of the city which constrains the possible building areas. Second factor is dense vegetation, caused by rainy climate of Blacksea Region. Approximately 31% of the city is listed as "Forest Wealth" by government and construction is forbidden.[70]

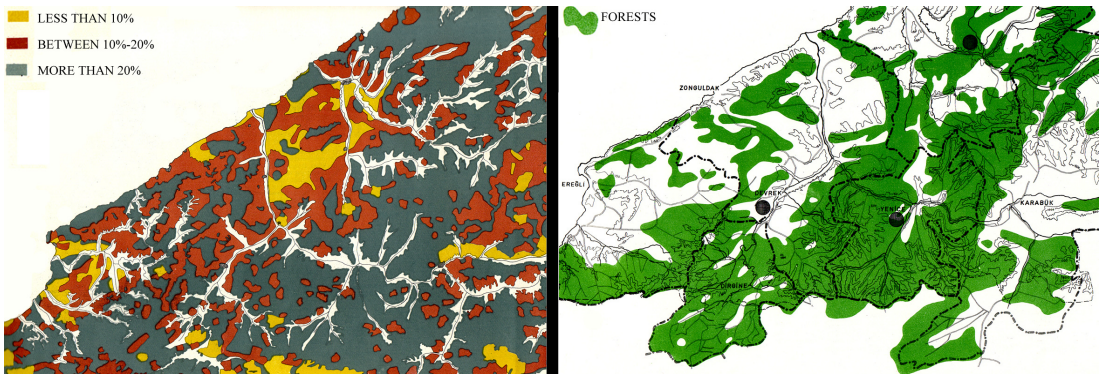


Figure 4.11 a) Zonguldak slope map (Zonguldak Bölgesi Ön Planı, 1964, p.13), **b)** Forest wealth of Zonguldak and its vicinity (Zonguldak Bölgesi Ön Planı, 1964, p.47)

[70] Akçın, H. et al., "Zonguldak ormanlık alanlarındaki kaçak yapılaşmanın uydu görüntülerinden otomatik nesne çıkarımı yapılarak CBS ile analizi", *http://jeodezi.karaelmas.edu.tr/karakis/FATIH_karakis.pdf*, accessed on December 8, 2008, p.2

Third factor is the geological structure of the lands. Zonguldak is the major coal production area in Turkey and most of the city center is located above coal reserves. Continuing underground mining activities and abandoned mines lead to the risk of land subsidence[71] which is another input for determination of development areas. Fourth and last factor is ownership of lands. Starting from Ottoman times, Zonguldak territory has been announced as state domain and just about 70% of lands belong to treasury, and rate of private ownership is very low, which restricts the lands for construction of private properties. These four factors limit the existing probable building area while searching to find appropriate lands for growing housing and consequently private ownership demand. Attempts to find solution to problems created by these special factors of Zonguldak city started in Ottoman period and continued until today.

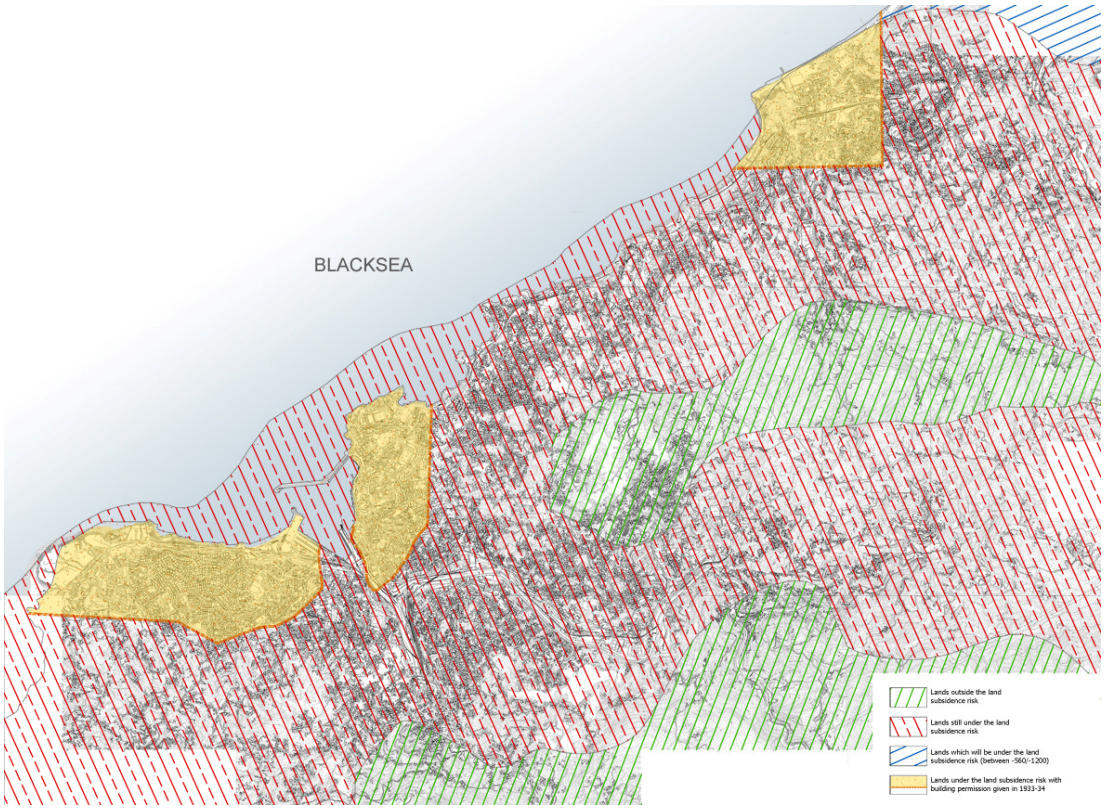


Figure 4.12 Land subsidence map of Zonguldak (produced from the 1/5000 plans obtained from Zonguldak Municipality and technical map from TTK)

[71] **Land subsidence** is defined as the lowering of the land surface. Many different factors can cause the land surface to subside such as collapse of a sinkhole or under ground mine, or a major earthquake. Subsidence can also take place slowly, becoming evident over a time span of many years (*http://www.geology.ar.gov/geohazards/landsubsidence.htm*, accessed on December 06, 2008).

With the primary mining activities in 1880s, Zonguldak and its vicinity started to grow through migration of workers and new constructions around coal mines. The first known document including an article on building activities is *Dilaver Paşa Nizamnamesi* of 1867. The third chapter of this 100-article document regularizes construction in the coalfield and states the requirement for worker dormitories:

> "Governmental buildings, and *han*s, bakeries, shops, coffee houses and other buildings can be constructed on suitable places determined by a commission, and unauthorized constructions will not be allowed".[72]

However, building activity was increasing rapidly and it created difficulties in production, moreover, it was risky because of land subsidence. These problems resulted in the declaration of the first legal arrangement, *Tezkere-i Samiye*, in 1911 which forbade all construction activities such as land opening or building in the limits of coalfield without State's authorization.[73] With this document, all lands set for coal production were announced as state domain and private ownership is prevented totally except the title deeds which were got before 1900. Nonetheless, it could not prevent the enlargement of the settlement because the production was continuing in full speed and workers, who need a place to stay, had to construct dwellings even it was illegal.

After the foundation of Turkish Republic, companies in the charge of coal production started to build houses and public buildings for employees. *İş Bankası* was the first administrator who contributed urbanization of Zonguldak. Many company housings were constructed during the administration of *İş Bankası* but many of these served to white-collar employees; workers had to construct their own houses. Since all empty lands belong to government, recently constructed houses were counted as illegal and slum neighborhoods started to appear around each mine and industrial facility. In 1933-34, ascending demand forced administration to allow construction in limited parts of Zonguldak: the coastal area around harbor in the center, and Kilimli coast at the eastern part of the city (See Figure 4.12 above for areas with building permission given in 1933-34). These lands quickly filled with apartments which can be easily differentiated from other parts of the city. Unfortunately, this narrow area could not

[72] Zaman, 2004, ibid., p.32
[73] Zaman, 2004, ibid., p.55

correspond to the needs of many inhabitants; most of the land is occupied by high or middle income classes.

After a decade, in 1948, General Management Plan was implemented by EKİ to increase the coal extraction, and number of production centers was reduced to nine: three coal mines and six scrubbers in the whole coalfield. Physical layout of the city started to concentrate around these limited production centers, but still in a spontaneous manner since the location of the centers was not decided according to a development plan.[74] The result was a number of disconnected and scattered settlements with a production facility as the focus.

The problem of planning still requires solution but a step in understanding and solving was taken. In 1960s, Zonguldak was chosen as one of the first regional planning investments by *Devlet Plânlama Teşkilâtı, DPT*, State Planning Organization and *İmar ve İskân Bakanlığı*, Ministry of Reconstruction and Resettlement.[75] Zonguldak Region Pre-Plan was completed in 1963 within the light of studies on social, economic and physical aspects.[76] The pre-plan covers a period of 20 years between 1960 and 1980, and it primarily aims to balance population increase and rate of development, improve infrastructure of the region, gain the greatest possible benefit from future investments, and make equal the existing income distribution.[77] After the completion, it was stated that the plan would have been detailed but future programs of 1960s could not manage the expected, as a result, this detailed planning attempt was not implemented.[78]

Attempts continued in the following years. In order to develop a plan to this significant and constantly growing urban area, *İller Bankası* (Bank of Provinces), announced a competition in 1969. Municipalities of Zonguldak, Kilimli, Çatalağzı and Kozlu decided to unite and form "Zonguldak Metropolitan Area, ZMA" in 1971

[74] Erkin, Engin, 1977, "Zonguldak Kömür Havzasında Kentleşme Sorunları", *Mimarlık*, Sayı: 1, p.20
[75] Gündoğan, Özdemir, 2005, *Spatial planning and the idea of progress: Zonguldak regional and metropolitan planning experiences*, unpublished master's thesis submitted to Orta Doğu Teknik Üniversitesi Fen Bilimleri Enstitüsü, p.59
[76] *Zonguldak Bölgesi Ön Planı*, 1964, İmar ve İskân Bakanlığı, Plânlama ve İmar Genel Müdürlüğü, Bölge Plânlama Dairesi, Ankara, p.7
[77] *Zonguldak Bölgesi Ön Planı*, 1964, ibid., p.9
[78] Gündoğan, 2005, ibid., p.67

on behalf of preparation of a single plan considering all these settlements together as pieces of a whole. In 1973, the winning group, which constitutes of twelve professionals from different disciplines, started to produce detailed plans with the purpose of creating an administration for metropolitan area and being a regional center in a linear settlement form.[79] However; ownership problems and changing administrations resulted in bureaucratic problems and the ZMA plan could not be implemented up to 1995, when its determined period ended.[80]

Increasing housing demand and lack of private ownership has leading to the danger of formation of slum neighborhoods since 1980s. Gardens of company dwellings were used as free lands, which actually belongs to Treasury, to construct additional rooms or houses illegally. Today, many of the model worker neighborhoods lost their original plan and density because of this reason. Also, the design and construction quality of previous decades cannot be read in recently built houses and apartments; even they are legal or illegal. A famous Turkish caricaturist, Selçuk Demirel, drew the city in 1970s and he could sum up the situation without need of words (Figure 4.13).

In 1990s, privatization process of iron and steel industries in Karabük and Ereğli (KARDEMİR and ERDEMİR) together with increasing unemployment rate derived from shrinking of TTK, oriented government for a preparation of a plan of West Blacksea Region. Zonguldak-Karabük-Bartın Regional Development Project was organized by DPT together with three private firms, and completed in 1997.[81] The essence of this overall project was to maintain independency of regional economy and provide a total annual growth of 5% in agriculture, industry and service sectors.[82] Some of the expected results were listed as increasing employment rate, decreasing migration from the city and increasing prosperity; but these results could not be achieved by the year 2008.

[79] Gündoğan, 2005, ibid., p.80
[80] Erkin, Ergin, 2007, "Zonguldak Metropolitan Alanında Planlama Sonuçları", *Zokev Bülteni*, Sayı: 16, p.5
[81] Gündoğan, 2005, ibid., p.89
[82] *http://www.dpt.gov.tr/bgyu/bkp/ZBK.pdf*, accessed on December 07, 2008

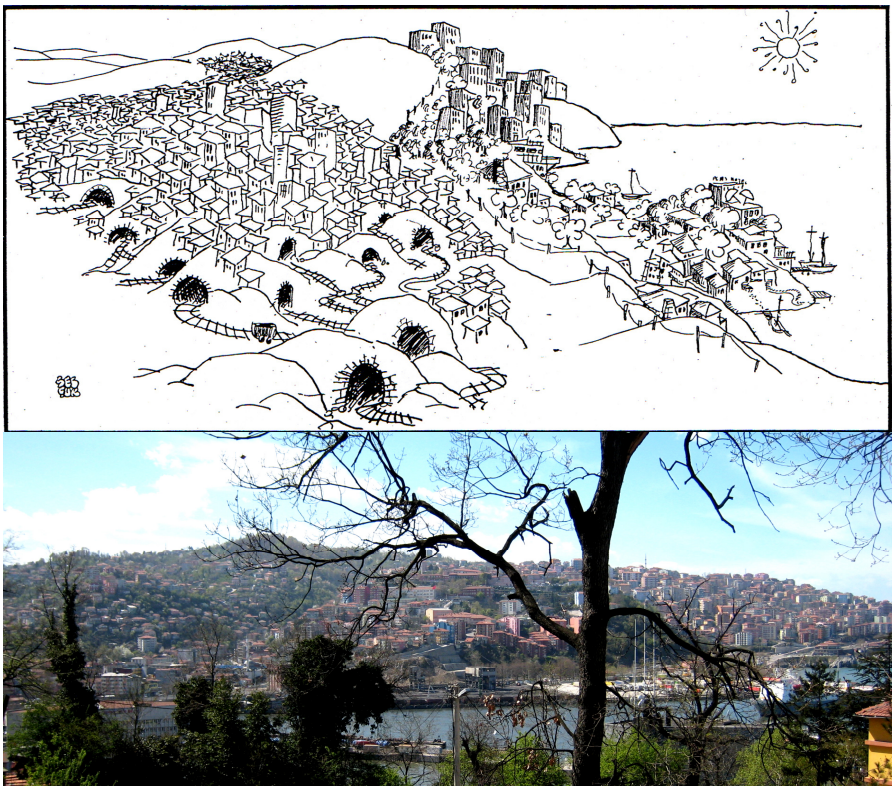


Figure 4.13 a) Zonguldak in 1970s by Selçuk Demirel. Right hand side next to the seaside is Fener neighborhood, upper part with high apartments is legal development area, and left hand side with mining tunnels is illegally constructed slum neighborhoods (*Mimarlık*, 1977, p.20) **b)** Zonguldak in 2008; right hand side is illegally constructed slum neighborhoods, and left hand side with high apartments is legal development area (author, March 2008)

The last planning attempt for Zonguldak is development of a master plan in 2007 by a private company, *Modül Planlama*, in Ankara. This plan intends to find solution to housing problems of the city which are originated from ownership, compelling topography as well as unplanned and illegal construction activities.[83]

Another important decision considering the subject of planning and conservation is the decision of Ankara Committee of Conservation of Cultural and Natural Assets in 1996, which declares registration of Fener (Yayla) neighborhood as urban site and third degree natural site:

> "This neighborhood can be stated as a model settlement which has an important place in urban history of Zonguldak, the first mining town in Turkey; witnessed development of the city by industrialization; has a symbolic meaning; reflects spatial relations that values human life with reference to social, economic, and cultural life of a specific community and a

[83] Modül Planlama, 2007, *Zonguldak Master Planı, Plan Notları,Genel Yaklaşım*, p.8

specific time period; has an urban design approach which can enlighten today's and future's designers with density and relation of open space-building use; positively effects silhouette of Zonguldak and helps to maintain ecological balance with single, series or group of trees."[84]

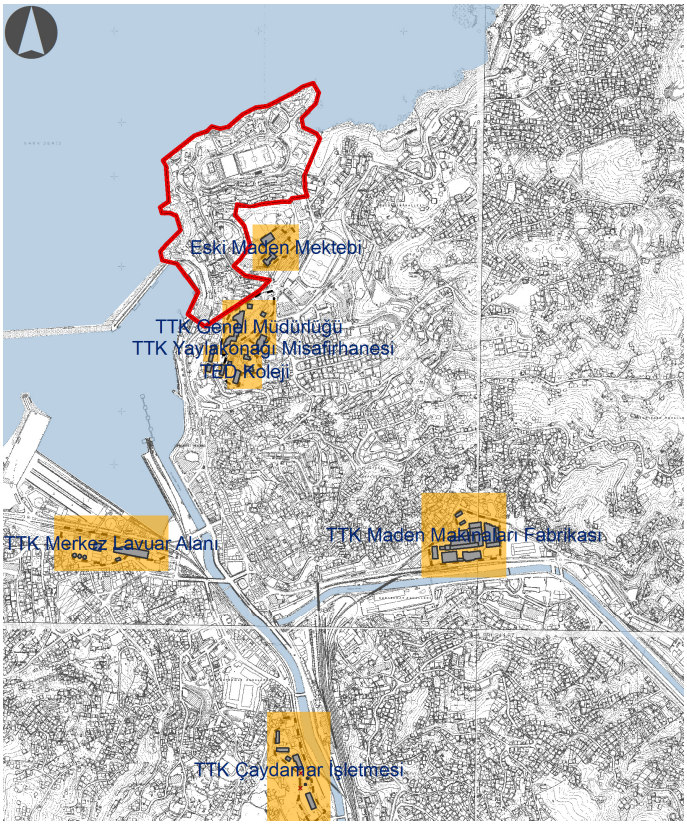


Figure 4.14 Registered natural and urban site in Fener (Yayla) neighborhood, shown with red borders (produced from the 1/5000 plans obtained from Zonguldak Municipality)

Zonguldak, as one of the most valuable cities in Turkey because of its coal reserves, could not solve its planning problem for more than a century. Legal arrangements started in 1880s, with the need to organize and maximize coal production but the need of inhabitants did not taken into consideration. Modern governmental approaches of the Republic gave importance to planning; however production of a proper plan for the coalfield was postponed till 1970s. And when the plan was produced after a success in the competition, it could not be implemented for years. In time, Zonguldak became an unplanned city which developed spontaneously and mostly illegally. Absence of even a development plan is holding this thesis to

[84] Ankara KTVKK, May 13, 1996, Decision number: 4596

criticize absence of conservation approaches towards industrial heritage of the city. There are single registrations including *Merkez Lavuar* and Yayla neighborhood, but a holistic approach could not be produced until so far.

4.3 Industrial buildings complexes in Zonguldak: Study areas

After the discovery of coal in the first decades of the 19th century, Zonguldak confronted with a physical and social transformation and the city started to develop around coal mines. Opening of each production center resulted in enclosure of industrial buildings with social infrastructure: dwellings, public spaces, schools, commercial areas etc. Together with the migration of workers and their families from different parts of the country, a district was formed around each of these centers. Although coalfield covers an area from Ereğli to Amasra, this study includes central district where the major industrial and political activity have been taking place for a century and half. The six study areas within the scope of this thesis are chosen for being cores and points of origin for urban and industrial development in central Zonguldak: Yayla neighborhood, the backyard of Zonguldak port, Üzülmez neighborhood, Karadon neighborhood, Kozlu district, and Çatalağzı district.[85]

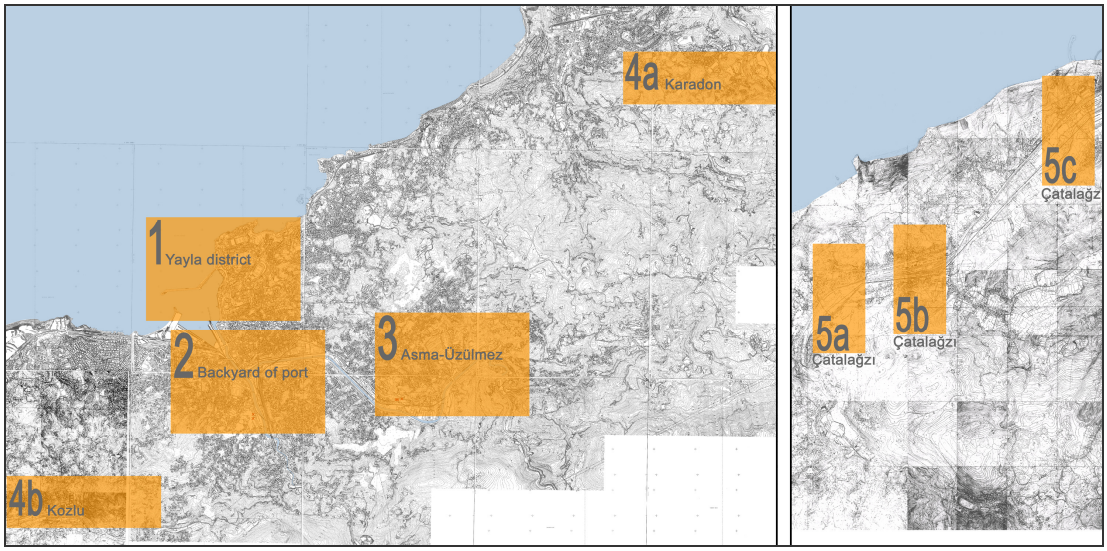


Figure 4.15 Selected study areas in the central district of Zonguldak (produced from the 1/5000 plans obtained from Zonguldak Municipality)

[85] Refer to Appendix D for detailed record forms for industrial sites and buildings in the study areas

These six areas differ in main characteristics. Each of them had a different significance and place in the history and current state of Zonguldak. Some of them include facilities that are still in active use, some of the sites were abandoned and some passed the action to the newer ones located in the vicinity. The first field survey was aiming to get know the structure of the settlement and current situation of the industrial buildings and sites where the outline of the study areas became definite. The second field survey includes a detailed study of selected buildings and the information to be collected was defined with the help of two survey sheets.[86] Industrial sites were recorded with a survey sheet named "Site" where main features of the site are defined and supported with photographs of the current situation. Single structures were recorded with "Building" survey sheets where the aim is to give details on architectural features, production information, administration and nearby environment; and this forms are also supported with photographs. Transportation elements and service buildings were documented through visual survey and written documents. There is an exception for service buildings in Yayla neighborhood where the whole area was free of industry and mainly acts as administrative vicinity of the city.

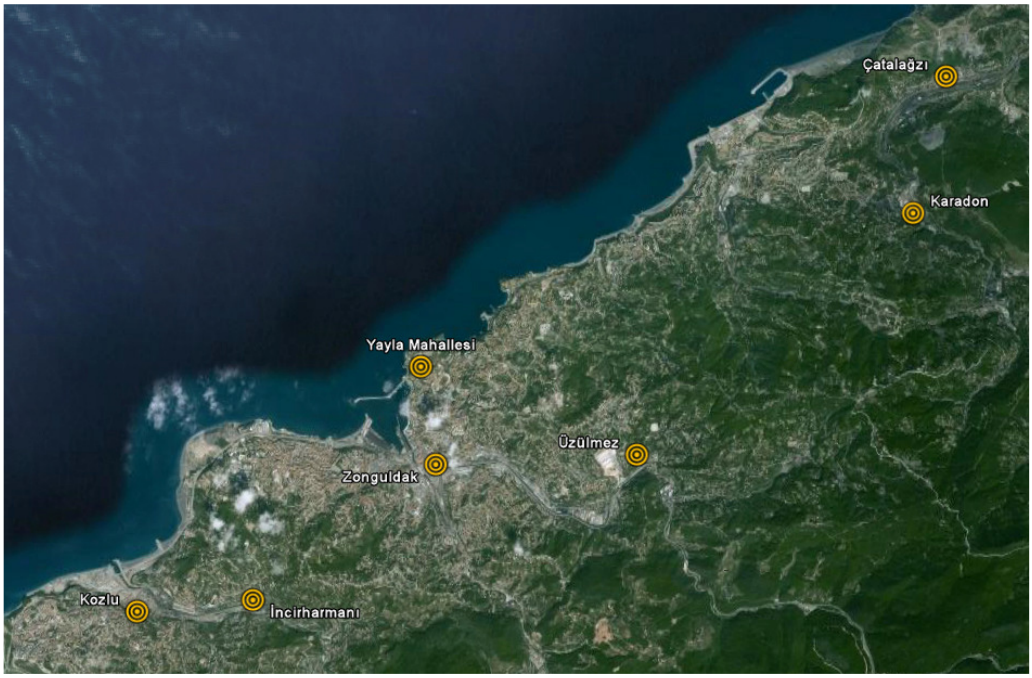


Figure 4.16 Selected study areas (obtained from Google Earth, May 2009)

[86] Refer to Section 2.2.2 for further information

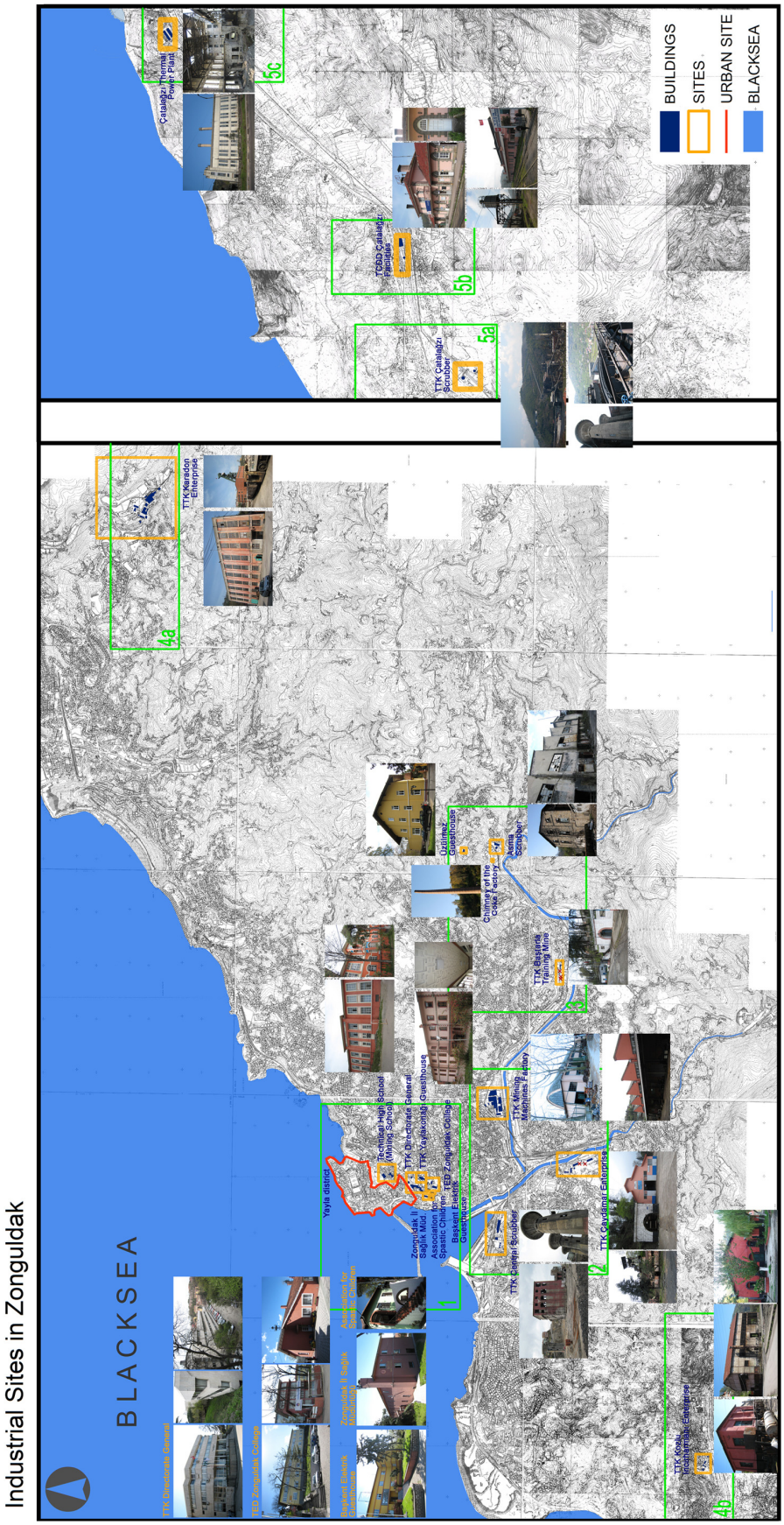


Figure 4.17 Selected industrial buildings within the study areas (produced from the 1/5000 plans obtained from Zonguldak Municipality)

Zone 1, Yayla neighborhood, is among the oldest settled areas of Zonguldak. It has been a prestigious residential area since pre-Republican period. The area includes public buildings in addition to housing, and not any structures directly taking place in the process of production. General Directorate of TTK, TED Zonguldak College, TTK Yaylakonağı Guesthouse, Başkent Elektrik Guesthouse, *Zonguldak İl Sağlık Müdürlüğü*, Association for Spastic Children / *Papazın Evi*, Technical High School, and *chariot-porteur* are the buildings surveyed in detail through forms. All the structures in this zone are physically in a good condition and used today by public and private institutions. This area is a part of active daily life in Zonguldak with public spaces located along coast and club houses of engineer chambers.

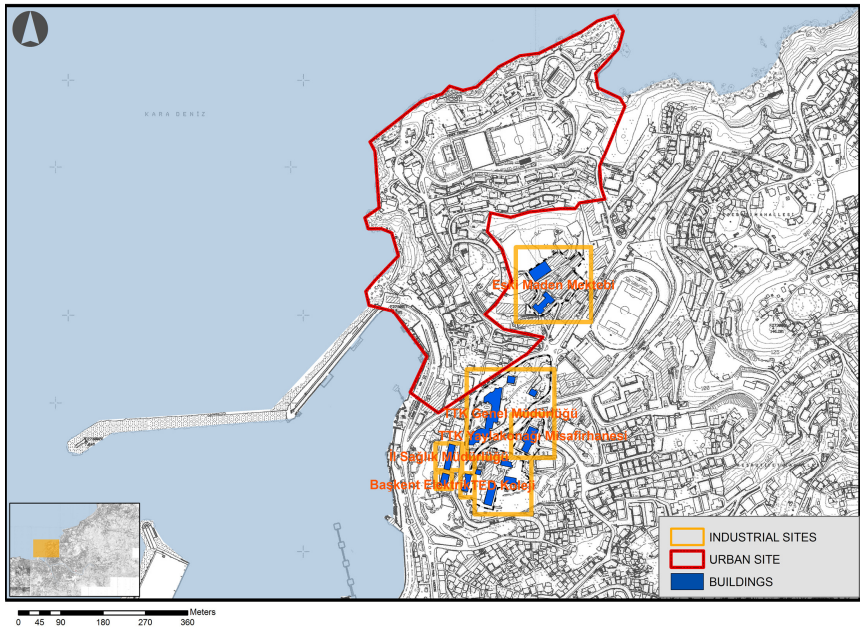


Figure 4.18 Zone 1, Yayla neighborhood (produced from the 1/5000 plans obtained from Zonguldak Municipality)

Zone 2 includes three large scale production facilities located at the back of Zonguldak port which are studied through survey forms: Central Scrubber, Çaydamar Enterprise, and TTK Mining Machines Factory. Central Scrubber, among rare industrial structures under legal protection, was partially demolished in 2006. Today, three towers, an underground silo and a transformer station are the remaining parts in the whole site. Çaydamar Enterprise is an old mine which was abandoned after collapse risk of underground tunnels appeared. Some buildings and part of open

area are still in use by governmental and private companies. TTK is using an administration building, a private manufacturer is using three buildings as workshops, and municipality is using a part of the site as parking lot for trucks. Still, there are empty buildings on site which are structurally stable but in a bad shape. TTK Mining Machines Factory is the only establishment in this zone that continues to work at full capacity for TTK. It is composed of an administrative building, a cafeteria and exhibition hall, and a number of different workshops which repair and produce mining machines.

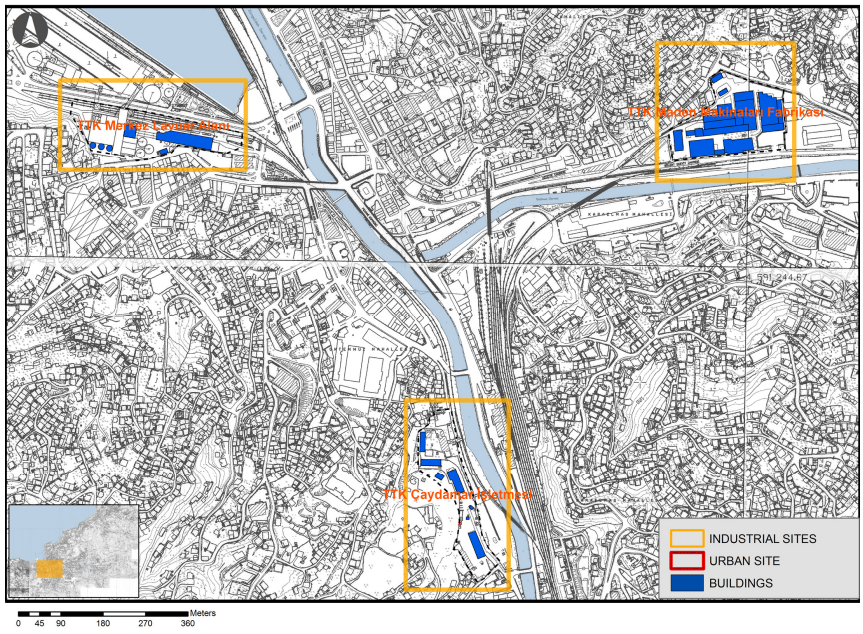


Figure 4.19 Zone 2, the backyard of port (produced from the 1/5000 plans obtained from Zonguldak Municipality)

Üzülmez district, **Zone 3**, is one of the five main coal production areas of TTK. The area includes old and new production facilities as well as public housing within its boundaries. Four of the existing sites are surveyed through this study: TTK Baştarla Training Mine, Asma Scrubber and Workshop, Chimney of the Old Coke Factory, and Üzülmez Guesthouse. Baştarla Training Mine was an active coal mine but stopped production in 1926. TTK rearranged the mine for educational and touristic purposes. Today, a part of the gallery is used by recruits and visiting groups for a introductory mine experience. Asma Scrubber is the oldest known industrial building in Zonguldak. Established in 1903 (?), the building was active for long years. A

workshop is constructed next to the scrubber in 1935. Today, both of the buildings are left obsolete and are subject to severe material problems. The Chimney is the component of the old coke factory which was founded in 1935 and stopped production in 1976. The factory was demolished but the remaining chimney was registered as cultural heritage. Üzülmez Guesthouse, which is also a listed cultural heritage, was built as director's dwelling, used as management for some time and now run as a guesthouse. It is located close to both production facilities and housing blocks in the neighborhood.

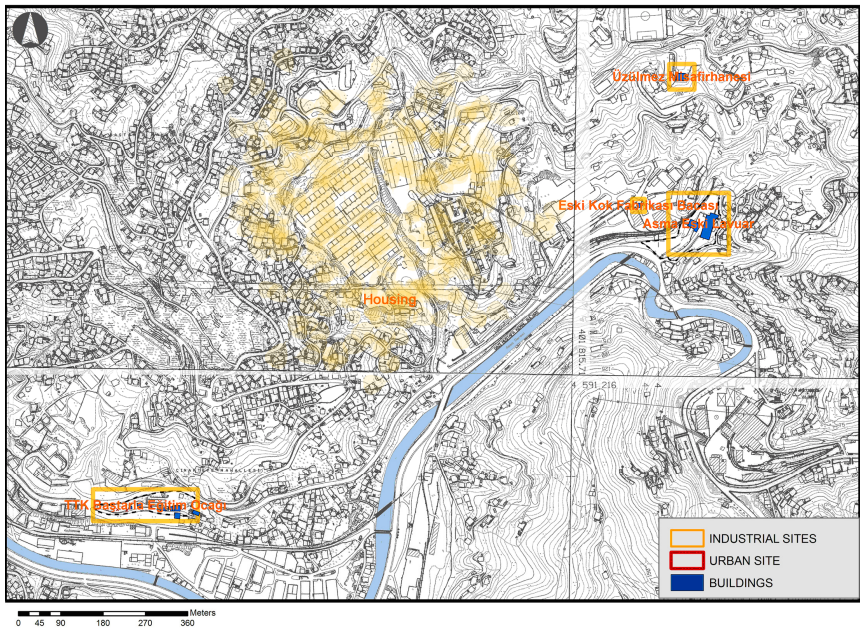


Figure 4.20 Zone 3, Asma-Üzülmez district (produced from the 1/5000 plans obtained from Zonguldak Municipality)

Zone 4a, TTK Karadon Enterprise, is located towards the north east of Zonguldak. The area is still an active coal mine and renovated lately. The site includes both new and old production and administrative buildings. It is stated by authorities that the mine still has reserves that can keep it active for 150 years. **Zone 4b**, Kozlu is among the five major production areas of TTK, and İncirharmanı Enterprise is located here, on the south west of the city. The site is composed of small-scale buildings which were part of a former coal production facility. At present, the major production moved to new facilities in Kozlu, where extraction continues through Uzun Mehmet wells. İncirharmanı site is well-preserved with its industrial buildings and workers'

dormitories. Most of the industrial buildings, which preserve their mechanical components, are used as warehouses today.

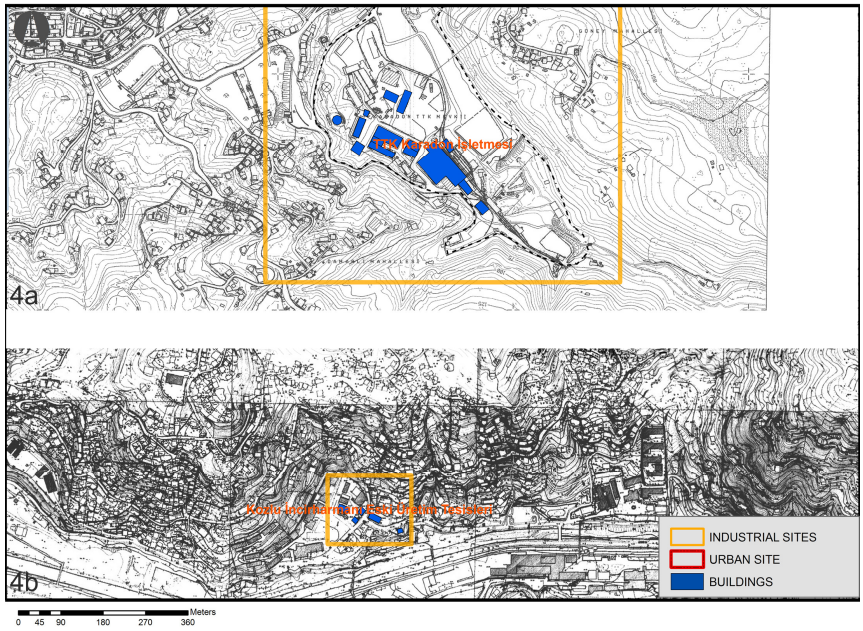


Figure 4.21 Zone 4a and 4b, TTK Karadon Enterprise and Kozlu-İncirharmanı Enterprise (produced from the 1/5000 plans obtained from Zonguldak Municipality)

Figure 4.22 Zone 5, Çatalağzı district (produced from the 1/5000 plans obtained from Zonguldak Municipality)

Zone 5 is Çatalağzı district which houses different types of industries: Çatalağzı Scrubber, Old Thermal Power Plant, and TCDD Çatalağzı Railway Facilities. Çatalağzı Scrubber is a low capacity version of Central Scrubber and it is still in use. Old Thermal Power Plant was abandoned with the construction of the new power plant, ÇATES in 1989. Thermal Power Plant is connected to Çatalağzı and Zonguldak by railway and conveyors in order to get coal from scrubbers. TCDD Facilities is a complex including railway station, repair workshops, dwellings etc. It is an active stop on Zonguldak-Karabük line.

Housing a large number of industrial edifices with different scales, types and potentials stands out as the positive aspect of Zonguldak; however, it is also hard to handle that much unused buildings and spaces for a declining economy.[87] Yayla neighborhood is one of the most preserved areas in the city but it faces the danger of losing its identity because of wrong renovation/ renewal activities (i.e. Bedaş Guesthouse and *Papazın Evi*). The industrial edifices located in other central districts with dense settled areas are facing the danger of demolition because of their high market values and passionate demand for open spaces for new construction activities (i.e. a shopping mall is planned to be constructed on the land of semi-demolished Central Scrubber). Structures located away from centers are fortunate in a way because they are forgotten for some time and survived from urgent demolition attacks (i.e. Çatalağzı Thermal Power Plant). On the other hand, their re-use is more problematic thinking of the distance to central areas and potential users.

Different types of buildings and elements in these six study areas in Zonguldak (the ones to be included in value assessment related to industrial heritage) can be arranged under three main groups: production, transportation, and service. The first group, production, includes buildings and technical equipment directly related to industry: scrubber, factory, mine entrance, power plant, store or warehouse, chimney and machinery within these buildings. The second group includes all buildings and elements related to transportation, which are railway, train station, road, conveyor,

[87] *Korumada Yeni Tanımlar Yeni Kavramlar Endüstri Mirası*, 2008, ed. Emre Madran, Ayşem Kılınç, TMMOB Mimarlar Odası Genel Merkezi, Ankara, p. 158

port, and *chariot-porteur*. The third group consists of "places for social activities" such as school, guesthouse, dormitory, housing, as well as administrative buildings.

Table 4.1 Distribution of different building / element types among selected zones

		ZONE 1 Yayla neighborhood	**ZONE 2** Backyard of the port	**ZONE 3** Üzülmez district	**ZONE 4a** Karadon district	**ZONE 4b** Kozlu İncirharmanı	**ZONE 5** Çatalağzı district
PRODUCTION	Scrubber	-	✓	✓	-	-	✓
	Factory	-	✓	-	-	-	-
	Workshop	-	✓	✓	✓	✓	✓
	Mine	-	✓	✓	✓	✓	-
	Power plant	-	-	-	-	-	✓
	Store Warehouse	-	✓	✓	✓	✓	✓
	Chimney	-	-	✓	-	-	✓
	Machinery	-	✓	✓	✓	✓	✓
TRANSPORTATION	Railway	-	✓	✓	✓	✓	✓
	Train station	-	✓	-	-	-	✓
	Road	✓	✓	✓	✓	✓	✓
	Conveyor	-	-	-	-	-	✓
	Port	-	✓	-	-	-	-
	Chariot-porteur	✓	-	-	-	-	-
SERVICE	Administrative buildings	✓	✓	✓	✓	✓	✓
	School	✓	-	✓	-	✓	-
	Guesthouse	✓	-	✓	-	-	-
	Workers' dormitory	-	-	-	-	✓	-
	Housing	✓	✓	✓	✓	-	✓

When compared, Yayla neighborhood stands out with containing edifices belonging to transportation and service groups only. Other zones are more or less similar in distribution of building types, however, backyard of the port and Çatalağzı district were noted for diversity and number of production and transportation edifices. For the purposes of this thesis, a narrower study area is more convenient. This study area can be formed by uniting Zone 1 and 2, which will be a sample that contains structures belonging to industrial culture in different scales –ranging from object to site-, types and uses. It is limited with Fener neighborhood on the north, TTK Mining Machines Factory on the east, Blacksea on the west, and TTK Çaydamar Enterprise

on the southwest. First of all, the selected site is located in the densely used city center within commercial and residential areas. It is part of the daily life with administrative, commercial, residential, educational, and industrial uses collected inside these boundaries. Secondly, the site includes both natural and manmade elements like sea, stream, green area, and built environment. Thirdly, it is a remarkable zone where industrial structures can be exemplified. As it was stated in Nizhny Tagil Charter, "…remain consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry…",[88] this area includes production facilities, transportation, infrastructure as well as social facilities. When evaluated from ongoing use, there are industrial buildings and sites, some of which are continuing the same type of production since their foundation, the others are still used for production different than their use, and some of them had been abandoned. Different scales of industrial use are also visible: bridges and railway as elements, *chariot-porteur* as a single structure, and Central Scrubber, Mining Machines Factory or Çaydamar Enterprise as industrial sites.

This area including different structures belonging to industrial past of Zonguldak also stands out with its location within the city. If an action on conservation of industrial heritage starts here, it will be seen and evaluated by public and hopefully importance of the subject will be admitted. In order to decide what should be named as industrial heritage and what should be conserved for which qualities, each edifice should be evaluated for holding different values. In the previous chapter, value types and their probable relation to industrial heritage is discussed. In the following chapter, relation of these values with selected case will be discussed and the area will be evaluated in the light of these discussions.

[88] TICCIH, 2003, ibid., p.2

CHAPTER 5

VALUE ASSESSMENT FOR INDUSTRIAL HERITAGE IN ZONGULDAK

Zonguldak has a significant historical background for being the center of hard coal mining in Ottoman State and Republic of Turkey for nearly two hundred years. The remains of this background as well as still functioning facilities form a unique settlement which is important especially in local, regional and national scales. This importance should be scientifically proven by making value assessment for edifices in Zonguldak to see different kind of values, to propose legal protection status, and to decide which characteristics to highlight. In the scope of this chapter, the values researched in the third chapter are re-evaluated for Zonguldak case and value assessment for selected study area is carried out.

Value types that were arranged in three groups due to their origin (intrinsic, extrinsic and economic) are explained in the previous chapter. Their relation to industrial background and buildings of Zonguldak is discussed below in order to figure out which particular value can be associated to which particular building during the valuation process.

1. **Intrinsic values:**
    a. **Age value**: For Turkey case, although there is manufacture beforehand, systematic production which can be labeled as "industry" started nearly a century later in Ottoman State than Europe's industrial revolution. Industrialization had continued, moreover, gained speed during Republican period and left numerous monuments behind. The Ottoman examples are older than Republican ones, so they are more valuable in terms of age. Age value for Turkish

examples should not be compared to European ones; they should be assessed within themselves because historical background of the country followed Europe a certain time afterwards. Similarly, history of the Zonguldak coalfield started in 1850s with the discovery of coal and its systematic extraction. Today, few examples from Ottoman times remained in the whole coalfield including Asma Scrubber, *chariot-porteur*, few mine entrances and dwellings. After foundation of Republic, construction of industrial complexes began in 1920s and continued rapidly until 1960s. So, most of the complexes are recently built and age value, which is generally valid for older edifices, can be counted for edifices from Ottoman period in Zonguldak case.

Figure 5.1 a) Asma Scrubber (Archive of Chamber of Architects Zonguldak Branch) **b)** Chariot-porteur (author, March 2008)

b. **Historical value**: As it is written in the third chapter, historical value represents the relation of cultural asset with historical events in two ways: whether a structure is intentionally erected after / for a historic event, or it is closely related to a historic event or a specific period. There are not any monuments in Zonguldak that fits in the first group of assessment explained for historical value. However, for the second group, edifices in Zonguldak which belongs to the first decades of Republican period can be stated to have historical value in the first place. After the fall of Ottoman State and foundation of Turkish

Republic, an economic and political plan for an industrialization attack was initiated. Production facilities were founded across the country and Zonguldak, for housing one of the main energy sources, is situated as one of the focal points. Coal production increased gradually with the ongoing constructions and investments. Most of the buildings in Zonguldak today, especially ones that are started to be abandoned lately, are part of this period and they are standing as monuments of an era when industry was the impulsive force in the Turkish economy. In addition to this general assessment, there are many spaces that are associated with local and sometimes national historic events. For example, Kozlu Mines is mostly remembered with the great explosion of March 1992 where 263 miners were passed away.

Figure 5.2 a) Rescue operation after the explosion (Zaman, 2004, p.140) **b)** Memorial ceremony for workers (*http://zonguldakbilgi.com/index.php?option=com_content&task=view&id=182&Itemid=50*, accessed on June 16, 2009) **c)** A recent view of Uzun Mehmed 2 mine shaft (*www.taskomuru.gov.tr*, accessed on June 16, 2009)

c. **Technical / Artistic value**: In Zonguldak, most of the buildings are not significant examples of technical/artistic value when evaluated with the architectural side of this value. They are mostly built with structural systems, materials or techniques within the limits of their period and do not stand out for their architectural qualities except for few such as TTK Mining Machines Factory Electric Workshop. Regarding the technical equipment, still functioning industrial buildings preserve their machinery but abandoned ones lost the majority apart from structurally attached ones like cranes. Industrial

complexes which are still preserving their equipment should be evaluated as having technical value.

d. **Authenticity / Originality value**: For Zonguldak coalfield, authenticity value is going to be based on preserving original qualities of each structure or element in terms of design, construction technique, material, and mechanical components. If all of these qualities remained unaltered since today, the edifice can be stated as original as a whole. Originality value is also very much related to other types of values. As it is written by Madran and Özgönül, originality is connected to historical and document values because the more original a structure remains, the more information it provides.[1] Three of these criteria, that are design, construction technique, and material, can also be evaluated as architectural value because these three items are among main components of architecture.

Figure 5.3 Mining Machines Factory Electric Workshop **a)** Exterior view (Archive of Chamber of Architects Zonguldak Branch) **b)** Interior view (author, March 2008) **c)** Interior view, columns (author, March 2008)

Figure 5.4 a) Original façade design of Çatalağzı Old Thermal Power Plant (author, April 2007) **b)** Original floor tiles in Yaylakonağı Guesthouse (author, March 2008) **c)** Original technical equipment from Kozlu İncirharmanı Facilities (author, April 2007)

[1] Madran and Özgönül, 2005, ibid., p.66

e. **Document value**: Each cultural as well as industrial asset is a document with the help and as a result of each value type listed above and below.

2. **Extrinsic values:**
   a. **Sociocultural value**: As it was stated before, this value is closely related relation of cultural asset and society. So, structure of the society is a strong input in displaying this relation. For the case of Zonguldak, one cannot talk about a native population in the coalfield. The original structure of the society is formed by gathering of various groups. The population of Zonguldak grew in time with constant migration into the city and with a great variety (from neighboring villages and cities to the Balkans and France) to maintain workforce for the mines. This variety created a society with different ideas, customs, social behavior, products, or way of life; that is to say, a culture specific to coalfield. The result is variety of relationship forms established with ndustrial assets.
   b. **Political value**: Politics is always a part of industrialization in the Zonguldak coalfield which can be tracked by constantly changing administrative body since Ottoman times. Relation between physical space and politics can be observed through many examples.[2] The coalfield has been a major political arena during Republican period where the development started with pushing Zonguldak to the center of an attack on industry in 1930s. Industrial buildings of those times still stand for monuments of a planned industrialization breakthrough. This acceleration continued until the end of 1970s but the decline started from 1980s onwards. This resulted in shrinkage of governmental investments and shutting down of facilities. Traces of these periods can be easily discovered in physical space. Industrial buildings of 1950s are still visible today as the sign of growth,

[2] Location of port is a good example for Ottoman period. Although Zonguldak city center is not a proper location for a port, and Ereğli has many natural advantages superior to Zonguldak as well as a man-made port, the loading docks and port is constructed in 1890s in the city center where most of the dominant private companies were extracting coal. (Quataert, 2006, ibid., pp.29-30)

whereas their abandoned and ruined position shows today's approach toward Zonguldak's industrial past and present. As aforementioned, direct relation of places to political history, such as arrival of Atatürk, worker movements, the Great Miner's Strike in 1990-91 are also assessed as having political value.

Figure 5.5 a) Great Miner's Strike, workers in Başţarla (Archive of Chamber of Architects Zonguldak Branch) **b)** Workers in Mengen, on their way to Ankara (Archive of Chamber of Architects Zonguldak Branch)

c. **Aesthetic value**: For Zonguldak case, it can be stated that classical machine aesthetics and decayed aesthetics are valid for most of the industrial buildings, both abandoned and still functioning ones. Engineering aesthetics and stylistic approaches in some structures is also valid from case to case.

Figure 5.6 a) Top view of decantation towers in Çatalağzı Scrubber (author, April 2007) **b)** Engine detail from Çatalağzı Scrubber (Alper Semih Alkan, April 2007) **c)** Export tower in Çaydamar Facilities (Bilge İmamoğlu, April 2007)

d. **Educational value**: Education value is valid for all remains for giving information on different such as material use, construction technique, design or life style.

e. **Symbolic value**: Zonguldak coalfield has been a symbol for mechanization and achievement of industrialization in Turkey even if it has been losing it for several years. Besides this holistic approach there are single buildings, used either for production or not, that represent different meanings to public such as TTK Headquarters as a concrete authority in the city that competes with governmental administrative units, or a recent case, TTK Central Scrubber became the symbol of a continuing fight on conservation vs. demolishment of industrial heritage in Zonguldak.

f. **Commemorative value**: For Zonguldak case, most of the production buildings, mines as well as service buildings have been used by workers and their families for generations and they are witnesses of many historic moments as well as daily routines shared by the community. This built heritage and its use is an important part of collective memory and daily urban life loop of Zonguldak. There are also monuments in Zonguldak that are erected directly to commemorate deceased workers and discovery of coal: Zonguldak Coalfield Mine Martyrs Monument, Uzun Mehmet Monument in the city center and Uzun Mehmet Statue in Ereğli (where it is assumed that he was born and then discovered coal).

Figure 5.7 a) Uzun Mehmet Monument in city center, (*http://www.supermeydan.net/forum/forum350/thread2893.html,* accessed on April 10, 2009) **b)** Zonguldak Coalfield Mine Martyrs Monument (*http://www.zonguldak.gov.tr,* accessed on April 10, 2009) **c)** Uzun Mehmet Statue in Ereğli (*http://www.kdzeregli.bel.tr*, accessed on April 10, 2009)

g. **Identity value**: Mining is a life style in Zonguldak and part of people's identities, and who they are. Although community and some of the workers do not want be labeled with coal; the city is piece of their existence more than a place to live in. In addition to this, "industrial city" tag was attributed to Zonguldak by government as a part of a political approach during the first decades of Turkish Republic. Despite the decreasing production rates and privatization of state's facilities, the city has still been mentioned with being an "industrial" and "coal" city. As a result, each structure and whole coalfield can be assessed as having the identity value.

h. **Spiritual / Religious value**: This value seems to have no connection with industry at the first sight, however, a Christian belief from Ottoman period denotes St. Barbara as protective soul for miners (December 4th as Miners' Day, grew out of a Christian feast, and celebrated annually in Zonguldak).[3] This belief does not have any supporters or relation to any physical space today but it is an important part of mining history in the coalfield.

i. **Mythological value**: There are not any known mythological characters or stories that are related to Zonguldak coalfield, so it is irrelevant to mention this type of value for the case.

j. **Relative art value**: This type of value can be united with aesthetic value for the Zonguldak case in order to be evaluated with industrial aesthetics concept.

k. **Rarity value**: When evaluated in international scale, structures in Zonguldak cannot be selected for being rare examples of their kind. However, within the coalfield, regional or national scale, there are rare examples of the criteria listed above. For example, although it is a common material use and construction method for Turkey, Üzülmez Guesthouse is among the rare residential buildings of its scale that was constructed with traditional techniques in Zonguldak.

[3] TMMOB Maden Mühendisleri Odası, www.mmo.org.tr, accessed on April 19, 2009

Figure 5.8 Example for rarity value, Üzülmez Guesthouse (author, March 2008)

l. **Uniqueness value**: The city is a unique example in Turkey for developing by and around coal mining but there are not any assets that can be evaluated as "unique" rather than "rare".

m. **Group value**: Zonguldak coalfield keeps typical samples of the industrial sites such as Kozlu İncirharmanı Facilities, Çaydamar Enterprise, or Mining Machines Factory and all of them can be definitely assessed for holding group value.

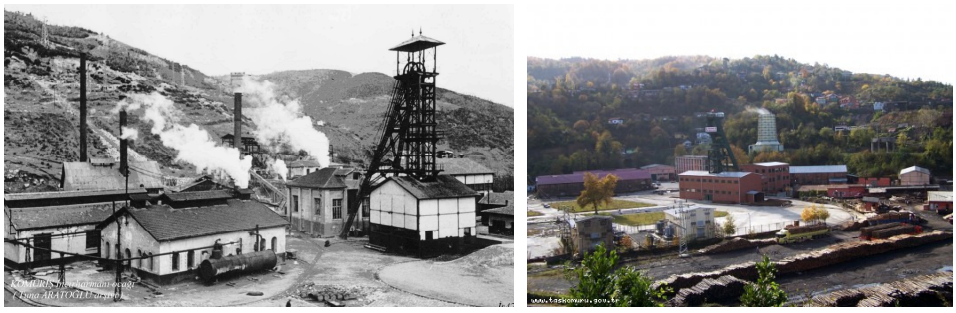


Figure 5.9 Group of buildings in an industrial site **a)** An old view of Kozlu İncirharmanı facilities (Archive of Chamber of Architects Zonguldak Branch) **b)** TTK Karadon Facilities (*www.taskomuru.gov.tr*, accessed on June 20, 2009)

n. **Plurality value**: The number of industrial buildings and sites in Zonguldak coalfield make the city to gain plurality value, and this

increase in quantity gives us a considerable amount of information on social structure, public profile, economy, and daily life cycle of the area.

3. **Economic values:**
    a. **Use / Functional value**: In Zonguldak, most of the buildings have use value. Some of them have been already re-functioned like the previous workers' dormitory in Kozlu, now used for educational purposes by university; or compressor building of Çaydamar, now used as a production workshop. However, majority of them are waiting to be used again and have great advantages in terms of location, accessibility and so.

Figure 5.10 Zonguldak Karaelmas University İncirharmanı Campus **a)** View of a re-functioned building (*http://www.panoramio.com/photo/4682735*, accessed on June 20, 2009) **b)** View from open areas facing to industrial buildings (*http://ydl.karaelmas.edu.tr/tr/kampusten_kareler/buyuk/4.jpg*, accessed on June 20, 2009)

    b. **Market value**: Each cultural property has a monetary value that can be gained through worth of its land, re-use of the building or cultural tourism. Industrial structures and sites in Zonguldak –especially the ones close to city centers, i.e. Central Scrubber – have very valuable lands. That is among the main reason for the demolishment: to use the land for new constructions. However, as it is stated and exemplified above, re-use of these areas can also derive income in many ways.
    c. **Continuity in use**: The continual use or re-use of buildings is a very common situation Zonguldak. Both still functioning facilities (Mining

Machines Factory, Karadon Facilities, Çatalağzı Railway Facilities) or the ones assigned with a new function (TTK Baştarla Training Mine, TED Zonguldak College) can be valuated for their incessant use.

After re-defining and evaluating the values, 17 values can be listed for valuation of industrial heritage in Zonguldak as

- Age, historical, technical/artistic, originality, and document as "intrinsic values";
- Sociocultural, political, aesthetic, educational, symbolic, commemorative, identity, rarity, and group as "extrinsic values",
- Use/functional, market and continuity in use as "economic values".

Nine single buildings and six sites (with 21 buildings) are examined by means of charts that can be seen in Table 5.1. The upper chart shows service buildings and sites whereas the lower shows the ones related to production and transportation. Each type of value is marked with a "**+**" if the building / site has it or with a "**-**" if not. Irrelevant inquiries are marked with a diagonal line, i.e. originality of mechanical equipments can not be searched in administrative buildings where no equipment is available. Also, the horizontal rows highlighted with yellow are buildings and sites that are under legal protection by Ministry of Culture and Tourism.

After analyzing the chart on service buildings and sites, it can be clearly stated that TTK Directorate General, Zonguldak Technical High School (both main building and Electric Workshop), TTK Yaylakonağı Guesthouse, and TTK *Müşavirlik Binası* include a remarkable number of values when compared to others. Yaylakonağı Guesthouse and buildings of the Technical High School are presently under legal protection; so, **TTK Directorate General** and **TTK *Müşavirlik Binası*** should also be registered as industrial monuments for all the values they are holding in addition to the symbolic value for their dominant role in the management of the coalfield.

For the second chart of production and transportation edifices and sites, each item will be evaluated separately. ***Chariot-porteur*** is among limited examples of production/transportation edifices that have age value. It needs to be registered for

Table 5.1 Valuation chart of the buildings and sites in the selected study area

	INTRINSIC									EXTRINSIC									ECONOMIC		
	Age	Historical	Technical/Artistic		Originality				Document	Socio cultural	Political	Aesthetic	Educational	Symbolic	Commemorative	Identity	Rarity	Group	Use Functional	Market	Continuity in use
			Technical	Technological	Design	Cons. tech.	Material	Mech. comp.													
TTK Directorate General	-	+	+		+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+
TTK *Müşavirlik Binası*	+	-	+		+	+	+		+	+	+	+	+	-	+	+	+	+	+	+	+
TED Zonguldak College	+	+	-		+	+	-		+	+	-	-	+	-	+	+	-	+	+	+	+
Nursery building	+	-	-		-	+	-		+	+	-	-	+	-	+	+	-	+	+	+	+
Depot	+	-	-		+	+	+		+	+	-	-	+	-	+	+	-	+	+	+	+
Administration building	-	-	-		+	+	-		+	+	-	-	+	-	+	+	-	+	+	+	+
High school building	-	-	-		-	+	-		+	+	-	-	+	-	+	+	-	+	+	+	+
BEDAŞ Guesthouse	-	-	-		+	+	-		+	+	-	-	+	-	+	+	-	-	+	+	+
Zonguldak İl Sağlık Müdürlüğü	-	+	-		+	+	-		+	+	+	-	+	-	+	+	-	-	+	+	+
Association for Spastic Children	+	-	-		-	+	-		+	+	-	-	+	-	+	+	+	-	+	+	+
Zonguldak Technical High School	-	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Zonguldak Technical High School-Electric workshop	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
TTK Yaylakonağı Guesthouse	+	-	+		+	+	+		+	+	-	+	+	+	+	+	+	-	+	+	+
Fener neighborhood	+	+	+		+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+

	INTRINSIC									EXTRINSIC									ECONOMIC		
	Age	Historical	Technical/Artistic		Originality				Document	Socio cultural	Political	Aesthetic	Educational	Symbolic	Commemorative	Identity	Rarity	Group	Use Functional	Market	Continuity in use
			Technical	Technological	Design	Cons. tech.	Material	Mech. comp.													
Chariot-porteur	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	-	-	+	-
TTK Central Scrubber	-	+	+	+	-	+	+	-	+	+	+	-	+	+	+	+	-	+	+	+	-
Decantation towers	-	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+	-	+	+	+	-
Coal grading unit	-	+	-	-	-	+	+	-	+	+	+	+	+	+	+	+	-	+	+	+	-
Underground silo	-	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	-
Transformer station	-	+	-	-	+	+	+	-	+	+	+	-	+	+	+	+	-	+	+	+	-
TTK Çaydamar Enterprise	-	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	-	+	+	+	+
Depot building	-	+	-		+	+	+		+	+	+	-	+	-	+	+	-	+	+	+	-
Export tower	-	+	-	+	+	+	+	+	+	+	+	+	+	-	+	+	-	+	+	+	-
Compressor building	-	+	-	-	+	+	+	-	+	+	+	-	+	-	+	+	-	+	+	+	+
Mine entrances	-	+	-	+	+	+	+	+	+	+	+	-	+	-	+	+	-	+	+	+	-
Administration	-	+	-		+	+	+		+	+	+	-	+	-	+	+	-	+	+	+	+
Tertip building	-	+	-	-	+	+	+	+	+	+	+	-	+	-	+	+	-	+	+	+	+
Crane building	-	+	-	+	+	+	+	-	+	+	+	+	+	-	+	+	-	+	-	+	-
Fan building	-	+	-	+	+	+	+	+	+	+	+	+	+	-	+	+	-	+	-	+	-
TTK Mining Machines Factory	-	+	+	+	+	+	+	+	+	+	+	-	+	-	+	+	+	+	+	+	+
Welding section	-	+	-	+	+	+	+	+	+	+	+	-	+	-	+	+	-	+	+	+	+
Puantaj	-	+	-		+	+	+		+	+	+	-	+	-	+	+	-	+	+	+	+
Refectory	-	+	-		+	+	+		+	+	+	-	+	-	+	+	-	+	+	+	+
Electric workshop	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Casting section	-	+	-	+	+	+	+	+	+	+	+	-	+	-	+	+	-	+	+	+	+
Assemblage section	-	+	-	+	+	+	+	+	+	+	+	-	+	-	+	+	-	+	+	+	+
Heating plant	-	+	-	+	+	+	+	+	+	+	+	+	+	-	+	+	-	+	+	+	+
Garage	-	+	-	+	+	+	+	+	+	+	+	-	+	-	+	+	-	+	+	+	+
Admin. & main building	-	+	-	+	+	+	+	+	+	+	+	-	+	-	+	+	-	+	+	+	+
Port	+	+	-	+	-	-	-	-	+	+	+	-	+	+	+	+	+	+	+	+	+

being a rare example from Ottoman times in addition to its other values. All three industrial sites of TTK have different building types embracing different values. However, their well preserved totality brings up a group value on the horizontal plane which should be resulted again in registration of them as urban sites. Although the proposed registration is mentioned as "urban site" because of the present definitions in the Turkish law, these sites should be named as "industrial sites" with necessary arrangements. Central Scrubber was already registered for its values despite the demolishment of its majority. The site is also marked for holding symbolic value because of its strategic location and compulsive force in growing awareness for Zonguldak's industrial heritage. **TTK Çaydamar Facilities** was a former coal extraction site that conserved most of its original state and components. Although it does not include symbolic, rarity, aesthetic or age values which easily find acceptance in public for the preservation of an area; its well-preserved shape, originality, being a part of an industrial city with all marked external and economic values in addition to its natural qualities underlines its significance. TTK Çaydamar Facilities is among the sites that should be under legal protection as well. **TTK Mining Machines Factory** is a completely different site because it is still in active use and all the production process can be followed step by step. Its inevitable enlargement with additions and divisions eliminated some of the values in building scale but the site should still be protected for the values it holds. Although **Zonguldak Port** has lost most of its original qualities, its age, historical, and document values as well as political, identity and commemorative values in history, makes it an integral part of this industrial city. The site should be under legal protection and its values listed above should be highlighted during its conservation process. The other buildings in the chart (administration and high school of TED College, BEDAŞ Guesthouse*, İl Sağlık Müdürlüğü*, and Association for Spastic Children/*Papazın Evi*) can not be registered for their values but they are part of an integral industrial settlement and should be protected by public consciousness for their place in the Yayla neighborhood's and coalfield's identity.

As a result, when considering industrial heritage of the selected study area, **age, originality, group and rarity values** appear to be determining value types for the selected study area when compared to other types that are repeating for most of the

sites and buildings. After analyzing the valuation chart of edifices and sites within the borders of the selected study area, TTK Directorate General, TTK *Müşavirlik Binası, chariot-porteur,* TTK Çaydamar Facilities, TTK Mining Machines Factory and Zonguldak Port should be listed for legal protection under the existing definitions in the Turkish Law No. 2863 on the Preservation of Cultural and Natural Assets. Their conservation projects should be executed immediately with emphasis on their existing values. This legal preservation and step-by-step conservation activities will also create a momentum in the public and raise interest in industrial heritage.

The method experienced for the documentation of selected six zones and value assessment for determined study area should be seen as a start for the industrial assets in Zonguldak. A comprehensive documentation of the coalfield (Ereğli, Amasra and Zonguldak) with team members of different professions such as architects, city planners, historians, engineers as well as volunteers from local people should be completed as soon as possible to see the existing stock in the region. A management plan for the selected study area (Zone 1 and Zone 2) should be prepared based on the definition “management area” and “management plan” in the third article of the Law No.2863. In the larger scale, a strategic plan should be prepared and implemented as soon as possible for the active and abandoned industrial heritage assets in the whole Zonguldak coalfield. The contribution of public is essential to grow consciousness, so, the process should be supported by workshops, presentations and exhibitions on theoretical sides as well as implemented cases of conservation of industrial heritage.

Abandoned industrial sites and cities in the world survived from post-industrial physical and social depression by revitalization of industrial lands. This heritage has been accepted by public and became an important part of daily life with the proposed functions. In Turkey, conservation efforts for some industrial buildings and sites can be followed in İstanbul, İzmir, Eskişehir, Kayseri or Bursa. However, lack of an inventory and a policy on industrial heritage s obvious. Buildings showing the industrialization efforts of Ottomans or monuments of Turkish Republic’s modernization movement are located in many cities. In fact, as it was stated

beforehand, there are Republican cities that are identified with industry: Eskişehir (brick and tile); Kayseri, Nazilli, Denizli (textile), Ereğli, İskenderun, Karabük (heavy industry), and the case study of thesis, Zonguldak (coal) and so. A country-wide inventory is a must to see the industrial building stock and to generate a national policy towards the subject. The "**value assessment**" is a vital step in a conservation project to form a methodical basis for deciding what to conserve and why through intrinsic, extrinsic and economic values. Since the proposed valuation of industrial heritage in Zonguldak is a case-based study, the values used in the assessment of the edifices should not be used without a re-evaluation for each new case. The method and discussion on value types should be considered as criteria for guiding the selection of proper value types for different cases.

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APPENDIX A

THE NIZHNY TAGIL CHARTER FOR THE INDUSTRIAL HERITAGE THE INTERNATIONAL COMMITTEE FOR THE CONSERVATION OF THE INDUSTRIAL HERITAGE (TICCIH), 17 July, 2003

TICCIH is the world organisation representing industrial heritage and is special adviser to ICOMOS on industrial heritage. The text of this charter was passed by the assembled delegates at the triennial National Assembly of TICCIH held in Moscow on 17 July, 2003.

Preamble

The earliest periods of human history are defined by the archaeological evidence for fundamental changes in the ways in which people made objects, and the importance of conserving and studying the evidence of these changes is universally accepted.

From the Middle Ages, innovations in Europe in the use of energy and in trade and commerce led to a change towards the end of the 18th century just as profound as that between the Neolithic and Bronze Ages, with developments in the social, technical and economic circumstances of manufacturing sufficiently rapid and profound to be called a revolution. The Industrial Revolution was the beginning of a historical phenomenon that has affected an ever-greater part of the human population, as well as all the other forms of life on our planet, and that continues to the present day.

The material evidence of these profound changes is of universal human value, and the importance of the study and conservation of this evidence must be recognised.

The delegates assembled for the 2003 TICCIH Congress in Russia wish therefore to assert that the buildings and structures built for industrial activities, the processes and tools used within them and the towns and landscapes in which they are located, along with all their other tangible and intangible manifestations, are of fundamental importance. They should be studied, their history should be taught, their meaning and significance should be probed and made clear for everyone and the most significant and characteristic examples should be identified, protected and maintained, in accordance with the spirit of the Venice Charter[1], for the use and benefit of today and of the future.

[1] The ICOMOS 'Venice Charter for the Conservation and Restoration of Monuments and Sites', 1964.

1. Definition of industrial heritage

Industrial heritage consists of the remains of industrial culture which are of historical, technological, social, architectural or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education.

Industrial archaeology is an interdisciplinary method of studying all the evidence, material and immaterial, of documents, artefacts, stratigraphy and structures, human settlements and natural and urban landscapes[2], created for or by industrial processes. It makes use of those methods of investigation that are most suitable to increase understanding of the industrial past and present.

The *historical period* of principal interest extends forward from the beginning of the Industrial Revolution in the second half of the eighteenth century up to and including the present day, while also examining its earlier pre-industrial and proto-industrial roots. In addition it draws on the study of work and working techniques encompassed by the history of technology.

2. Values of industrial heritage

i. The industrial heritage is the evidence of activities which had and continue to have profound historical consequences. The motives for protecting the industrial heritage are based on the universal value of this evidence, rather than on the singularity of unique sites.

ii. The industrial heritage is of social value as part of the record of the lives of ordinary men and women, and as such it provides an important sense of identity. It is of technological and scientific value in the history of manufacturing, engineering, construction, and it may have considerable aesthetic value for the quality of its architecture, design or planning.

iii. These values are intrinsic to the site itself, its fabric, components, machinery and setting, in the industrial landscape, in written documentation, and also in the intangible records of industry contained in human memories and customs.

iv. Rarity, in terms of the survival of particular processes, site typologies or landscapes, adds particular value and should be carefully assessed. Early or pioneering examples are of especial value.

[2] For convenience, 'sites' will be taken to mean landscapes, complexes, buildings, structures and machines unless these terms are used in a more specific way.

3. The importance of identification, recording and research

i. Every territory should identify, record and protect the industrial remains that it wants to preserve for future generations.

ii. Surveys of areas and of different industrial typologies should identify the extent of the industrial heritage. Using this information, inventories should be created of all the sites that have been identified. They should be devised to be easily searchable and should be freely accessible to the public. Computerisation and on-line access are valuable objectives.

iii. Recording is a fundamental part of the study of industrial heritage. A full record of the physical features and condition of a site should be made and placed in a public archive before any interventions are made. Much information can be gained if recording is carried out before a process or site has ceased operation. Records should include descriptions, drawings, photographs and video film of moving objects, with references to supporting documentation. Peoples' memories are a unique and irreplaceable resource which should also be recorded when they are available.

iv. Archaeological investigation of historic industrial sites is a fundamental technique for their study. It should be carried out to the same high standards as that of sites from other historical or cultural periods.

v. Programmes of historical research are needed to support policies for the protection of the industrial heritage. Because of the interdependency of many industrial activities, international studies can help identify sites and types of sites of world importance.

vi. The criteria for assessing industrial buildings should be defined and published so as to achieve general public acceptance of rational and consistent standards. On the basis of appropriate research, these criteria should be used to identify the most important surviving landscapes, settlements, sites, typologies, buildings, structures, machines and processes.

vii. Those sites and structures that are identified as important should be protected by legal measures that are sufficiently strong to ensure the conservation of their significance. The World Heritage List of UNESCO should give due recognition to the tremendous impact that industrialisation has had on human culture.

viii. The value of significant sites should be defined and guidelines for future interventions established. Any legal, administrative and financial measures that are necessary to maintain their value should be put in place.

ix. Sites that are at risk should be identified so that appropriate measures can be taken to reduce that risk and facilitate suitable schemes for repairing or re-using them.

x. International co-operation is a particularly appropriate approach to the conservation of the industrial heritage through co-ordinated initiatives and sharing resources. Compatible criteria should be developed to compile international inventories and databases.

4. Legal protection

I. The industrial heritage should be seen as an integral part of the cultural heritage in general. Nevertheless, its legal protection should take into account the special nature of the industrial heritage. It should be capable of protecting plant and machinery, below-ground elements, standing structures, complexes and ensembles of buildings, and industrial landscapes. Areas of industrial waste should be considered for their potential archaeological as well as ecological value.

II. Programmes for the conservation of the industrial heritage should be integrated into policies for economic development and into regional and national planning.

III. The most important sites should be fully protected and no interventions allowed that compromise their historical integrity or the authenticity of their fabric. Sympathetic adaptation and re-use may be an appropriate and a cost-effective way of ensuring the survival of industrial buildings, and should be encouraged by appropriate legal controls, technical advice, tax incentives and grants.

IV. Industrial communities which are threatened by rapid structural change should be supported by central and local government authorities. Potential threats to the industrial heritage from such changes should be anticipated and plans prepared to avoid the need for emergency actions.

V. Procedures should be established for responding quickly to the closure of important industrial sites to prevent the removal or destruction of significant elements. The competent authorities should have statutory powers to intervene when necessary to protect important threatened sites.

VI. Government should have specialist advisory bodies that can give independent advice on questions relating to the protection and conservation of industrial heritage, and their opinions should be sought on all important cases.

VII. Every effort should be made to ensure the consultation and participation of local communities in the protection and conservation of their local industrial heritage.

VIII. Associations and societies of volunteers have an important role in identifying sites, promoting public participation in industrial conservation and disseminating information and research, and as such are indispensable actors in the theatre of industrial heritage.

5. Maintenance and conservation

I. Conservation of the industrial heritage depends on preserving functional integrity, and interventions to an industrial site should therefore aim to maintain this as far as possible. The value and authenticity of an industrial site may be greatly reduced if machinery or components are removed, or if subsidiary elements which form part of a whole site are destroyed.

II. The conservation of industrial sites requires a thorough knowledge of the purpose or purposes to which they were put, and of the various industrial processes which may have taken place there. These may have changed over time, but all former uses should be examined and assessed.

III. Preservation *in situ* should always be given priority consideration. Dismantling and relocating a building or structure are only acceptable when the destruction of the site is required by overwhelming economic or social needs.

IV. The adaptation of an industrial site to a new use to ensure its conservation is usually acceptable except in the case of sites of especial historical significance. New uses should respect the significant material and maintain original patterns of circulation and activity, and should be compatible as much as possible with the original or principal use. An area that interprets the former use is recommended.

V. Continuing to adapt and use industrial buildings avoids wasting energy and contributes to sustainable development. Industrial heritage can have an important role in the economic regeneration of decayed or declining areas. The continuity that re-use implies may provide psychological stability for communities facing the sudden end a long-standing sources of employment.

VI. Interventions should be reversible and have a minimal impact. Any unavoidable changes should be documented and significant elements that are removed should be recorded and stored safely. Many industrial processes confer a patina that is integral to the integrity and interest of the site.

VII. Reconstruction, or returning to a previous known state, should be considered an exceptional intervention and one which is only appropriate if it benefits the integrity of the whole site, or in the case of the destruction of a major site by violence.

VIII. The human skills involved in many old or obsolete industrial processes are a critically important resource whose loss may be irreplaceable. They need to be carefully recorded and transmitted to younger generations.

IX. Preservation of documentary records, company archives, building plans, as well as sample specimens of industrial products should be encouraged.

6. Education and training

I. Specialist professional training in the methodological, theoretical and historical aspects of industrial heritage should be taught at technical and university levels.

II. Specific educational material about the industrial past and its heritage should be produced by and for students at primary and secondary level.

7. Presentation and interpretation

I. Public interest and affection for the industrial heritage and appreciation of its values are the surest ways to conserve it. Public authorities should actively explain the meaning and value of industrial sites through publications, exhibitions, television, the Internet and other media, by providing sustainable access to important sites and by promoting tourism in industrial areas.

II. Specialist industrial and technical museums and conserved industrial sites are both important means of protecting and interpreting the industrial heritage.

III. Regional and international routes of industrial heritage can highlight the continual transfer of industrial technology and the large-scale movement of people that can be caused by it.

Eusebi Casanelles
President TICCIH

Eugene Logunov
TICCIH XII International Congress

Nizhny Tagil, 2003

APPENDIX B

COUNCIL OF EUROPE COMMITTEE OF MINISTERS RECOMMENDATION No. R (90) 20 OF THE COMMITTEE OF MINISTERS TO MEMBER STATES ON THE PROTECTION AND CONSERVATION OF THE INDUSTRIAL, TECHNICAL AND CIVIL ENGINEERING HERITAGE IN EUROPE

(Adopted by the Committee of Ministers on 13 September 1990 at the 443rd meeting of the Ministers' Deputies)

The Committee of Ministers, under the terms of Article 15.b of the Statute of the Council of Europe,

Having regard to the European Cultural Convention signed in Paris on 19 December 1954 and, in particular, to Articles 1 and 5;

Having regard to the Convention for the Protection of the Architectural Heritage of Europe, opened for signature at Granada on 3 October 1985;

Having regard to the resolutions of the European Conference of Ministers responsible for the Architectural Heritage, held at Granada on 3 and 4 October 1985, and, in particular, to Resolution No. 2 on the promotion of the architectural heritage in socio-cultural life and as a factor in the quality of life;

Recalling that the technical, industrial and civil engineering heritage constitutes an integral part of the historic heritage of Europe;

Emphasising the need to secure its protection and conservation by appropriate measures taking into account its specific nature;

Observing that the strategies to promote incentives and arouse public awareness to be set up in respect of this heritage would be given their rightful dimension in the context of concerted action at European level;

Considering that, to achieve these objectives, the promotion of scientific knowledge of the technical, industrial and civil engineering heritage must be the subject of added attention on the part of the member states,

Recommends that the governments of member states:

- take or pursue the implementation of measures permitting the identification, survey and scientific analysis of the technical, industrial and civil engineering heritage;

- protect this heritage according to its specific nature by relevant legal protection and conservation measures;
- promote public knowledge and enhancement of the technical, industrial and civil engineering heritage through campaigns to alert the public at large and by placing particular emphasis on the promotion of tourism;

- study the possibility of pooling their efforts to preserve and maintain certain exceptional industrial complexes which are part of the common historic heritage of Europe as a whole, on the basis of the principles set out in the appendix to this recommendation;

Asks the Secretary General to transmit the text of this recommendation to non-member states, Parties or invited to become Parties to the European Cultural Convention and/or to the Convention for the Protection of the Architectural Heritage of Europe.

Appendix to Recommendation No. R (90) 20

I. Aims of the recommendation

The rapid development of industrial civilisation, the new types of production and employment resulting from the recent economic crisis and the technological explosion, which is typical of our age and society, have led to farreaching upheavals in whole sectors of industrial activity, with the consequent major changes in urban or suburban landscapes involving the sometimes total disappearance of buildings, installations or vestiges of industrial activity. Today, Europe is becoming aware of the technical, cultural and social value of this heritage as a whole which conceals an important part of the collective memory and European identity, some of whose elements deserve to be protected as part of the heritage.

The series of colloquies organised by the Council of Europe on that theme at Lyons (France) "The industrial heritage, what policies?", Madrid (Spain) "Engineering and public works: a new dimension of the heritage", Bochum (Federal Republic of Germany) "Mining engineering monuments as a cultural heritage" and Durham (United Kingdom) "Recording the industrial heritage" has highlighted the role of this heritage in post-industrial society and the need to implement protection and maintenance policies which take into account its specific nature. In adopting this approach towards a specific category of the historic heritage, the aim is not to consider only buildings, technical monuments, sites or objects, but also a physical environment, a corpus of knowledge, techniques and ways of life.

II. Measures for the identification, survey and scientific analysis of the technical, industrial and civil engineering heritage

1. This heritage should be systematically identified by:

i. establishing or continuing detailed surveys which take into account the

multidisciplinary character of this heritage and can be used for protection and enhancement policies;

ii. identifying significant sites and places, particularly those whose geographical situation makes access difficult (small hydraulic works, small dams, disused mines, etc.) and which are harder to protect;

iii. promoting programmes of study and research on the technical, industrial and civil engineering heritage by:

- public bodies responsible for the management of the heritage;
- university and scientific research institutions, as well as in professional circles;
- the industrial and commercial companies concerned, whilst fostering sponsorship by firms to that end;
- organisations and private and public associations engaged in the defence and promotion of this heritage;

iv. a better use of human resources by, in particular, calling on early retired or retired professionals in the context of the enterprise or outside, with a view to analysing and protecting not only archives but also techniques, know-how and the operation of tools, machines and installations.

2. For this purpose modern and high-performance methods and resources should be used, in accordance with common criteria defined at European level.

III. Measures to protect and conserve the technical, industrial and civil engineering heritage

The scale and extent of the technical, industrial and civil engineering heritage, as well as its very nature, make it necessary to adopt specific protection and conservation measures in the wider framework of heritage policies. It would be impossible to seek to protect all the technical or industrial constructions existing in Europe, even if they had a certain historic or scientific value. Selection is necessary more than in any other sector of the heritage. Sometimes, the mere identification of the building, tool or object represents in itself a form of conservation. This selection will have to be made so as to ensure a balanced representation of the different branches of production. It is also important to associate owners and enterprises in this task. It is necessary to:

1. promote, at European level, protection and conservation policies for the technical, industrial and civil engineering heritage by:

i. adopting appropriate legislative measures adapted to the nature of this heritage;
ii. defining the framework of a land policy for deserted industrial areas, which represent reserve areas for future
iii. intervention in the form of research and possible protection;
iv. mounting pilot research and conservation programmes at regional level;

2. set up strategies for providing incentives by:

i. promoting sponsorship by enterprises, based on tax incentives, for participation in the salvage and enhancement of this heritage, even in sectors of activities which are in no way connected with the sponsoring firm;
ii. fostering the selective conservation by enterprises of archives which retrace their history, notably plans and other data concerning the construction of technical and industrial buildings, civil engineering works and production processes;
iii. urging enterprises not to destroy all outdated material without recording it and to keep at least a number of specimens.

IV. Measures to alert the public to the technical, industrial and civil engineering heritage

Scientific knowledge and alerting the public to the industrial, technical and civil engineering heritage foster its protection and do much to encourage the implementation of projects designed to conserve, restore and enhance it. To that end, it is up to the public authorities to:

1. promote the training of specialists in this sector at university and technical levels or in the crafts, in a spirit of interdependence between scientific disciplines and an approach directed towards the heritage;

2. organise specific campaigns to provide information for and alert:

i. local and regional elected representatives in order to attract their attention both to the historic value of this heritage and to the possibilities resulting from action centred on enhancement and new forms of use, including the promotion of tourism by organising specific cultural routes and encouraging industrial tourism;
ii. professional circles, often the owners and managers of the installations concerned, in order to make them aware that the value of their heritage does not lie solely in production;
iii. young people at school, who constitute a particularly receptive audience for this type of message;
iv. the public at large, whose knowledge of the historic heritage is generally restricted to monuments and groups of buildings; the development of specialised museums, initiatives such as "open days" in enterprises still in production or focusing attention on the industrial heritage on the occasion of European heritage days can do much to make all citizens aware of the prominent place of industrial installations in the historic heritage; local authorities have an essential role to play as a link with the public by organising and promoting industrial tourism; specific cultural routes would fit perfectly into such a programme for arousing awareness.

V. Measures to promote co-operation and intervention at European level

In a number of hypotheses, the work to be done presupposes wider support than that which could be given by the authorities or private circles at regional or even national level. European co-operation would thus make it easier to respond to the objectives and could be expressed in the following forms:

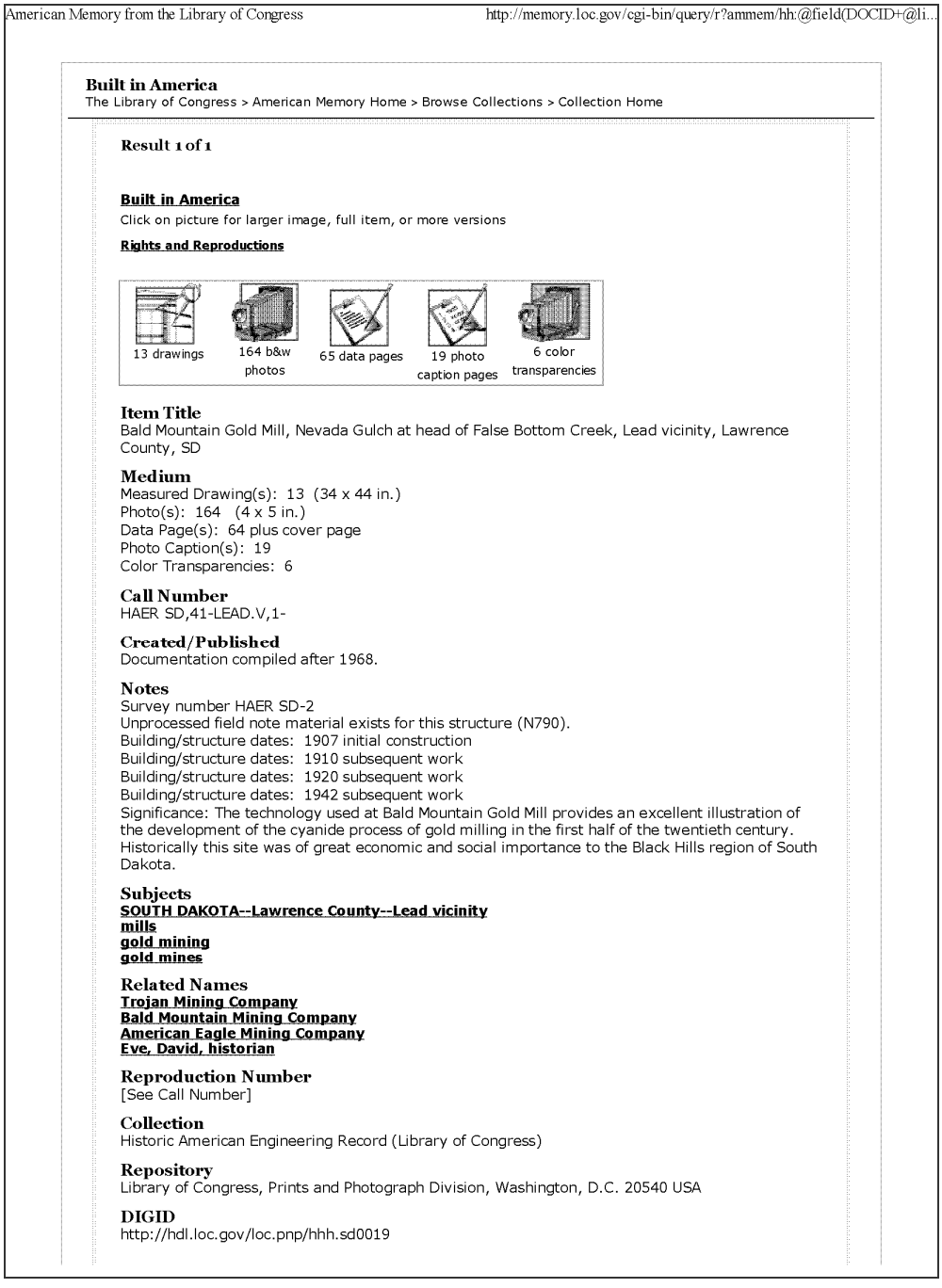
- consultation and the co-ordination of initiatives among the competent authorities of the states in respect of strategies to be defined for the protection and enhancement of the technical and industrial heritage, particularly in the context of the application of and follow-up to the Convention for the Protection of the Architectural Heritage of Europe;
- concrete co-operation in respect of local projects of exceptional importance and having a European dimension in which those concerned in a number of states would pool their know-how and investments with a view to mounting large-scale operations.

The implementation of European projects might be possible with the support of:

- Council of Europe technical assistance programmes;
- supplementary financial assistance from European institutions or sponsorship on the part of enterprises.

APPENDIX C

EXAMPLES OF INDUSTRIAL HERITAGE RECORD FORMS



American Memory from the Library of Congress http://memory.loc.gov/cgi-bin/query/r?ammem/hh:@field(DOCID+@li...

Built in America
The Library of Congress > American Memory Home > Browse Collections > Collection Home

Result 1 of 1

Built in America
Click on picture for larger image, full item, or more versions

Rights and Reproductions

13 drawings | 164 b&w photos | 65 data pages | 19 photo caption pages | 6 color transparencies

Item Title
Bald Mountain Gold Mill, Nevada Gulch at head of False Bottom Creek, Lead vicinity, Lawrence County, SD

Medium
Measured Drawing(s): 13 (34 x 44 in.)
Photo(s): 164 (4 x 5 in.)
Data Page(s): 64 plus cover page
Photo Caption(s): 19
Color Transparencies: 6

Call Number
HAER SD,41-LEAD.V,1-

Created/Published
Documentation compiled after 1968.

Notes
Survey number HAER SD-2
Unprocessed field note material exists for this structure (N790).
Building/structure dates: 1907 initial construction
Building/structure dates: 1910 subsequent work
Building/structure dates: 1920 subsequent work
Building/structure dates: 1942 subsequent work
Significance: The technology used at Bald Mountain Gold Mill provides an excellent illustration of the development of the cyanide process of gold milling in the first half of the twentieth century. Historically this site was of great economic and social importance to the Black Hills region of South Dakota.

Subjects
SOUTH DAKOTA--Lawrence County--Lead vicinity
mills
gold mining
gold mines

Related Names
Trojan Mining Company
Bald Mountain Mining Company
American Eagle Mining Company
Eve, David, historian

Reproduction Number
[See Call Number]

Collection
Historic American Engineering Record (Library of Congress)

Repository
Library of Congress, Prints and Photograph Division, Washington, D.C. 20540 USA

DIGID
http://hdl.loc.gov/loc.pnp/hhh.sd0019

Figure C.1 Screenshot from online inventory of US Heritage Documentation Programs, record for Bald Mountain Gold Mill prepared by HAER: Main record (*http://www.nps.gov/history/hdp/samples/index.htm*, accessed on February 01, 2009)

The Library of Congress

AMERICAN MEMORY

Historic American Buildings Survey/Historic American Engineering Record

drawings | b&w photos | data pages | photo caption pages | color transparencies

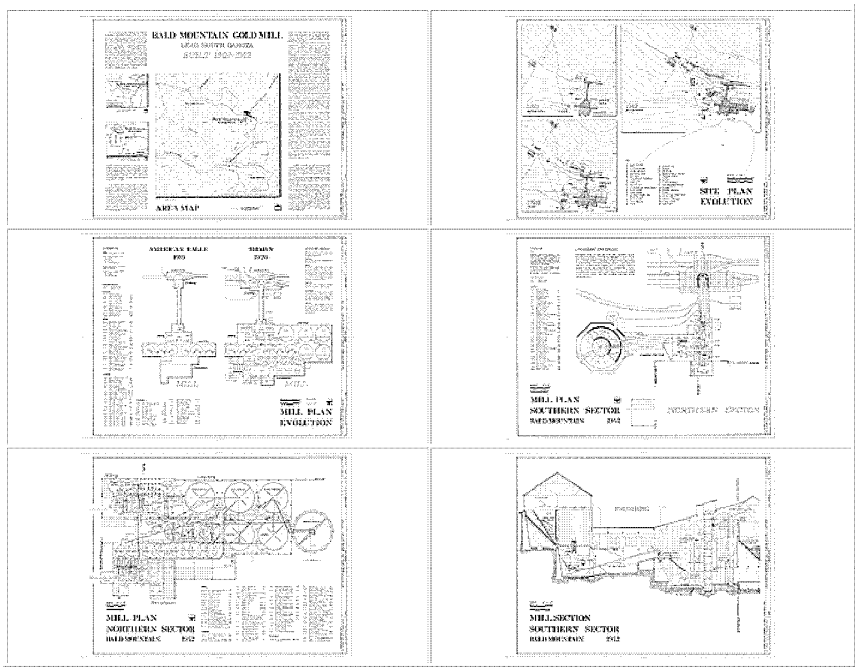
(If noted, names of delineators and date of creation are found on the drawings.)

Bald Mountain Gold Mill, Nevada Gulch at head of False Bottom Creek, Lead vicinity, Lawrence County, SD

Drawings 1 through 6 of 13 **NEXT GROUP**

For a larger reference image, click on the picture or text.

Back to catalog record | **Built in America Home Page**



Back to catalog record | **Built in America Home Page**

Drawings 1 through 6 of 13 **NEXT GROUP**

American Memory | Search All Collections | Collection Finder | Learning Page

Figure C.2 Screenshot from online inventory of US Heritage Documentation Programs, record for Bald Mountain Gold Mill prepared by HAER: Drawings (*http://www.nps.gov/history/hdp/samples/index.htm*, accessed on February 01, 2009)

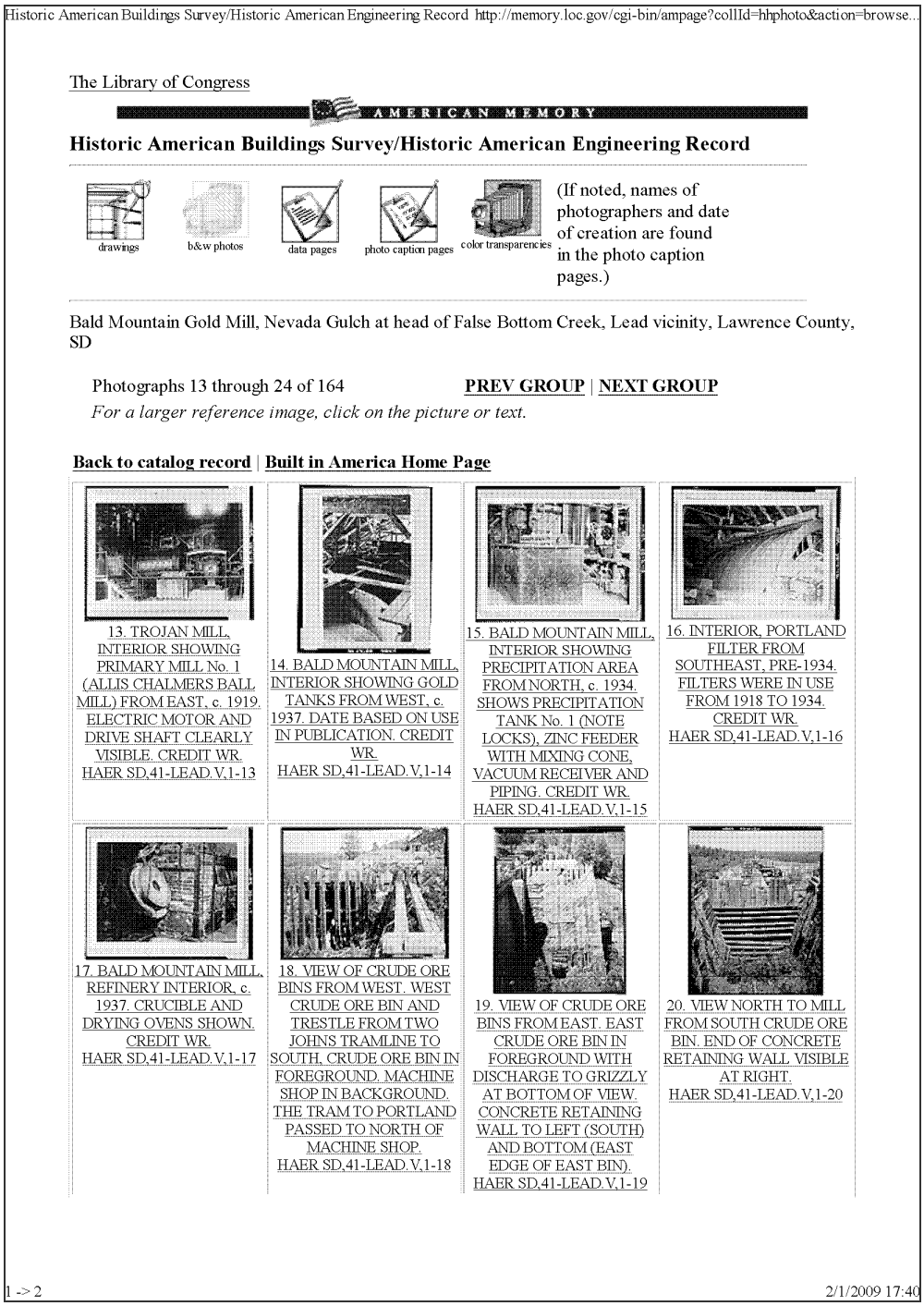


Figure C.3 Screenshots from online inventory of US Heritage Documentation Programs, record for Bald Mountain Gold Mill prepared by HAER: Black and white photographs (*http://www.nps.gov/history/hdp/samples/index.htm*, accessed on February 01, 2009)

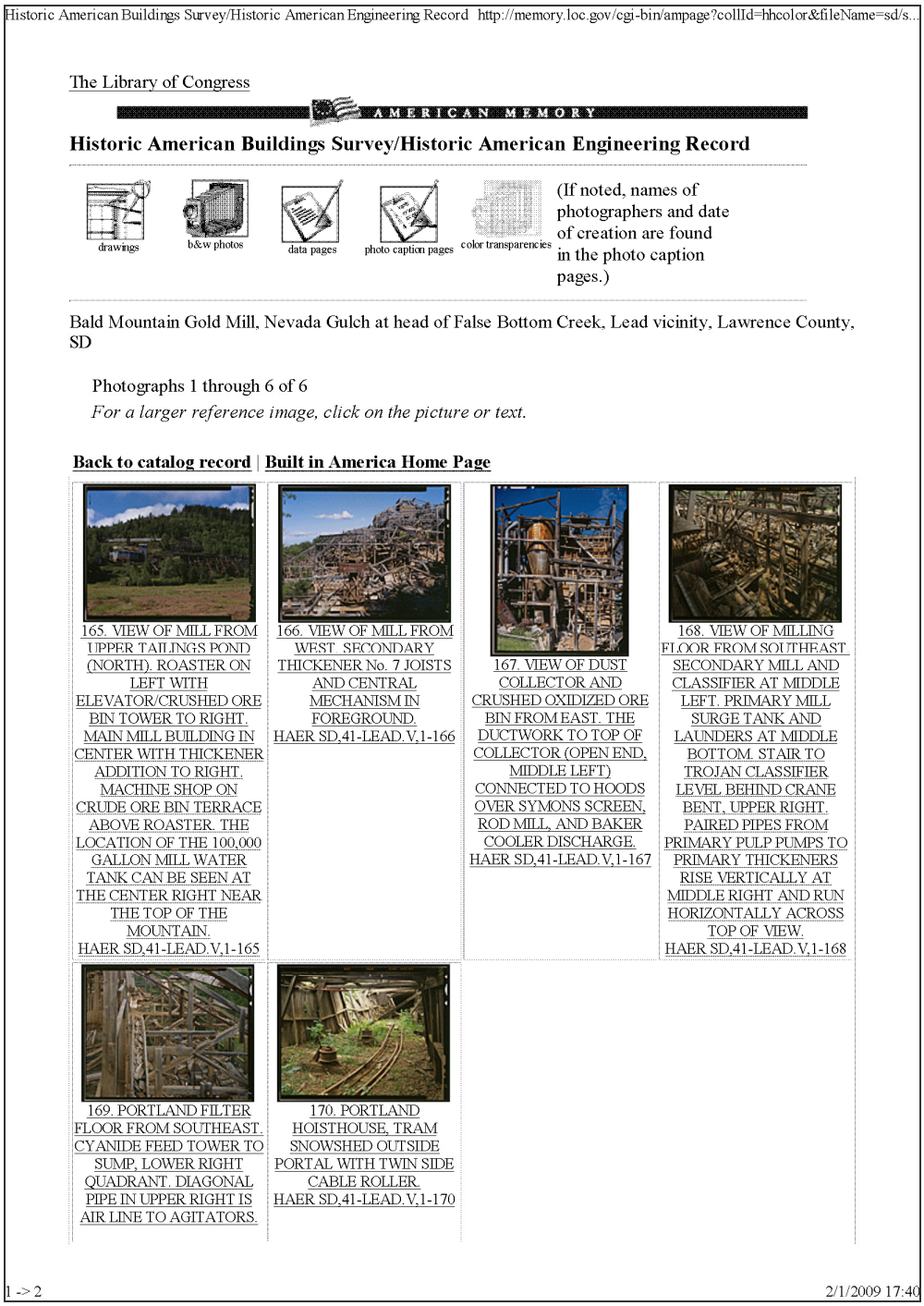
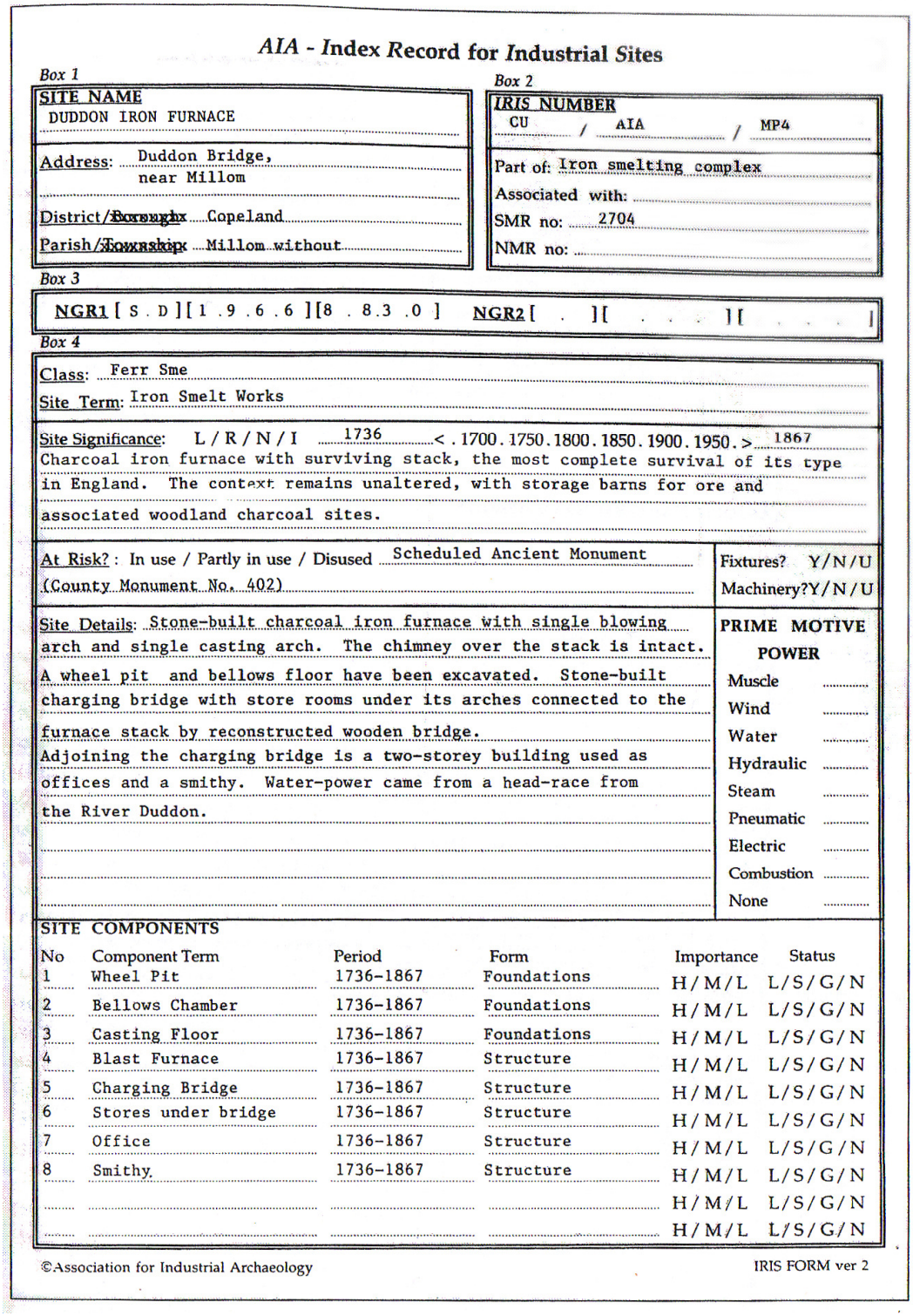


Figure C.4 Screenshots from online inventory of US Heritage Documentation Programs, record for Bald Mountain Gold Mill prepared by HAER: Color transparencies (*http://www.nps.gov/history/hdp/samples/index.htm*, accessed on February 01, 2009)



AIA - Index Record for Industrial Sites

Box 1

SITE NAME
DUDDON IRON FURNACE

Address: Duddon Bridge,
near Millom

District/~~Borough~~: Copeland

Parish/~~Township~~: Millom without

Box 2

IRIS NUMBER
CU / AIA / MP4

Part of: Iron smelting complex

Associated with:

SMR no: 2704

NMR no:

Box 3

NGR1 [S . D][1 . 9 . 6 . 6][8 . 8.3 .0] NGR2 [.][. . .][. . .]

Box 4

Class: Ferr Sme

Site Term: Iron Smelt Works

Site Significance: L / R / N / I 1736 < . 1700 . 1750 . 1800 . 1850 . 1900 . 1950 . > 1867

Charcoal iron furnace with surviving stack, the most complete survival of its type in England. The context remains unaltered, with storage barns for ore and associated woodland charcoal sites.

At Risk? : In use / Partly in use / Disused Scheduled Ancient Monument (County Monument No. 402)

Fixtures? Y/N/U

Machinery? Y/N/U

Site Details: Stone-built charcoal iron furnace with single blowing arch and single casting arch. The chimney over the stack is intact. A wheel pit and bellows floor have been excavated. Stone-built charging bridge with store rooms under its arches connected to the furnace stack by reconstructed wooden bridge. Adjoining the charging bridge is a two-storey building used as offices and a smithy. Water-power came from a head-race from the River Duddon.

PRIME MOTIVE POWER

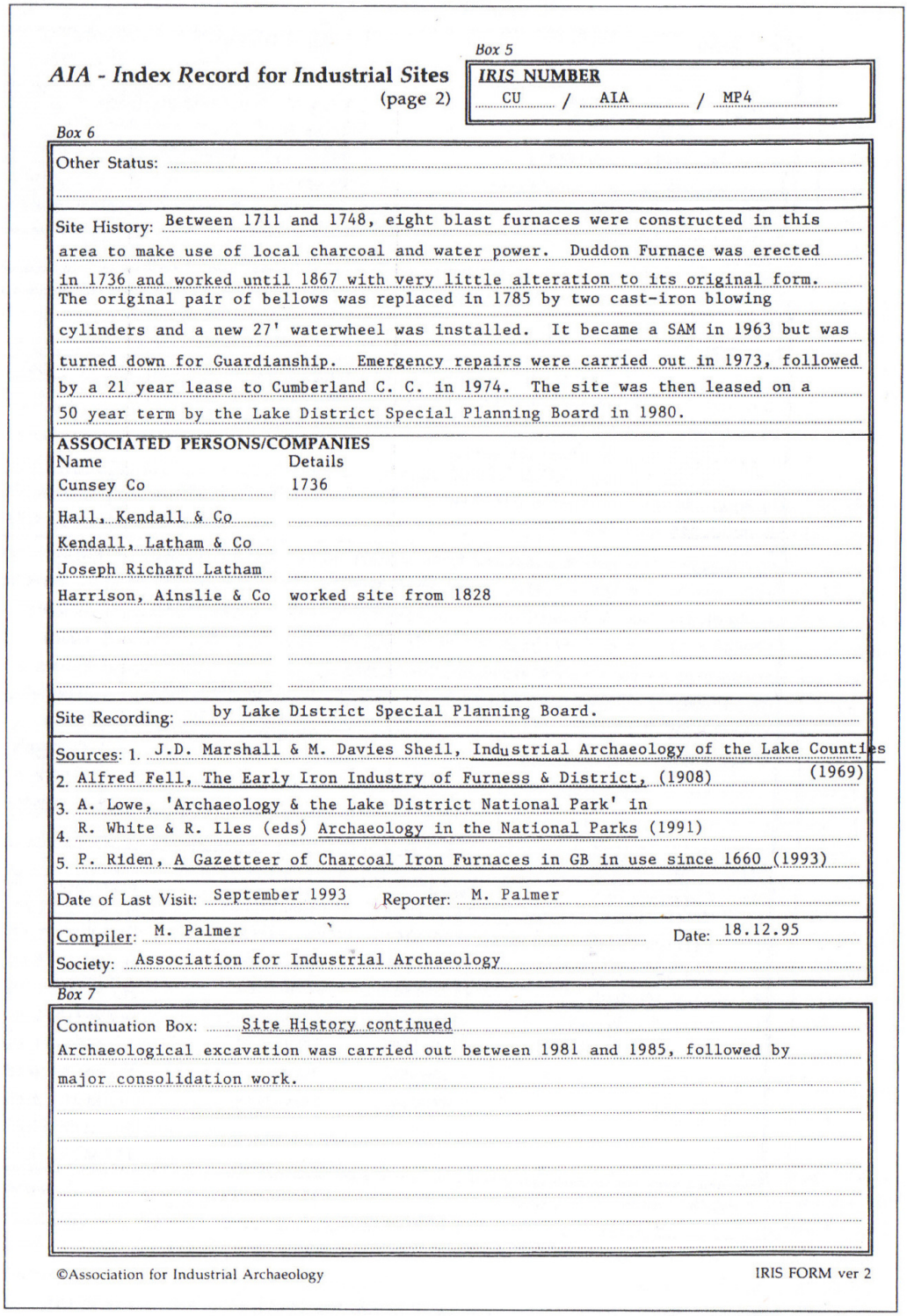
Muscle .....
Wind .....
Water .....
Hydraulic .....
Steam .....
Pneumatic .....
Electric .....
Combustion .....
None .....

SITE COMPONENTS

No	Component Term	Period	Form	Importance	Status
1	Wheel Pit	1736–1867	Foundations	H/M/L	L/S/G/N
2	Bellows Chamber	1736–1867	Foundations	H/M/L	L/S/G/N
3	Casting Floor	1736–1867	Foundations	H/M/L	L/S/G/N
4	Blast Furnace	1736–1867	Structure	H/M/L	L/S/G/N
5	Charging Bridge	1736–1867	Structure	H/M/L	L/S/G/N
6	Stores under bridge	1736–1867	Structure	H/M/L	L/S/G/N
7	Office	1736–1867	Structure	H/M/L	L/S/G/N
8	Smithy	1736–1867	Structure	H/M/L	L/S/G/N
				H/M/L	L/S/G/N
				H/M/L	L/S/G/N

IRIS FORM ver 2

Figure C.5 Completed IRIS form for Duddon Furnace in Cumbria, page 1 (Palmer and Neaverson, 1998, pp.83-84)



AIA - Index Record for Industrial Sites
(page 2)

Box 5
IRIS NUMBER
CU / AIA / MP4

Box 6

Other Status:

Site History: Between 1711 and 1748, eight blast furnaces were constructed in this area to make use of local charcoal and water power. Duddon Furnace was erected in 1736 and worked until 1867 with very little alteration to its original form. The original pair of bellows was replaced in 1785 by two cast-iron blowing cylinders and a new 27' waterwheel was installed. It became a SAM in 1963 but was turned down for Guardianship. Emergency repairs were carried out in 1973, followed by a 21 year lease to Cumberland C. C. in 1974. The site was then leased on a 50 year term by the Lake District Special Planning Board in 1980.

ASSOCIATED PERSONS/COMPANIES

Name	Details
Cunsey Co	1736
Hall, Kendall & Co	
Kendall, Latham & Co	
Joseph Richard Latham	
Harrison, Ainslie & Co	worked site from 1828

Site Recording: by Lake District Special Planning Board.

Sources: 1. J.D. Marshall & M. Davies Sheil, Industrial Archaeology of the Lake Counties (1969)
2. Alfred Fell, The Early Iron Industry of Furness & District, (1908)
3. A. Lowe, 'Archaeology & the Lake District National Park' in
4. R. White & R. Iles (eds) Archaeology in the National Parks (1991)
5. P. Riden, A Gazetteer of Charcoal Iron Furnaces in GB in use since 1660 (1993)

Date of Last Visit: September 1993 Reporter: M. Palmer

Compiler: M. Palmer Date: 18.12.95

Society: Association for Industrial Archaeology

Box 7

Continuation Box: Site History continued

Archaeological excavation was carried out between 1981 and 1985, followed by major consolidation work.

IRIS FORM ver 2

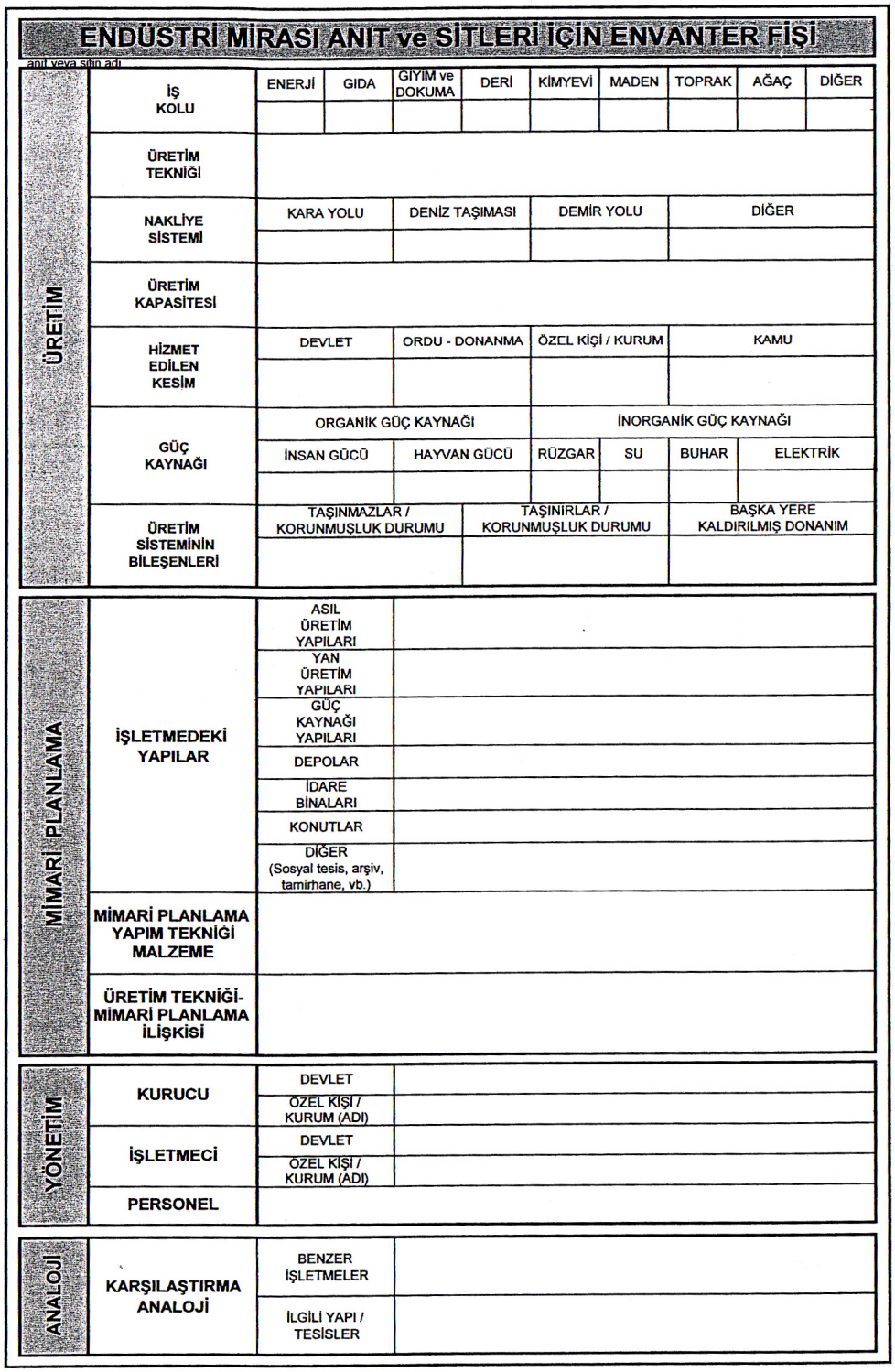
Figure C.6 Completed IRIS form for Duddon Furnace in Cumbria, page 2 (from Palmer and Neaverson, 1998, pp.83-84)

RCHME LEVELS OF RECORDING FOR BUILDINGS

WRITTEN ACCOUNT	DRAWINGS	PHOTOGRAPHY
1. Location of buildings, NGR and status	1. Sketch plan, roughly dimensioned	1. External view or views
2. Date record made, names of recorders	2. Plans of principal floors, showing features of historic significance	2. Overall interiors of principal rooms
3. Statement of building's type, purpose, materials, date	3. Drawings of other significant structural detail	3. All exteriors
4. Fuller account of development sequence, plan, form and function	4. Sections to illustrate vertical relationships	4. External details, relevant to design, development and use
5. As 4, with evidence for analysis	5. Drawings of details, eg. doorcases, mullions	5. Relationship of building to setting
6. Description of past and present uses, including machinery etc	6. Measured elevations	6. Interior detail, structural and decorative
7. Evidence for former existence of demolished structures etc.	7. Site plan relating building to other structures etc	
8. Copies of previous records or information on location	8. Copies of earlier plans	
9. Relevant information from readily available sources	9. Three-dimensional projections	
10. Past and present relationship of building to setting	10. Reconstruction drawings or phased drawings	
11. Potential for existence of below ground evidence		
12. Significance of building locally, regionally or nationally		
13. Other historical research, oral information and bibliography		

	Level One	Level Two	Level Three	Level Four
Written record	1-3	1-2, 4	1-2, 4-9	1-2, 4-13
Drawn record	1	1, normally 2	2-4 or 5	2-10
Photography	1, perhaps 2	2-3	3-6	3-6

Figure C.7 Simplified table showing four levels of recording by RCHME (Palmer and Neaverson, 1998, p.86)



ENDÜSTRİ MİRASI ANIT ve SİTLERİ İÇİN ENVANTER FİŞİ

anıt veya sitin adı

ÜRETİM

İŞ KOLU	ENERJİ	GIDA	GİYİM ve DOKUMA	DERİ	KİMYEVİ	MADEN	TOPRAK	AĞAÇ	DİĞER
ÜRETİM TEKNİĞİ									
NAKLİYE SİSTEMİ	KARA YOLU		DENİZ TAŞIMASI		DEMİR YOLU		DİĞER		
ÜRETİM KAPASİTESİ									
HİZMET EDİLEN KESİM	DEVLET		ORDU - DONANMA		ÖZEL KİŞİ / KURUM		KAMU		
GÜÇ KAYNAĞI	ORGANİK GÜÇ KAYNAĞI				İNORGANİK GÜÇ KAYNAĞI				
	İNSAN GÜCÜ		HAYVAN GÜCÜ		RÜZGAR	SU	BUHAR	ELEKTRİK	
ÜRETİM SİSTEMİNİN BİLEŞENLERİ	TAŞINMAZLAR / KORUNMUŞLUK DURUMU			TAŞINIRLAR / KORUNMUŞLUK DURUMU			BAŞKA YERE KALDIRILMIŞ DONANIM		

MİMARİ PLANLAMA

İŞLETMEDEKİ YAPILAR	ASIL ÜRETİM YAPILARI	
	YAN ÜRETİM YAPILARI	
	GÜÇ KAYNAĞI YAPILARI	
	DEPOLAR	
	İDARE BİNALARI	
	KONUTLAR	
	DİĞER (Sosyal tesis, arşiv, tamirhane, vb.)	
MİMARİ PLANLAMA YAPIM TEKNİĞİ MALZEME		
ÜRETİM TEKNİĞİ-MİMARİ PLANLAMA İLİŞKİSİ		

YÖNETİM

KURUCU	DEVLET	
	ÖZEL KİŞİ / KURUM (ADI)	
İŞLETMECİ	DEVLET	
	ÖZEL KİŞİ / KURUM (ADI)	
PERSONEL		

ANALOJİ

KARŞILAŞTIRMA ANALOJİ	BENZER İŞLETMELER	
	İLGİLİ YAPI / TESİSLER	

Figure C.8 Additional inventory form for industrial heritage monuments and sites, developed by Gül Köksal (Köksal, 2005, p.356)

APPENDIX D

RECORD FORMS OF INDUSTRIAL HERITAGE IN ZONGULDAK

This appendix includes the record forms produced for the industrial sites and buildings in the six study zones in Zonguldak. The information is gathered under six main titles discussed in Section 2.3.1.

Table D.1 TTK Directorate General

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Genel Müdürlüğü	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-B01	**PHOTO #**	IMG 3050-51, 3115
SURVEY DATE	24.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1978	**ORIGINAL FUNCTION**	Head office of TTK
OWNER	Government, TTK	**CURRENT USE**	Head office
ADMINISTRATOR	Government, TTK		

ARCHITECTURAL DATA			
ARCHITECT	Yılmaz Soylu	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Reinforced concrete, stone covered facade	**CONDITION**	Good
EXISTING LANDSCAPE	Dense green area on the slope		
NEARBY ENVIRONMENT	Public and administrative buildings as well as residential area		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	Main office building of TTK, comprised of two blocks: head office and offices. Located on the slope, entrance facing to the sea. Elongated rectangular blocks with stripe windows along the facade.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	~~Originality~~	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational Symbolic
	Commemorative		Identity	Rarity	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS

Table D.2 TTK *Müşavirlik Binası*

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Müşavirlik Binası	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-B02	**PHOTO #**	IMG 3052-3063
SURVEY DATE	24.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1880s (?)	**ORIGINAL FUNCTION**	Unknown
OWNER	Government, TTK	**CURRENT USE**	Consultancy office, policlinic
ADMINISTRATOR	Government, TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone and brick	**CONDITION**	Good
EXISTING LANDSCAPE	Dense green area on the slope		
NEARBY ENVIRONMENT	Public and administrative buildings as well as residential area		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	3+1 floor building located in the same garden with TTK Genel Müdürlüğü. Exterior and interior features (cupboards, stairs, ceilings etc.) are well preserved except the mass added to the east facade. Stone building with pitched roof, doors and windows surrounded with brick.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	Age	~~Historical~~	Technical/Artistic		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS





Table D.3 Başkent Elektrik Guesthouse

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Başkent Elektrik Misafirhanesi	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-B03	**PHOTO #**	
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	Unknown	**ORIGINAL FUNCTION**	Unknown
OWNER	BEDAŞ	**CURRENT USE**	Guesthouse (had been head office of BEDAŞ)
ADMINISTRATOR	Private, Başkent Elektrik		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone	**CONDITION**	Good
EXISTING LANDSCAPE	Single trees around the garden		
NEARBY ENVIRONMENT	Public and administrative buildings		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	Two storey (+basement) building. Rectangular plan with extensions on both ends. Symmetrical facade with rhythmic windows. Five horizontal extending lines surrounding the buildings along facades. Interior material was extremely changed. Plan organization has been preserved.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~ Originality	~~Historical~~ Design	~~Technical/Artistic~~ Const.	~~Material~~	Document ~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural Commemorative		~~Political~~ Identity	~~Aesthetic~~ ~~Rarity~~	Educational ~~Symbolic~~ ~~Group~~
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS




Table D.4 Zonguldak LocalHealth Authority

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Zonguldak İl Sağlık Müdürlüğü	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-B04	**PHOTO #**	IMG 3182-3185
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	Unknown	**ORIGINAL FUNCTION**	Unknown
OWNER	Amele Birliği	**CURRENT USE**	Local health authority
ADMINISTRATOR	Government, Ministry of Health		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry	**CONDITION**	Good
EXISTING LANDSCAPE	Single trees around the garden		
NEARBY ENVIRONMENT	Public and administrative buildings		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	Located in the center of a garden down from the main road. Two storey (+basement) building with rectangular plan. Rectangular windows on the longer facades, windows of different sizes and shapes on the shorter facades. Renovated (ceiling, floor, windows etc.) in 2006.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	~~Group~~
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS

Table D.5 Association for Spastic Children Zonguldak Branch

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TSÇD Zonguldak Şb./*Papazın Evi*	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-B05	**PHOTO #**	IMG 3163-64, 3169-73
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	Unknown (1880s?)	**ORIGINAL FUNCTION**	House of priest (?)
OWNER	TTK	**CURRENT USE**	Association for spastic children
ADMINISTRATOR	Private, TSÇD		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone	**CONDITION**	Good
EXISTING LANDSCAPE	Single trees around the garden		
NEARBY ENVIRONMENT	Public and administrative buildings		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	Located in a garden down from the main road. Single storey building with a basement. Mass addition towards north, extreme changes in plan, facade organization and material.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	Age	~~Historical~~	~~Technical/Artistic~~		Document
	Originality	~~Design~~	Const.	~~Material~~	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		~~Political~~	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	Rarity	~~Group~~
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS




Table D.6 Zonguldak Technical High School

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Teknik Lise ve End. Meslek Lisesi	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-B06	**PHOTO #**	IMG 3064-3078
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1924	**ORIGINAL FUNCTION**	Mining school
OWNER	Government	**CURRENT USE**	Technical high school
ADMINISTRATOR	Ministry of Education		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone	**CONDITION**	Good
EXISTING LANDSCAPE	Designed garden with trees, green areas, stairs and its open areas		
NEARBY ENVIRONMENT	Public and administrative buildings as well as residential area		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	Two storey rectangular building with extension at the center. Large openings along all facades. Additional building on the northwest. Interior organization has been preserved with material changes (windows, railings etc.) Registered building.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE						
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document	
	Originality	Design	Const.	Material	Mech. comp.	
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational	Symbolic
	Commemorative		Identity	Rarity	Group	
ECONOMIC VALUES	Use/Functional		Market		Cont. in use	

PHOTOGRAPHS




Table D.7 Zonguldak Technical High School, Electric workshop

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Teknik Lise ve End. Meslek Lisesi	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-B07	**PHOTO #**	IMG 3079-3092
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1927	**ORIGINAL FUNCTION**	Mining school
OWNER	Government	**CURRENT USE**	Technical high school, electric workshop
ADMINISTRATOR	Ministry of Education		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone	**CONDITION**	Good
EXISTING LANDSCAPE	Designed garden with trees, green areas, stairs and its open areas		
NEARBY ENVIRONMENT	Public and administrative buildings as well as residential area		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	Two storey building. Two wings on both ends added to the original rectangular block. Large windows along facades of the upper floor, arched small windows at the lower floor. Original features remain, timber windows changed to PVC. Registered building.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE						
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document	
	Originality	Design	Const.	Material	Mech. comp.	
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational	Symbolic
	Commemorative		Identity	Rarity	Group	
ECONOMIC VALUES	Use/Functional		Market		Cont. in use	

PHOTOGRAPHS






Table D.8 TTK Yaylakonağı Guesthouse

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Yaylakonağı Misafirhanesi	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-B08	**PHOTO #**	IMG 3117-3146
SURVEY DATE	24.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1880s (?)	**ORIGINAL FUNCTION**	Guesthouse
OWNER	Government, TTK	**CURRENT USE**	Guesthouse and social facilities
ADMINISTRATOR	TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone and brick	**CONDITION**	Good
EXISTING LANDSCAPE	Large garden with trees, bushes and open areas; main gate and stairs.		
NEARBY ENVIRONMENT	Public and administrative buildings as well as residential area		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	Three storey (+basement) building. Central block was the first to be constructed, wings on the both sides added later. Exterior doors and windows surrounded with brick. Windows located along the facades, larger ones on the east. Restaurant and meeting rooms on the ground floor, rooms along the corridor on the upper floors. Registered building.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE						
INTRINSIC VALUES	Age	~~Historical~~	Technical/Artistic		Document	
	Originality	Design	Const.	Material	Mech. comp.	
EXTRINSIC VALUES	Sociocultural		~~Political~~	Aesthetic	Educational	Symbolic
	Commemorative		Identity	Rarity	Group	
ECONOMIC VALUES	Use/Functional		Market		Cont. in use	

PHOTOGRAPHS







Table D.9 Chariot-porteur

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	*Chariot-porteur*	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-B09	**PHOTO #**	IMG 3524-3525
SURVEY DATE	28.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1848	**ORIGINAL FUNCTION**	Chariot-porteur
OWNER	Government, TTK	**CURRENT USE**	Not used
ADMINISTRATOR	TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone	**CONDITION**	Good
EXISTING LANDSCAPE	In the sea, within the limits of breakwater		
NEARBY ENVIRONMENT	Close to open public areas and commercial uses along the coast		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available.		

DESCRIPTION Single arched structure located in the sea. It is connected to coast with a bridge supported by stone piers. Structure is built with cut and rough cut stones. For safety reasons, surrounding walls are heightened with few rows of stone and brick. Bridge-like structure also has iron balustrades on both sides.

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway / Sea	**MECHANICAL COMPONENTS**	None

SIGNIFICANCE OF THE SITE						
INTRINSIC VALUES	Age	Historical	Technical/Artistic		Document	
	Originality	Design	Const.	Material	~~Mech. comp.~~	
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational	Symbolic
	Commemorative		Identity	Rarity	~~Group~~	
ECONOMIC VALUES	~~Use/Functional~~		Market		~~Cont. in use~~	

PHOTOGRAPHS

Table D.10 TED Zonguldak College

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

SITE			
NAME	TED Zonguldak Koleji	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-S01	**PHOTO #**	IMG 3147-3173
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	?	**ADMINISTRATOR**	TED
OWNER	TTK and TED		
ORIGINAL FUNCTION	Various	**CURRENT USE**	School buildings

ARCHITECTURAL DATA	
SITE COMPONENTS	Administrative building, high school, nursery, depot, heating plant
EXISTING LANDSCAPE	Single trees around the garden
CIRCULATION & TRANSPORTATION	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles
NEARBY ENVIRONMENT	Public and administrative buildings as well as residential area
DESCRIPTION	Private school campus with buildings of different styles and periods. Located on the slope, connection by stairs within the site.

SIGNIFICANCE OF THE SITE				
INTRINSIC VALUES	Age	Technical	Historical	Document
Originality	~~Design~~	Cons. tech.	~~Material~~	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural	Political	~~Symbolic~~	Commemorative
Educational	Group	~~Aesthetic~~	~~Rarity~~	Identity
ECONOMIC VALUES	Use/Functional	Market		Continuity in use

PHOTOGRAPHS





Table D.11 TED Zonguldak College, Nursery

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TED Zonguldak Koleji - Anaokulu	MAP REFERENCE	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	COORDINATES	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-S01-B01	PHOTO #	IMG 3148-3155
SURVEY DATE	25.03.2008	REPORTERS	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	Unknown (Late 1800s?)	ORIGINAL FUNCTION	Unknown (*Sağlık koleji*)
OWNER	TED	CURRENT USE	Nursery of TED College
ADMINISTRATOR	Private, TED		

ARCHITECTURAL DATA			
ARCHITECT	-	ARCHITECTURAL ELEMENTS	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone and brick	CONDITION	Good
EXISTING LANDSCAPE	Single trees around the garden		
NEARBY ENVIRONMENT	Public and administrative buildings as well as residential area		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	Single storey building with pitched roof. Located in the campus of the high school. Original features can be traced but most of them were lost for maintenance purposes. Interior window and some ceilings as well as brick corners still visible. Registered building.		

PRODUCTION			
BRANCH	NA	SECTOR SERVED	NA
TRANSPORTATION SYSTEM	NA	MECHANICAL COMPONENTS	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	Age	~~Historical~~	~~Technical/Artistic~~		Document
	Originality	~~Design~~	Const.	~~Material~~	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		~~Political~~	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS





Table D.12 TED Zonguldak College, Depot

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TED Zonguldak Koleji - Depo	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-S01-B02	**PHOTO #**	IMG 3156-3160
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	Unknown (Late 1800s?)	**ORIGINAL FUNCTION**	Unknown (*Sağlık koleji*)
OWNER	TED	**CURRENT USE**	Depot
ADMINISTRATOR	Private, TED		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone and brick	**CONDITION**	Good
EXISTING LANDSCAPE	Single trees around the garden		
NEARBY ENVIRONMENT	Public and administrative buildings as well as residential area		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	Single storey building with pitched roof. Exterior doors and windows surrounded with brick. Located in the campus of the high school. Original features are well preserved except west facade elements. New spaces were added on the west with the help of slope. Registered bldg.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	Age	~~Historical~~	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		~~Political~~	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS





Table D.13 TED Zonguldak College, Administrative building

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TED Zonguldak Koleji-İdari bina	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-S01-B03	**PHOTO #**	IMG 3147, 3161, 3162
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	Unknown	**ORIGINAL FUNCTION**	Unknown
OWNER	Government, TTK	**CURRENT USE**	Administration
ADMINISTRATOR	Private, TED		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone	**CONDITION**	Good
EXISTING LANDSCAPE	Single trees around the garden		
NEARBY ENVIRONMENT	Public and administrative buildings as well as residential area		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	Three storey building. Windows along the west facade. Exterior staircase was added on the east. Interior was changed according to office use. High ceilings remain.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	~~Historical~~	~~Technical/Artistic~~		Document
	Originality	~~Design~~	Const.	~~Material~~	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		~~Political~~	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS



Table D.14 TED Zonguldak College, High school

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TED Zonguldak Koleji-Lise	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-S01-B04	**PHOTO #**	IMG 3163-64, 3169-73
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	Unknown	**ORIGINAL FUNCTION**	Unknown
OWNER	Government, TTK	**CURRENT USE**	High school
ADMINISTRATOR	Private, TED		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone	**CONDITION**	Good
EXISTING LANDSCAPE	Single trees around the garden		
NEARBY ENVIRONMENT	Public and administrative buildings as well as residential area		
CIRCULATION & TRANSPORT	Easy pedestrian access (close to the city center), public transportation available. Parking lot for private vehicles		
DESCRIPTION	Located in the campus of the high school. Two storey building with a rectangular plan. Interior organization, material and architectural elements were changed.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	~~Historical~~	~~Technical/Artistic~~		Document
	Originality	~~Design~~	Const.	~~Material~~	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		~~Political~~	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS




Table D.15 Zonguldak Port

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

SITE			
NAME	Port	**MAP REFERENCE**	F-27-b-01-c
ADDRESS	Milli Egemenlik Cad. Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-S02	**PHOTO #**	IMG 3166-3171
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1890s	**ADMINISTRATOR**	Government
OWNER	Government		
ORIGINAL FUNCTION	Port, loading docks	**CURRENT USE**	Port, loading docks

ARCHITECTURAL DATA	
SITE COMPONENTS	Port, loading docks, cranes
EXISTING LANDSCAPE	Random trees towards the entrance of the port.
CIRCULATION & TRANSPORTATION	Pedestrian possible (close to city center), on the route of public transportation, parking for private vehicles.
NEARBY ENVIRONMENT	Commercial center & Merkez Lavuar, next to dolmuş stops & Kozlu bus stop
DESCRIPTION	Man-made port of Zonguldak. Concrete loading docks reaching to the sea with fixed and mobile cranes.

SIGNIFICANCE OF THE SITE				
INTRINSIC VALUES	Age	Technical	Historical	Document
Originality	~~Design~~	~~Cons. tech.~~	~~Material~~	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural	Political	Symbolic	Commemorative
Educational	Group	~~Aesthetic~~	~~Rarity~~	Identity
ECONOMIC VALUES	Use/Functional	Market		Continuity in use

PHOTOGRAPHS

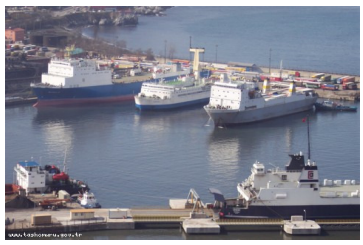



Table D.16 Fener / Yayla neighborhood

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

SITE			
NAME	Fener / Yayla mahallesi	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Yayla Mahallesi Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z01-S03	**PHOTO #**	IMG 3094-3113
SURVEY DATE	24.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	Late 18th c. to 1950s	**ADMINISTRATOR**	NA
OWNER	NA		
ORIGINAL FUNCTION	Housing	**CURRENT USE**	Housing

ARCHITECTURAL DATA	
SITE COMPONENTS	Single and two storey houses, open areas, sports facilities
EXISTING LANDSCAPE	Naturally formed dense greenery, trees along the streets
CIRCULATION & TRANSPORTATION	Easy pedestrian access (close to the city center), public transportation available. Parking for private vehicles
NEARBY ENVIRONMENT	Public and administrative buildings in the neighborhood.
DESCRIPTION	Specially designed housing area with residential units, recreational areas and urban furniture. Registered urban site since 1996.

SIGNIFICANCE OF THE SITE				
INTRINSIC VALUES	~~Age~~	Technical	Historical	Document
Originality	Design	Cons. tech.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural	Political	Symbolic	Commemorative
Educational	Group	Aesthetic	Rarity	Identity
ECONOMIC VALUES	Use/Functional	Market		Continuity in use

PHOTOGRAPHS






Table D.17 Zonguldak Central Scrubber

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

SITE			
NAME	TTK Merkez Lavuar	**MAP REFERENCE**	F-27-b-01-c
ADDRESS	Milli Egemenlik Cad. Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S01	**PHOTO #**	IMG 3186-3228, 3166-3171
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1957	**ADMINISTRATOR**	-
OWNER	TTK		
ORIGINAL FUNCTION	Main scrubber	**CURRENT USE**	Not used

ARCHITECTURAL DATA	
SITE COMPONENTS	Coal grading unit, decantation towers (x3), underground silo, transformer station
EXISTING LANDSCAPE	Surrounded by wire, few trees, rubble of destructed buildings all over
CIRCULATION & TRANSPORTATION	Easy pedestrian access (located in the city center), next to main public transportation stops and long distance bus stop.
NEARBY ENVIRONMENT	Commercial center & port, next to dolmuş stops & Kozlu bus stop
DESCRIPTION	Site is situated at the back of port area, lying on the east-west axis. Towers and coal grading unit is located on the western part whereas underground silo covers the east. A limited area on the west is administrated as a private parking lot.

SIGNIFICANCE OF THE SITE				
INTRINSIC VALUES	Age	Technical	Historical	Document
Originality	Design	Cons. tech.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural	Political	Symbolic	Commemorative
Educational	Group	~~Aesthetic~~	~~Rarity~~	Identity
ECONOMIC VALUES	~~Use/Functional~~	Market		~~Continuity in use~~

PHOTOGRAPHS





Table D.18 TTK Central Scrubber, Decantation towers

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Merkez Lavuar - Kuleler	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Milli Egemenlik Cad. Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S01-B01	**PHOTO #**	IMG 3198-3201
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1957	**ORIGINAL FUNCTION**	Decantation towers
OWNER	Government, TTK	**CURRENT USE**	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Reinforced concrete	**CONDITION**	Good
EXISTING LANDSCAPE	Surrounded by wire, few trees, rubble of destructed buildings all over		
NEARBY ENVIRONMENT	Commercial center & port, next to dolmuş stops & Kozlu bus stop		
CIRCULATION & TRANSPORT	Easy pedestrian access (located in the city center), next to main public transportation stops and long distance bus stop.		
DESCRIPTION	Three free standing towers of scrubber, located linearly. Main building that they were connected to was demolished. Octagonal concrete towers with reverse conical tops. Each had an entrance door on the floor level, and rectangular openings of different heights on two sides.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, conveyor	**MECHANICAL COMPONENTS**	None remaining

SIGNIFICANCE OF THE SITE						
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document	
	Originality	Design	Const.	Material	~~Mech. comp.~~	
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational	Symbolic
	Commemorative		Identity	~~Rarity~~	Group	
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~	

PHOTOGRAPHS




Table D.19 TTK Central Scrubber, Coal grading unit

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Merkez Lavuar-Kriblaj Ünitesi	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Milli Egemenlik Cad. Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S01-B02	**PHOTO #**	IMG 3052-3063
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1957	**ORIGINAL FUNCTION**	Coal grading unit
OWNER	Government, TTK	**CURRENT USE**	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Reinforced concrete	**CONDITION**	Bad
EXISTING LANDSCAPE	Surrounded by wire, few trees, rubble of destructed buildings all over		
NEARBY ENVIRONMENT	Commercial center & port, next to dolmuş stops & Kozlu bus stop		
CIRCULATION & TRANSPORT	Easy pedestrian access (located in the city center), next to main public transportation stops and long distance bus stop.		
DESCRIPTION	Approximately five-storey high building. Partially demolished; interior organization is preserved. Upper level of the west facade is fully open; lower levels have no openings. North and east facades have two rows of windows whereas south has one row of square windows.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, conveyor	**MECHANICAL COMPONENTS**	None remaining

SIGNIFICANCE OF THE SITE						
INTRINSIC VALUES	~~Age~~	Historical	~~Technical/Artistic~~		Document	
	Originality	~~Design~~	Const.	Material	~~Mech. comp.~~	
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational	Symbolic
	Commemorative		Identity	~~Rarity~~	Group	
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~	

PHOTOGRAPHS





Table D.20 TTK Central Scrubber, Underground silo

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Merkez Lavuar - Siloaltı	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Milli Egemenlik Cad. Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S01-B03	**PHOTO #**	IMG 3215-3224
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1957	**ORIGINAL FUNCTION**	Underground silo
OWNER	Government, TTK	**CURRENT USE**	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Reinforced concrete	**CONDITION**	Medium
EXISTING LANDSCAPE	Surrounded by wire, few trees, rubble of destructed buildings all over		
NEARBY ENVIRONMENT	Commercial center & port, next to dolmuş stops & Kozlu bus stop		
CIRCULATION & TRANSPORT	Easy pedestrian access (located in the city center), next to main public transportation stops and long distance bus stop.		
DESCRIPTION	Rectangular planned underground space. Entrance from north through three large openings of the above-ground section. Alternating rows of stairs and ramps are leading downwards with mushroom columns on ramp sections. Top of the underground space is partially open now.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, conveyor	**MECHANICAL COMPONENTS**	None remaining

SIGNIFICANCE OF THE SITE						
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document	
	Originality	Design	Const.	Material	~~Mech. comp.~~	
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational	Symbolic
	Commemorative		Identity	Rarity	Group	
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~	

PHOTOGRAPHS

Table D.21 TTK Central Scrubber, Transformer station

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Merkez Lavuar - Trafo	**MAP REFERENCE**	F27-b-01-c
ADDRESS	Milli Egemenlik Cad. Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S01-B04	**PHOTO #**	IMG 3190-3197
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1957	**ORIGINAL FUNCTION**	Transformer station
OWNER	Government, TTK	**CURRENT USE**	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Reinforced concrete	**CONDITION**	Medium
EXISTING LANDSCAPE	Surrounded by wire, few trees, rubble of destructed buildings all over		
NEARBY ENVIRONMENT	Commercial center & port, next to dolmuş stops & Kozlu bus stop		
CIRCULATION & TRANSPORT	Easy pedestrian access (located in the city center), next to main public transportation stops and long distance bus stop.		
DESCRIPTION	Two storey building with a rectangular plan and pitched roof. Two entrances from upper floor with exterior staircases. Square windows on the lower, rectangular windows on the upper level on all four sides.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, conveyor	**MECHANICAL COMPONENTS**	None remaining

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~

PHOTOGRAPHS




Table D.22 TTK Çaydamar Facilities

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

SITE			
NAME	TTK Çaydamar İşletme Müdürlüğü	**MAP REFERENCE**	F-27-b-06-b
ADDRESS	On Temmuz Mah. Acılık Cad.	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S02	**PHOTO #**	IMG 3229-3279
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1945-51	**ADMINISTRATOR**	TTK, Meksa
OWNER	Government		
ORIGINAL FUNCTION	Mining facilities	**CURRENT USE**	Mixed

ARCHITECTURAL DATA	
SITE COMPONENTS	Depot building, export tower, compressor building, mine entrances, administration, *tertip* building, crane building, fan building
EXISTING LANDSCAPE	Dense green area, Acılık Stream running along the west of the site. Small pool and squares emphasized by landscape.
CIRCULATION & TRANSPORTATION	Pedestrian access possible, on the routes of public transportation vehicles, parking available for private vehicles
NEARBY ENVIRONMENT	Illegally constructed slum houses on the west hill, gas station on north.
DESCRIPTION	Site is located along Acılık stream, on the north-south axis. Especially northern part is very well designed with its open areas and landscape elements. Some buildings are abandoned and some are still in use. South part is used as parking lot for garbage trucks.

SIGNIFICANCE OF THE SITE				
INTRINSIC VALUES	~~Age~~	Technical	Historical	Document
Originality	Design	Cons. tech.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural	Political	Symbolic	Commemorative
Educational	Group	Aesthetic	~~Rarity~~	Identity
ECONOMIC VALUES	Use/Functional	Market		Continuity in use

PHOTOGRAPHS






Table D.23 TTK Çaydamar Facilities, Depot

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Çaydamar İşletme Müd.-Ambar	**MAP REFERENCE**	F-27-b-06-b
ADDRESS	On Temmuz Mah. Acılık Cad.	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S02-B01	**PHOTO #**	IMG 3241-3249
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1946	**ORIGINAL FUNCTION**	Depot
OWNER	Government, TTK	**CURRENT USE**	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Concrete frame	**CONDITION**	Good
EXISTING LANDSCAPE	Dense green area, Acılık Stream running along the west of the site		
NEARBY ENVIRONMENT	Illegally constructed slum houses on the west hill, gas station on north		
CIRCULATION & TRANSPORT	Pedestrian access possible, on the routes of public transportation vehicles, parking available for private vehicles		
DESCRIPTION	Single storey, partially elevated, rectangular planned building with pitched roof. Four doors on the east facade. Windows along the east and west facades, horizontal rectangular ones towards ends, larger vertical rectangular ones at the center. Concrete frame is exposed.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway	**MECHANICAL COMPONENTS**	None

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~

PHOTOGRAPHS




Table D.24 TTK Çaydamar Facilities, Export tower

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Çaydamar İşletmesi-İhraç vinci	**MAP REFERENCE**	F-27-b-06-b
ADDRESS	On Temmuz Mah. Acılık Cad.	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S02-B02	**PHOTO #**	IMG 3230-33, 3271-72
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1946	**ORIGINAL FUNCTION**	Export tower
OWNER	Government, TTK	**CURRENT USE**	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	Export crane
STRUCTURAL SYSTEM & MATERIAL	Steel frame	**CONDITION**	Medium
EXISTING LANDSCAPE	Dense green area, Acılık Stream running along the west of the site		
NEARBY ENVIRONMENT	Illegally constructed slum houses on the west hill, gas station on north		
CIRCULATION & TRANSPORT	Pedestrian access possible, on the routes of public transportation vehicles, parking available for private vehicles		
DESCRIPTION	Single storey rectangular planned building with pitched roof. Two doors on short sides, one door at he center of east facade. East and west facades have rectangular windows on the upper level. Crane tower rises from southern part, diagonal steel legs run towards corners.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	-	**MECHANICAL COMPONENTS**	Crane tower going down to mine

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~

PHOTOGRAPHS



Table D.25 TTK Çaydamar Facilities, Compressor building

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Çaydamar İşletmesi-Kompresör	**MAP REFERENCE**	F-27-b-06-b
ADDRESS	On Temmuz Mah. Acılık Cad.	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S02-B03	**PHOTO #**	IMG 3264-3270
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1945	**ORIGINAL FUNCTION**	Compressor building
OWNER	Government, TTK	**CURRENT USE**	Workshop
ADMINISTRATOR	Private, Meksa		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Concrete frame	**CONDITION**	Good
EXISTING LANDSCAPE	Dense green area, Acılık Stream running along the west of the site		
NEARBY ENVIRONMENT	Illegally constructed slum houses on the west hill, gas station on north		
CIRCULATION & TRANSPORT	Pedestrian access possible, on the routes of public transportation vehicles, parking available for private vehicles		
DESCRIPTION	Single storey rectangular planned building with pitched roof. Surrounded by large openings on north, east and south facades. Concrete frame visible inside.		

PRODUCTION			
BRANCH	(Mining)	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	(Railway) Road	**MECHANICAL COMPONENTS**	Crane and new machines of Meksa

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~ Originality	Historical Design	Technical/Artistic Const.	Material	Document ~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural Commemorative		Political Identity	~~Aesthetic~~ ~~Rarity~~	Educational ~~Symbolic~~ Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS




Table D.26 TTK Çaydamar Facilities, Mine entrances

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Çaydamar İşletmesi-Maden girişi	**MAP REFERENCE**	F-27-b-06-b
ADDRESS	On Temmuz Mah. Acılık Cad.	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S02-B04	**PHOTO #**	IMG 3235-36, 3240
SURVEY DATE	25.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1947 (?)	**ORIGINAL FUNCTION**	Mine entrances
OWNER	Government, TTK	**CURRENT USE**	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry	**CONDITION**	Good (only the entrance)
EXISTING LANDSCAPE	Dense green area, Acılık Stream running along the west of the site		
NEARBY ENVIRONMENT	Illegally constructed slum houses on the west hill, gas station on north		
CIRCULATION & TRANSPORT	Pedestrian access possible, on the routes of public transportation vehicles, parking available for private vehicles		
DESCRIPTION	Two abandoned mine entrances. Collapse risk for inside galleries. The empty land in front of the entrances are used as parking lot for garbage trucks of municipality.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Rail tracks	**MECHANICAL COMPONENTS**	Railway tracks going downwards

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	~~Historical~~	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS

Table D.27 TTK Çaydamar Facilities, Administration

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Çaydamar İşletmesi - İdari Bina	**MAP REFERENCE**	F-27-b-06-b
ADDRESS	On Temmuz Mah. Acılık Cad.	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S02-B05	**PHOTO #**	IMG 3273
SURVEY DATE	25.03.20008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1945	**ORIGINAL FUNCTION**	Administration
OWNER	Government, TTK	**CURRENT USE**	Railway administration
ADMINISTRATOR	TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Concrete frame	**CONDITION**	Good
EXISTING LANDSCAPE	Dense green area, Acılık Stream running along the west of the site		
NEARBY ENVIRONMENT	Illegally constructed slum houses on the west hill, gas station on north		
CIRCULATION & TRANSPORT	Pedestrian access possible, on the routes of public transportation vehicles, parking available for private vehicles		
DESCRIPTION	Three storey building with offices inside. Located on the upper level, reached by stairs from the site. Entrance from north, large rectangular windows on facades.		

PRODUCTION			
BRANCH	Mining, transportation	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	-	**MECHANICAL COMPONENTS**	-

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS

Table D.28 TTK Çaydamar Facilities, Preparation building of miners

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Çaydamar İşletmesi-Tertip Binası	**MAP REFERENCE**	F-27-b-06-b
ADDRESS	On Temmuz Mah. Acılık Cad.	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S02-B06	**PHOTO #**	IMG 3255-3260
SURVEY DATE	25.03.20008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1951	**ORIGINAL FUNCTION**	Preparation building for mine workers
OWNER	Government, TTK		
ADMINISTRATOR	Private, Meksa	**CURRENT USE**	Workshop

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone	**CONDITION**	Good
EXISTING LANDSCAPE	Dense green area, Acılık Stream running along the west of the site		
NEARBY ENVIRONMENT	Illegally constructed slum houses on the west hill, gas station on north		
CIRCULATION & TRANSPORT	Pedestrian access possible, on the routes of public transportation vehicles, parking available for private vehicles		
DESCRIPTION	Two adjacent blocks. Elongated rectangular block has a pitched cascaded roof with three rows of windows along east and west facades. Entrance from south side. Adjacent block is a two storey building with square plan and hipped roof.		

PRODUCTION			
BRANCH	(Mining)	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Road	**MECHANICAL COMPONENTS**	Crane and new machines of Meksa

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS





Table D.29 TTK Çaydamar Facilities, Crane building

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING

NAME	TTK Çaydamar İşletmesi-Vinç Binası	MAP REFERENCE	F-27-b-06-b
ADDRESS	On Temmuz Mah. Acılık Cad.	COORDINATES	-

INVENTORY DATA

INVENTORY NUMBER	Z02-S02-B07	PHOTO #	IMG 3234, 3237
SURVEY DATE	25.03.20008	REPORTERS	A. Kılınç

HISTORY & USE

CONSTRUCTION DATE	1951	ORIGINAL FUNCTION	Crane building
OWNER	Government, TTK	CURRENT USE	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA

ARCHITECT	-	ARCHITECTURAL ELEMENTS	-
STRUCTURAL SYSTEM & MATERIAL	Steel frame	CONDITION	Good
EXISTING LANDSCAPE	Dense green area, Acılık Stream running along the west of the site		
NEARBY ENVIRONMENT	Illegally constructed slum houses on the west hill, gas station on north		
CIRCULATION & TRANSPORT	Pedestrian access possible, on the routes of public transportation vehicles, parking available for private vehicles		
DESCRIPTION	Small, free-standing crane building located at the center of the site. Has a pitched roof, app. three storey high. North side of the upper level is totally open and the mechanical equipment inside is visible.		

PRODUCTION

BRANCH	Mining	SECTOR SERVED	Government
TRANSPORTATION SYSTEM	-	MECHANICAL COMPONENTS	Bobbins

SIGNIFICANCE OF THE SITE

INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	~~Use/Functional~~		Market		~~Cont. in use~~

PHOTOGRAPHS



Table D.30 TTK Çaydamar Facilities, Fan building

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Çaydamar İşletmesi-Pervane	**MAP REFERENCE**	F-27-b-06-b
ADDRESS	On Temmuz Mah. Acılık Cad.	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S02-B08	**PHOTO #**	IMG 3238-39, 3252-53
SURVEY DATE	25.03.20008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	Unknown	**ORIGINAL FUNCTION**	Fan building
OWNER	Government, TTK	**CURRENT USE**	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Concrete and steel frame	**CONDITION**	Medium
EXISTING LANDSCAPE	Dense green area, Acılık Stream running along the west of the site		
NEARBY ENVIRONMENT	Illegally constructed slum houses on the west hill, gas station on north		
CIRCULATION & TRANSPORT	Pedestrian access possible, on the routes of public transportation vehicles, parking available for private vehicles		
DESCRIPTION	Small, free-standing fan building located at the center of the site. Single storey high. Rectangular block on south a chimney and a convex mass located right on north. Fan is located in the rectangular block and its top is not covered.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	-	**MECHANICAL COMPONENTS**	Fan, chimney

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	~~Use/Functional~~		Market		~~Cont. in use~~

PHOTOGRAPHS

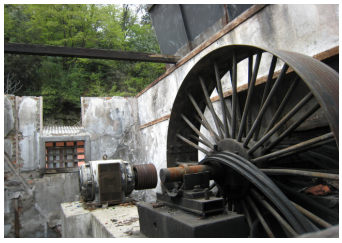


Table D.31 TTK Mining Machines Factory

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

SITE			
NAME	TTK Maden Makinaları Fabrikası	**MAP REFERENCE**	F-27-b-01-c, F-27-b-(
ADDRESS	Bülent Ecevit Cad. (Ankara Yolu)	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S03	**PHOTO #**	IMG 3280-3367
SURVEY DATE	26.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1940-1962	**ADMINISTRATOR**	TTK
OWNER	TTK		
ORIGINAL FUNCTION	Mining machines fact.	**CURRENT USE**	Mining machines f

ARCHITECTURAL DATA	
SITE COMPONENTS	Welding, electric workshop, casting, assemblage, garage, administration, heating plant, puantaj, refectory, main production
EXISTING LANDSCAPE	Row of trees along buildings and road
CIRCULATION & TRANSPORTATION	Pedestrian possible (close to city center), on the route of public transportation, parking for private vehicles.
NEARBY ENVIRONMENT	Located on Ankara Road, surrounded by residential area from north
DESCRIPTION	Site is located along Ankara road. Entrance to the site is maintained from the gate on south, in front of main production and administration building.

SIGNIFICANCE OF THE SITE				
INTRINSIC VALUES	~~Age~~	Technical	Historical	Document
Originality	Design	Cons. tech.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural	Political	~~Symbolic~~	Commemorative
Educational	Group	~~Aesthetic~~	Rarity	Identity
ECONOMIC VALUES	Use/Functional	Market		Continuity in use

PHOTOGRAPHS





Table D.32 TTK Mining Machines Factory, Welding section

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Maden Mak. Fabr.-Kaynak	MAP REFERENCE	F27-b-01-c, F-27-b-02-d
ADDRESS	Bülent Ecevit Cad. (Ankara Yolu)	COORDINATES	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S03-B01	PHOTO #	IMG 3281-3291
SURVEY DATE	26.03.2008	REPORTERS	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1950s (?)	ORIGINAL FUNCTION	Welding section
OWNER	Government, TTK	CURRENT USE	Welding section
ADMINISTRATOR	TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	ARCHITECTURAL ELEMENTS	-
STRUCTURAL SYSTEM & MATERIAL	Steel frame	CONDITION	Good
EXISTING LANDSCAPE	Row of trees along buildings and road		
NEARBY ENVIRONMENT	Located on Ankara Road, surrounded by residential area from north		
CIRCULATION & TRANSPORT	Pedestrian possible (close to city center), on the route of public transportation, parking for private vehicles.		
DESCRIPTION	Two rectangular blocks side by side, each with a pitched roof. Single volume inside. Horizontal openings along the facades, also openings on roof for light.		

PRODUCTION			
BRANCH	Mining	SECTOR SERVED	Government
TRANSPORTATION SYSTEM	Railway, road	MECHANICAL COMPONENTS	Cranes, welding benches & ventilation

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS





Table D.33 TTK Mining Machines Factory, Electric workshop

METU Faculty of Architecture - Graduate Program in Restoration			March 2008
Survey form for industrial heritage in Zonguldak			Ayşem Kılınç
BUILDING			
NAME	TTK Maden Mak. Fabr.-Elektrik	MAP REFERENCE	F27-b-01-c, F-27-b-02-d
ADDRESS	Bülent Ecevit Cad. (Ankara Yolu)	COORDINATES	-
INVENTORY DATA			
INVENTORY NUMBER	Z02-S03-B02	PHOTO #	IMG 3297-3308
SURVEY DATE	26.03.2008	REPORTERS	A. Kılınç
HISTORY & USE			
CONSTRUCTION DATE	1962	ORIGINAL FUNCTION	Electric workshop
OWNER	Government, TTK	CURRENT USE	Electric workshop
ADMINISTRATOR	TTK		
ARCHITECTURAL DATA			
ARCHITECT	Sermet Baslo	ARCHITECTURAL ELEMENTS	
STRUCTURAL SYSTEM & MATERIAL	Concrete	CONDITION	Good
EXISTING LANDSCAPE	Row of trees along buildings and road		
NEARBY ENVIRONMENT	Located on Ankara Road, surrounded by residential area from north		
CIRCULATION & TRANSPORT	Pedestrian possible (close to city center), on the route of public transportation, parking for private vehicles.		
DESCRIPTION	Building covered with a concrete shell, rectangular plan. Mushroom columns of two rows carry the second floor running along two long sides of the building. Entrances from short sides.		
PRODUCTION			
BRANCH	Mining	SECTOR SERVED	Government
TRANSPORTATION SYSTEM	Railway, road	MECHANICAL COMPONENTS	All technical equipment in use
SIGNIFICANCE OF THE SITE			
INTRINSIC VALUES	~~Age~~ Historical	Technical/Artistic	Document
	Originality Design	Const. Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural	Political Aesthetic	Educational Symbolic
	Commemorative	Identity Rarity	Group
ECONOMIC VALUES	Use/Functional	Market	Cont. in use

PHOTOGRAPHS





Table D.34 TTK Mining Machines Factory, Casting section

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Maden Mak. Fabr.- Döküm	**MAP REFERENCE**	F27-b-01-c, F-27-b-02-d
ADDRESS	Bülent Ecevit Cad. (Ankara Yolu)	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S03-B03	**PHOTO #**	IMG 3311-15, 3318-20
SURVEY DATE	26.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1950s (?)	**ORIGINAL FUNCTION**	Casting section
OWNER	Government, TTK	**CURRENT USE**	Casting section (iron and steel)
ADMINISTRATOR	TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	
STRUCTURAL SYSTEM & MATERIAL	Steel frame	**CONDITION**	Medium
EXISTING LANDSCAPE	Row of trees along buildings and road		
NEARBY ENVIRONMENT	Located on Ankara Road, surrounded by residential area from north		
CIRCULATION & TRANSPORT	Pedestrian possible (close to city center), on the route of public transportation, parking for private vehicles.		
DESCRIPTION	Two rectangular block with separate pitched roofs. Openings along long sides and roof. Iron casting is located in one of the main spaces, the other is shared by modeling and steel casting.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, conveyor	**MECHANICAL COMPONENTS**	Furnace, crane.

SIGNIFICANCE OF THE SITE						
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document	
	Originality	Design	Const.	Material	Mech. comp.	
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational	~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group	
ECONOMIC VALUES	Use/Functional		Market		Cont. in use	

PHOTOGRAPHS





Table D.35 TTK Mining Machines Factory, Assemblage section

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Maden Mak. Fabr.-Montaj	**MAP REFERENCE**	F27-b-01-c, F-27-b-02-d
ADDRESS	Bülent Ecevit Cad. (Ankara Yolu)	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S03-B04	**PHOTO #**	IMG 3321-3325
SURVEY DATE	26.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1950s (?)	**ORIGINAL FUNCTION**	Assemblage section
OWNER	Government, TTK	**CURRENT USE**	Assemblage section
ADMINISTRATOR	TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	
STRUCTURAL SYSTEM & MATERIAL	Concrete frame and steel frame	**CONDITION**	Good
EXISTING LANDSCAPE	Row of trees along buildings and road		
NEARBY ENVIRONMENT	Located on Ankara Road, surrounded by residential area from north		
CIRCULATION & TRANSPORT	Pedestrian possible (close to city center), on the route of public transportation, parking for private vehicles.		
DESCRIPTION	Located next to casting, this section is composed of two different buildings. One is a concrete frame building with openings at roof level and the other is a steel frame building with almost a square plan. It has cascaded roof with linear openings between levels.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, road	**MECHANICAL COMPONENTS**	Assemblage benches and stocking racks

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS




Table D.36 TTK Mining Machines Factory, Garage and Administration

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Maden Mak. Fabr.-Garaj	**MAP REFERENCE**	F27-b-01-c, F-27-b-02-d
ADDRESS	Bülent Ecevit Cad. (Ankara Yolu)	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S03-B05	**PHOTO #**	IMG 3360-3364
SURVEY DATE	26.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1940	**ORIGINAL FUNCTION**	Garage, administration
OWNER	Government, TTK	**CURRENT USE**	Garage, administration
ADMINISTRATOR	TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	
STRUCTURAL SYSTEM & MATERIAL	Concrete frame, steel frame	**CONDITION**	Good
EXISTING LANDSCAPE	Row of trees along buildings and road		
NEARBY ENVIRONMENT	Located on Ankara Road, surrounded by residential area from north		
CIRCULATION & TRANSPORT	Pedestrian possible (close to city center), on the route of public transportation, parking for private vehicles.		
DESCRIPTION	Two storey building. Elevated upper floor includes offices. Entrance of garage is between columns, and this rectangular space is covered with steel frame construction.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, road	**MECHANICAL COMPONENTS**	-

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS

Table D.37 TTK Mining Machines Factory, Heating plant

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Maden Mak. Fabr.-Kalorifer d.	**MAP REFERENCE**	F27-b-01-c, F-27-b-02-d
ADDRESS	Bülent Ecevit Cad. (Ankara Yolu)	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S03-B06	**PHOTO #**	IMG 3330
SURVEY DATE	26.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1950s (?)	**ORIGINAL FUNCTION**	Heating plant
OWNER	Government, TTK	**CURRENT USE**	Heating plant
ADMINISTRATOR	TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	Chimneys
STRUCTURAL SYSTEM & MATERIAL	Steel frame	**CONDITION**	Medium
EXISTING LANDSCAPE	Row of trees along buildings and road		
NEARBY ENVIRONMENT	Located on Ankara Road, surrounded by residential area from north		
CIRCULATION & TRANSPORT	Pedestrian possible (close to city center), on the route of public transportation, parking for private vehicles.		
DESCRIPTION	Rectangular building with a pitched roof. Four cylindrical chimneys extends. South facade is partially covered with metal sheet, and partially covered with grid windows.		

PRODUCTION			
BRANCH	Energy	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Rail tracks	**MECHANICAL COMPONENTS**	

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	~~Historical~~	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	~~Sociocultural~~		~~Political~~	~~Aesthetic~~	~~Educational~~ ~~Symbolic~~
	~~Commemorative~~		~~Identity~~	~~Rarity~~	~~Group~~
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS

Table D.38 TTK Mining Machines Factory, *Puantaj*

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Maden Mak. Fabr.-Puantaj	**MAP REFERENCE**	F27-b-01-c, F-27-b-02-d
ADDRESS	Bülent Ecevit Cad. (Ankara Yolu)	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z02-S03-B07	**PHOTO #**	IMG 3292-3294
SURVEY DATE	26.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1950s (?)	**ORIGINAL FUNCTION**	*Puantaj* (Time measurement unit), refectory, exhibition
OWNER	Government, TTK	**CURRENT USE**	
ADMINISTRATOR	TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	
STRUCTURAL SYSTEM & MATERIAL	Concrete frame	**CONDITION**	Good
EXISTING LANDSCAPE	Row of trees along buildings and road		
NEARBY ENVIRONMENT	Located on Ankara Road, surrounded by residential area from north		
CIRCULATION & TRANSPORT	Pedestrian possible (close to city center), on the route of public transportation, parking for private vehicles.		
DESCRIPTION	Two storey rectangular planned building. Entrance from both ends of west facade. Lower floor has narrower stripe windows along the facade whereas upper floor has large windows, nearly forming a transparent upper level.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, road	**MECHANICAL COMPONENTS**	-

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS

Table D.39 TTK Mining Machines Factory, Administration, main production and maintenance

METU Faculty of Architecture - Graduate Program in Restoration			March 2008
Survey form for industrial heritage in Zonguldak			Ayşem Kılınç
BUILDING			
NAME	TTK Maden Mak. Fabr.-Main bldg	MAP REFERENCE	F27-b-01-c, F-27-b-02-d
ADDRESS	Bülent Ecevit Cad. (Ankara Yolu)	COORDINATES	-
INVENTORY DATA			
INVENTORY NUMBER	Z02-S03-B08	PHOTO #	IMG 3357-3359
SURVEY DATE	26.03.2008	REPORTERS	A. Kılınç
HISTORY & USE			
CONSTRUCTION DATE	1951	ORIGINAL FUNCTION	Administration, main production & maintenance block
OWNER	Government, TTK	CURRENT USE	
ADMINISTRATOR	TTK		
ARCHITECTURAL DATA			
ARCHITECT	-	ARCHITECTURAL ELEMENTS	-
STRUCTURAL SYSTEM & MATERIAL	Concrete	CONDITION	Good
EXISTING LANDSCAPE	Row of trees along buildings and road		
NEARBY ENVIRONMENT	Located on Ankara Road, surrounded by residential area from north		
CIRCULATION & TRANSPORT	Pedestrian possible (close to city center), on the route of public transportation, parking for private vehicles.		
DESCRIPTION	Two adjacent blocks. Administration includes offices, it is a 4-storey building with hipped roof. Second block houses production process and connected to administration block from inside. It is covered with a saw-tooth roof, and approximately total height of three storey.		
PRODUCTION			
BRANCH	Mining	SECTOR SERVED	Government
TRANSPORTATION SYSTEM	Railway, road	MECHANICAL COMPONENTS	All technical equipment in use
SIGNIFICANCE OF THE SITE			
INTRINSIC VALUES	~~Age~~ Historical	Technical/Artistic	Document
	Originality Design	Const. Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural	Political ~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative	Identity ~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional	Market	Cont. in use

PHOTOGRAPHS




Table D.40 ÜTİM Üzülmez Guesthouse

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	ÜTİM Üzülmez Pansiyonu	**MAP REFERENCE**	F27-b-02-c
ADDRESS	Asma Mah. Türkiş Sok. Üzülmez	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z03-B01	**PHOTO #**	IMG 3394-3414
SURVEY DATE	26.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	-	**ORIGINAL FUNCTION**	Administrative building
OWNER	Government, TTK	**CURRENT USE**	Guesthouse
ADMINISTRATOR	TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Stone masonry	**CONDITION**	Good
EXISTING LANDSCAPE	Designed garden with flowers and trees		
NEARBY ENVIRONMENT	Located in upper slopes of Üzülmez, in a residential area		
CIRCULATION & TRANSPORT	On the route of public transportation, parking for private vehicles.		
DESCRIPTION	Two rectangular blocks side by side, each with a pitched roof. Single volume inside. Horizontal openings along the facades, also openings on roof for light. Registered building.		

PRODUCTION			
BRANCH	NA	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	NA	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	~~Group~~
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS





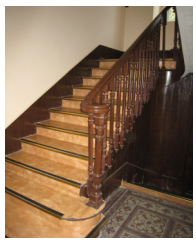




Table D.41 Chimney of the Old Coke Factory

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Eski Kok Fabrikası Bacası	**MAP REFERENCE**	F27-b-02-c
ADDRESS	Asma-Üzülmez	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z03-B02	**PHOTO #**	IMG 3392
SURVEY DATE	26.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1935	**ORIGINAL FUNCTION**	Chimney of the coke factory
OWNER	Government		
ADMINISTRATOR	NA	**CURRENT USE**	Not used

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, brick with metal rings	**CONDITION**	Medium
EXISTING LANDSCAPE	Dense green area		
NEARBY ENVIRONMENT	Few structures of the previous coke factory		
CIRCULATION & TRANSPORT	On the route of public transportation, parking for private vehicles.		
DESCRIPTION	Cylindrical brick chimney. Rhythmic metal rings as support through the structure. Structural problems showing itself in bending towards north. Registered building.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, road	**MECHANICAL COMPONENTS**	-

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	~~Group~~
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~

PHOTOGRAPHS



Table D.42 Asma Scrubber

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Asma Lavuar	**MAP REFERENCE**	F27-b-02-c
ADDRESS	Gazi Mustafa Kemal Blv. Üzülmez	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z03-B03	**PHOTO #**	IMG 3386 - 3393
SURVEY DATE	26.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1903 (?)	**ORIGINAL FUNCTION**	Scrubber
OWNER	Private	**CURRENT USE**	Not used (partially depot)
ADMINISTRATOR	NA		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone and brick	**CONDITION**	Medium
EXISTING LANDSCAPE	Row of trees on both sides of the entrance way		
NEARBY ENVIRONMENT	Workshop&old coke factory, surrounded by residential area from north		
CIRCULATION & TRANSPORT	On the route of public transportation.		
DESCRIPTION	Approximately three storey building with a pitched roof. Openings on all sides on second and third floors. Arched windows and rectangular doors. One storey brick and concrete structures were added to the east.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	Stream and road	**MECHANICAL COMPONENTS**	Steel construction from a later period

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	Age	~~Historical~~	Technical/Artistic		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		~~Political~~	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	Rarity	Group
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~

PHOTOGRAPHS





Table D.43 Asma Workshop Building

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Asma Atölye Binası	**MAP REFERENCE**	F27-b-02-c
ADDRESS	Gazi Mustafa Kemal Blv. Üzülmez	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z03-B04	**PHOTO #**	IMG 3386 - 3393
SURVEY DATE	26.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1935-37	**ORIGINAL FUNCTION**	Workshop
OWNER	Government, TTK	**CURRENT USE**	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Concrete frame	**CONDITION**	Bad
EXISTING LANDSCAPE	Row of trees on both sides of the entrance way		
NEARBY ENVIRONMENT	Scrubber & old coke factory, surrounded by residential area from north		
CIRCULATION & TRANSPORT	On the route of public transportation.		
DESCRIPTION	Rectangular building of approximately three storey high. Saw tooth roof along the building except the mass at the end covered with hipped roof. Each unit has two doors on the ground floor and a large, horizontal rectangular window on the upper floor.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Road	**MECHANICAL COMPONENTS**	Assemblage benches and stocking racks

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~

PHOTOGRAPHS



Table D.44 TTK Baştarla Education Mine

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Baştarla Eğitim Ocağı	**MAP REFERENCE**	F27-b-07-a
ADDRESS	Üzülmez	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z03-B05	**PHOTO #**	IMG 3387 - 3385
SURVEY DATE	26.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	-	**ORIGINAL FUNCTION**	Mine
OWNER	Government, TTK	**CURRENT USE**	Educational and exhibitive mine
ADMINISTRATOR	Government, TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry	**CONDITION**	Good
EXISTING LANDSCAPE	Close to the stream, buildings surrounded by trees, railway on south		
NEARBY ENVIRONMENT	Industrial uses on north and south		
CIRCULATION & TRANSPORT	On the route of public transportation, parking for private vehicles.		
DESCRIPTION	Mine entrance, transformer station and administrative building next to each other. Arched mine entrance and transformer station are both one storey high whereas administration has two floors with a balcony on the upper one. It was an active mine since 1926.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, road	**MECHANICAL COMPONENTS**	Mine has mechanical equipment.

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	Age	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS

Table D.45 TTK Karadon Facilities

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

SITE			
NAME	TTK Karadon İşletmesi	**MAP REFERENCE**	F-27-b-03-a
ADDRESS	Damarlı Mah. Karadon	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z04-S01	**PHOTO #**	IMG 3470-4399
SURVEY DATE	28.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1950s	**ADMINISTRATOR**	Government, TTK
OWNER	Government, TTK		
ORIGINAL FUNCTION	Mining facilities	**CURRENT USE**	Mining facilities

ARCHITECTURAL DATA	
SITE COMPONENTS	Compressor building, workshop, export tower and entrance to the underground mine, cooling tower, administrative building
EXISTING LANDSCAPE	Open spaces within the facility are greened by administration lately, forests on the surrounding the hills
CIRCULATION & TRANSPORTATION	Close to the route of public transportation, parking for private vehicles.
NEARBY ENVIRONMENT	Surrounded by residential area from southwest, forest on the other side
DESCRIPTION	Buildings of 1950s and renovated buildings (in 2004) are located in the site. Tracks running inside the site are used for transportation within the facility.

SIGNIFICANCE OF THE SITE				
INTRINSIC VALUES	~~Age~~	Technical	Historical	Document
	Originality	Design	Cons. tech.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural	Political	Symbolic	Commemorative
	Educational	Group	~~Aesthetic~~	~~Rarity~~	Identity
ECONOMIC VALUES	Use/Functional	Market		Continuity in use

PHOTOGRAPHS





Table D.46 TTK Karadon Facilities, Compressor building

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Karadon Kompresör Binası	**MAP REFERENCE**	F27-b-03-a
ADDRESS	Damarlı Mah. Karadon	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z04-S01-B01	**PHOTO #**	IMG 3477 - 3482, 3488
SURVEY DATE	28.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1950s (?)	**ORIGINAL FUNCTION**	Compressor bldg
OWNER	Government, TTK	**CURRENT USE**	Compressor building
ADMINISTRATOR	Government, TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Concrete frame	**CONDITION**	Good
EXISTING LANDSCAPE	Newly planted trees in green areas within the site, forests around		
NEARBY ENVIRONMENT	Surrounded by residential area from southwest, forest on the other side		
CIRCULATION & TRANSPORT	Close to the route of public transportation, parking for private vehicles.		
DESCRIPTION	Rectangular building with a flat roof. Four storey high building with large windows on four sides, nearly transparent facade. Still functioning so has all mechanical equipments inside.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway and road	**MECHANICAL COMPONENTS**	All existing and still in use

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS



Table D.47 TTK Karadon Facilities, Workshop

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Karadon Atölye Binası	**MAP REFERENCE**	F27-b-03-a
ADDRESS	Damarlı Mah. Karadon	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z04-S01-B02	**PHOTO #**	IMG 3472-73, 83, 84, 87
SURVEY DATE	28.03.2009	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1959	**ORIGINAL FUNCTION**	Workshop
OWNER	Government,TTK	**CURRENT USE**	Workshop
ADMINISTRATOR	Government,TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Steel frame and brick	**CONDITION**	Good
EXISTING LANDSCAPE	Newly planted trees in green areas within the site, forests around		
NEARBY ENVIRONMENT	Surrounded by residential area from southwest, forest on the other side		
CIRCULATION & TRANSPORT	Close to the route of public transportation, parking for private vehicles.		
DESCRIPTION	Three rectangular blocks adherent to each other from long sides. Each unit has a pitched roof. There are large rectangular windows along the long side of the building. Pitched roof is a timber structure supported by steel frame.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, road	**MECHANICAL COMPONENTS**	-

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS




Table D.48 TTK Karadon Facilities, Export tower

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TTK Karadon İhraç Vinci	**MAP REFERENCE**	F27-b-03-a
ADDRESS	Damarlı Mah. Karadon	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z04-S01-B03	**PHOTO #**	IMG 3470-76, 3485-86
SURVEY DATE	28.03.2009	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1950s, renewed in 2004	**ORIGINAL FUNCTION**	Export tower
OWNER	Government,TTK	**CURRENT USE**	Export tower
ADMINISTRATOR	Government,TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Steel frame and brick	**CONDITION**	Good
EXISTING LANDSCAPE	Newly planted trees in green areas within the site, forests around		
NEARBY ENVIRONMENT	Surrounded by residential area from southwest, forest on the other side		
CIRCULATION & TRANSPORT	Close to the route of public transportation, parking for private vehicles.		
DESCRIPTION	Three storey rectangular block with pitched roof. Export tower is rising through the building. Long sides of the building have two rows of rectangular windows along the facades.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, road	**MECHANICAL COMPONENTS**	All technical equipment in use

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	~~Design~~	Const.	~~Material~~	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS




Table D.49 Kozlu İncirharmanı Facilities

METU Faculty of Architecture - Graduate Program in Restoration				March 2008
Survey form for industrial heritage in Zonguldak				Ayşem Kılınç
SITE				
NAME	Kozlu İncirharmanı İşletmesi	**MAP REFERENCE**		F27-b-01-d
ADDRESS	Kozlu	**COORDINATES**		-
INVENTORY DATA				
INVENTORY NUMBER	Z04-S02	**PHOTO #**	IMG 3428 - 2449	
SURVEY DATE	27.03.2008	**REPORTERS**	A. Kılınç	
HISTORY & USE				
CONSTRUCTION DATE	1930s-1940s	**ADMINISTRATOR**		Government, TTK
OWNER	Government, TTK			
ORIGINAL FUNCTION	Mining facilities	**CURRENT USE**		Mining & storage
ARCHITECTURAL DATA				
SITE COMPONENTS	Compressor building, fan building, crane building, mine shaft, transformer station			
EXISTING LANDSCAPE	Natural green areas around buildings, partially designed open areas			
CIRCULATION & TRANSPORTATION	Close to the route of public transportation, parking for private vehicles.			
NEARBY ENVIRONMENT	University buildings towards west, housing around the site			
DESCRIPTION	Single storey, small-scale buildings of a previously active mine entrance. Although it is partially in use today, most of the buildings are renewed and in a good condition. Gardens and green areas within the site are well kept.			
SIGNIFICANCE OF THE SITE				
INTRINSIC VALUES	~~Age~~	Technical	Historical	Document
	Originality	Design	Cons. tech.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural	Political	~~Symbolic~~	Commemorative
	Educational	Group	~~Aesthetic~~	~~Rarity~~	Identity
ECONOMIC VALUES	Use/Functional	Market		Continuity in use

PHOTOGRAPHS




Table D.50 Kozlu İncirharmanı Facilities, Mine shaft

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Kozlu İncirharmanı Vinç Binası	**MAP REFERENCE**	F27-b-01-d
ADDRESS	Kozlu	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z04-S02-B01	**PHOTO #**	IMG 1849, 3433-34
SURVEY DATE	27.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1934	**ORIGINAL FUNCTION**	Mine shaft
OWNER	Government,TTK	**CURRENT USE**	Mine shaft
ADMINISTRATOR	Government,TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone and brick	**CONDITION**	Good
EXISTING LANDSCAPE	Natural green areas around buildings, partially designed open areas		
NEARBY ENVIRONMENT	University buildings towards west, housing around the site		
CIRCULATION & TRANSPORT	Close to the route of public transportation, parking for private vehicles.		
DESCRIPTION	Single storey buildings with a square plan, covered by a hipped roof. Rectangular openings on all sides. Mechanic equipments still in the building, cranes and steel ropes are visible.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, road	**MECHANICAL COMPONENTS**	Technical equipment within building

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS



Table D.51 Kozlu İncirharmanı Facilities, Crane building

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Kozlu İncirharmanı Kuyu Binası	**MAP REFERENCE**	F27-b-01-d
ADDRESS	Kozlu	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z04-S02-B02	**PHOTO #**	IMG 1847, 3435
SURVEY DATE	27.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1934	**ORIGINAL FUNCTION**	Crane building
OWNER	Government,TTK	**CURRENT USE**	Crane building
ADMINISTRATOR	Government,TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Steel frame	**CONDITION**	Good
EXISTING LANDSCAPE	Natural green areas around buildings, partially designed open areas		
NEARBY ENVIRONMENT	University buildings towards west, housing around the site		
CIRCULATION & TRANSPORT	Close to the route of public transportation, parking for private vehicles.		
DESCRIPTION	1.5 storey buildings with a square plan, covered by a pitched roof. One or two small opening(s) on each sides. Mechanic equipments still in the building, cranes and steel ropes are visible.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, road	**MECHANICAL COMPONENTS**	Technical equipment within building

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS

Table D.52 Kozlu İncirharmanı Facilities, Fan building

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Kozlu İncirharmanı Pervane Binası	**MAP REFERENCE**	F27-b-01-d
ADDRESS	Kozlu	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z04-S02-B03	**PHOTO #**	IMG 3429 - 3432
SURVEY DATE	27.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	-	**ORIGINAL FUNCTION**	Fan building
OWNER	Government,TTK	**CURRENT USE**	Depot
ADMINISTRATOR	Government,TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone and brick	**CONDITION**	Good
EXISTING LANDSCAPE	Natural green areas around buildings, partially designed open areas		
NEARBY ENVIRONMENT	University buildings towards west, housing around the site		
CIRCULATION & TRANSPORT	Close to the route of public transportation, parking for private vehicles.		
DESCRIPTION	Single storey building with high ceiling, covered with a pitched roof. Arched openings on the entrance facade. Well kept front yard with flowers, trees and a small pool. Additional building on the side.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, road	**MECHANICAL COMPONENTS**	All technical equipment inside

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS



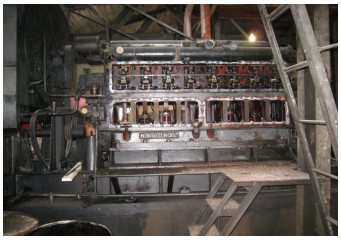



Table D.53 Kozlu İncirharmanı Facilities, Compressor building

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Kozlu İncirharmanı Kompresör Binası	MAP REFERENCE	F27-b-01-d
ADDRESS	Kozlu	COORDINATES	-

INVENTORY DATA			
INVENTORY NUMBER	Z04-S02-B04	PHOTO #	IMG 3437 - 3443
SURVEY DATE	27.03.2008	REPORTERS	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1946	ORIGINAL FUNCTION	Compressor building
OWNER	Government,TTK	CURRENT USE	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA			
ARCHITECT	-	ARCHITECTURAL ELEMENTS	-
STRUCTURAL SYSTEM & MATERIAL	Steel frame	CONDITION	Bad
EXISTING LANDSCAPE	Natural green area around		
NEARBY ENVIRONMENT	Outside the renewed site, standing alone		
CIRCULATION & TRANSPORT	Close to the route of public transportation, parking for private vehicles.		
DESCRIPTION	Rectangular building with pitched roof. Single space with approximately two storey height. Has random opening on all facades, interior is partially demolished.		

PRODUCTION			
BRANCH	Mining/Energy	SECTOR SERVED	Government
TRANSPORTATION SYSTEM	Railway, road	MECHANICAL COMPONENTS	Only a crane remaining

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~

PHOTOGRAPHS





Table D.54 Kozlu İncirharmanı Facilities, Administration

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Kozlu İncirharmanı İdare Binası	**MAP REFERENCE**	F27-b-01-d
ADDRESS	Kozlu	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z04-S02-B05	**PHOTO #**	IMG 3445
SURVEY DATE	27.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1932	**ORIGINAL FUNCTION**	Administration
OWNER	Government,TTK	**CURRENT USE**	Not used
ADMINISTRATOR	-		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone	**CONDITION**	Good
EXISTING LANDSCAPE	Natural green area around. Ivies and trees in the garden.		
NEARBY ENVIRONMENT	Outside the renewed site, standing alone		
CIRCULATION & TRANSPORT	Close to the route of public transportation, parking for private vehicles.		
DESCRIPTION	Two storey building with a hipped roof. Rectangular windows on facades, cut stone corners. Two chimneys rising from roof.		

PRODUCTION			
BRANCH	Mining/Energy	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, road	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	~~Technical/Artistic~~		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	~~Aesthetic~~	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~

PHOTOGRAPHS

Table D.55 Çatalağzı Old Thermal Power Plant

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Çatalağzı Eski Termik Santral	**MAP REFERENCE**	F27-c-23-c
ADDRESS	Çatalağzı-Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z05-B01	**PHOTO #**	IMG 1766-1809, 3508-1
SURVEY DATE	28.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1946-1948	**ORIGINAL FUNCTION**	Thermal power plant
OWNER	Government	**CURRENT USE**	Not used
ADMINISTRATOR	NA		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	Chimneys
STRUCTURAL SYSTEM & MATERIAL	Concrete frame	**CONDITION**	Bad
EXISTING LANDSCAPE	Natural green lands towards north		
NEARBY ENVIRONMENT	New power plant on north east, railway running from NE to SW		
CIRCULATION & TRANSPORT	Access by private vehicles, parking possible.		
DESCRIPTION	Single rectangular block with flat roof, located parallel to the railway. Two cylindrical concrete chimneys with cubic bases are rising at the north. Long sides of the main block have vertical rectangular windows all along in pairs. Northern facade and interior are demolished.		

PRODUCTION			
BRANCH	Energy	**SECTOR SERVED**	NA
TRANSPORTATION SYSTEM	Railway, conveyor, road	**MECHANICAL COMPONENTS**	Few parts remaining.

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	~~Group~~
ECONOMIC VALUES	Use/Functional		Market		~~Cont. in use~~

PHOTOGRAPHS






Table D.56 Çatalağzı Scrubber

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	Çatalağzı Lavuarı	**MAP REFERENCE**	F27-b-03-a
ADDRESS	Çatalağzı-Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z05-B02	**PHOTO #**	IMG 1811-44, 3500-06
SURVEY DATE	28.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1955-1957	**ORIGINAL FUNCTION**	Scrubber
OWNER	Government, TTK	**CURRENT USE**	Scrubber
ADMINISTRATOR	Government, TTK		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	Towers, conveyor lines
STRUCTURAL SYSTEM & MATERIAL	Concrete and steel frame	**CONDITION**	Good
EXISTING LANDSCAPE	Dense green area on the hills on the north		
NEARBY ENVIRONMENT	Residential area towards south, away from scrubber		
CIRCULATION & TRANSPORT	Access by private vehicles, parking possible.		
DESCRIPTION	Collection of buildings of different sizes, each connected physically by their location adherent to each other or by conveyor lines. All mechanical equipment are present and actively in use. Low capacity version of Merkez Lavuar, projects are the same.		

PRODUCTION			
BRANCH	Mining	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway, conveyor, road	**MECHANICAL COMPONENTS**	All parts still in use

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		Identity	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS





Table D.57 TCDD Çatalağzı Railway Facilities

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

SITE			
NAME	TCDD Çatalağzı Tesisleri	**MAP REFERENCE**	F27-c-23-c, F27-b-03-b
ADDRESS	Çatalağzı-Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z05-S01	**PHOTO #**	IMG 1737-63, 3512-23
SURVEY DATE	27.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1936 - 1956	**ADMINISTRATOR**	Government, TCDD
OWNER	Government, TCDD		
ORIGINAL FUNCTION	Railway facilities	**CURRENT USE**	Railway facilities

ARCHITECTURAL DATA	
SITE COMPONENTS	Station, locomotive repair workshop, passenger car repari workshop, dwellings, preparation building for workers
EXISTING LANDSCAPE	Designed park at the entrance of the station, randomly located single trees close to buildings
CIRCULATION & TRANSPORTATION	In the Çatalağzı commercial center, pedestrian access available, on the route of public transportation, parking for private vehicles.
NEARBY ENVIRONMENT	Buildings belonging to railway facilities, town center on the north
DESCRIPTION	Railway facilities of Turkish railway company. Usually rectangular building blocks of two storey, located parallel to railway tracks. Technical spaces and station close to each other; other away from this group.

SIGNIFICANCE OF THE SITE				
INTRINSIC VALUES	~~Age~~	Technical	Historical	Document
	Originality	Design	Cons. tech.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural	Political	~~Symbolic~~	Commemorative
	Educational	Group	Aesthetic	~~Rarity~~	Identity
ECONOMIC VALUES	Use/Functional	Market		Continuity in use

PHOTOGRAPHS





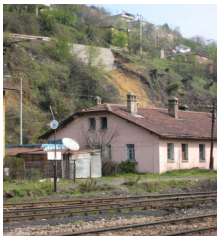


Table D.58 TCDD Çatalağzı Railway Facilities, Station

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TCDD Çatalağzı İstasyonu	**MAP REFERENCE**	F27-c-23-c, F27-b-03-b
ADDRESS	Çatalağzı-Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z05-S01-B01	**PHOTO #**	IMG 1737-63, 3512-23
SURVEY DATE	28.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1936-1937	**ORIGINAL FUNCTION**	Train station
OWNER	Government, TCDD	**CURRENT USE**	Train station
ADMINISTRATOR	Government, TCDD		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone	**CONDITION**	Good
EXISTING LANDSCAPE	Garden at the back of the station		
NEARBY ENVIRONMENT	Buildings belonging to railway facilities, town center on the north		
CIRCULATION & TRANSPORT	In the Çatalağzı commercial center, pedestrian access available, on the route of public transportation, parking for private vehicles.		
DESCRIPTION	Two adjacent blocks. The one on the west is a two storey building with hipped roof and balcony. The other on the east is a single storey building with a pitched roof. Both have arched opening along the facades and cut stones visible at the corners and opening borders.		

PRODUCTION			
BRANCH	Transportation	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway	**MECHANICAL COMPONENTS**	NA

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	~~Mech. comp.~~
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		~~Identity~~	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS




Table D.59 TCDD Çatalağzı Railway Facilities, Locomotive repair workshop

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TCDD Lokomotif Atölyesi	**MAP REFERENCE**	F27-c-23-c, F27-b-03-b
ADDRESS	Çatalağzı-Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z05-S01-B02	**PHOTO #**	IMG 1737-63, 3512-23
SURVEY DATE	28.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1938	**ORIGINAL FUNCTION**	Locomotive repair workshop
OWNER	Government, TCDD	**CURRENT USE**	
ADMINISTRATOR	Government, TCDD		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Masonry, stone	**CONDITION**	Good
EXISTING LANDSCAPE	Few plants in front of the building, surrounded by railway tracks		
NEARBY ENVIRONMENT	Buildings belonging to railway facilities, town center on the north		
CIRCULATION & TRANSPORT	In the Çatalağzı commercial center, pedestrian access available, on the route of public transportation, parking for private vehicles.		
DESCRIPTION	Rectangular building with pitched roof of three levels. Large square windows on long sides, entrances from short sides. A large inner space with a rail track in the middle. Smaller close units on one side of the interior. Timber roof structure supported by stone columns.		

PRODUCTION			
BRANCH	Transportation	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway	**MECHANICAL COMPONENTS**	All parts still in use

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		~~Identity~~	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS

Table D.60 TCDD Çatalağzı Railway Facilities, Passenger car repair workshop

METU Faculty of Architecture - Graduate Program in Restoration	March 2008
Survey form for industrial heritage in Zonguldak	Ayşem Kılınç

BUILDING			
NAME	TCDD Vagon Atölyesi	**MAP REFERENCE**	F27-c-23-c, F27-b-03-b
ADDRESS	Çatalağzı-Zonguldak	**COORDINATES**	-

INVENTORY DATA			
INVENTORY NUMBER	Z05-S01-B03	**PHOTO #**	IMG 1737-63, 3512-23
SURVEY DATE	28.03.2008	**REPORTERS**	A. Kılınç

HISTORY & USE			
CONSTRUCTION DATE	1956	**ORIGINAL FUNCTION**	Passenger car repair workshop
OWNER	Government, TCDD	**CURRENT USE**	
ADMINISTRATOR	Government, TCDD		

ARCHITECTURAL DATA			
ARCHITECT	-	**ARCHITECTURAL ELEMENTS**	-
STRUCTURAL SYSTEM & MATERIAL	Concrete frame	**CONDITION**	Good
EXISTING LANDSCAPE	Few plants in front of the building, surrounded by railway tracks		
NEARBY ENVIRONMENT	Buildings belonging to railway facilities, town center on the north		
CIRCULATION & TRANSPORT	In the Çatalağzı commercial center, pedestrian access available, on the route of public transportation, parking for private vehicles.		
DESCRIPTION	Two storey rectangular building with a pitched roof. Square windows on all sides. Entrances from the short side with two large doors. A large inner space with a rail track in the middle. Smaller close units on one side of the interior, inner balcony along the second floor.		

PRODUCTION			
BRANCH	Transportation	**SECTOR SERVED**	Government
TRANSPORTATION SYSTEM	Railway	**MECHANICAL COMPONENTS**	All parts still in use

SIGNIFICANCE OF THE SITE					
INTRINSIC VALUES	~~Age~~	Historical	Technical/Artistic		Document
	Originality	Design	Const.	Material	Mech. comp.
EXTRINSIC VALUES	Sociocultural		Political	Aesthetic	Educational ~~Symbolic~~
	Commemorative		~~Identity~~	~~Rarity~~	Group
ECONOMIC VALUES	Use/Functional		Market		Cont. in use

PHOTOGRAPHS