TICCIH Poland - Report for the years 2003-2006

Industrial heritage in Poland

The beginings of industrialisation in Poland are related to the growth of the so-caled Old-Polish industrial Area, situated in the central region of the country. Due to the energy available from rivers, a multitude of forests and other resources, numerous iron ore mines, limestones, quarries and processing workshops had existed here for centuries. Beetwen 1610 – 1623, the first wood fired blast furnace in Poland was activated in the region, in Bobrza.

The period of the industrial revolution in Poland coincided with the loss of its independence. At the beginings of the XIX century the authority of the Polish Kingdom, an entiety which was dependent on Russia, began to expand the activity of the Old-Polish Industrial Area. Up to this days many ruins from this period have remained: Ironworks in Samsonów (1818), rolling mill in Nietulisk (1834-35), as well as the ironworks in Maleniec, preserved to this day.

The most important industrial region in Poland is the area of Upper Silesia. Beginning in middle ages the mining and processing of metal ores had been carried out here, as well as coal mining. The industrial period in Upper Silesia began at the end of the XVIII century.

In 1754 the state iron foundry "Małapanew" in Ozimek was opened, and in 1755 the iron foundry in Zagwiździe near Kluczbork. The first deep mine was opened in 1770 - "Brandenburg ", and in 1786 the foundry of non - ferrous metals : "Friedrichshütte ", as well as the first steam engine used in mining in both Upper Silesia and Continental Europe, initialised in 1788 in the "Friedrichsgrube ". In 1796 an ironworks in Gliwice was outfitted with the first coke-fired blast furnace in Silesia, built by John Baildon.

Multiple types of facilities, concentrated on a small space, such as complexes composed of coal mines, coking plant and iron foundries, or zinc ore mines, coal mines and zinc foundries were very characteristic of Upper Silesian industry. In 1860 the region of Upper Silesia produced the most zinc in the world.

In the years 1907 –1910 the exemplary housing estate in Giszowiec was built, composed of small houses surrounded by gardens, designed along the lines of a "garden city". In 1909 the housing estate of Nikiszowiec was built, with the character of dense municipal buildings. Both housing estates were provided with adequate public utility buildings and infrastructure.

In 90's. of XX century, due to the restructuring of heavy industry, most manufacturing sites were closed. However, several facilities which had an important place in industrial traditions of the region were retained. this includes mines which now form the mining museum in Zabrze, the mines "Guido " and "Queen Luiza", connected by the so-called Main Pivotal Shaft, formerly used for draining water from the mines. An underground experimental mining shaft was also made avaliable for tourists. Apart from a preserved mining chain bath, near the elevator tower, the antique engine room building also contains a functioning steam winding machine with rope wheel of the "Koepe" type, dating from 1915.

Development of mining is related to the Sudety area, and especially the region of Walbrzych. On this terrain mining of silver, lead, and copper had been carried out since the Middle Ages, and also, from the end of the XVIII century, mining of pit-coal was started. Formed in XIX century, most of the mines and coking plants were closed in first half of the 90's. of the XX century. Today the main testimony of the industrial traditions of the region is the Museum of Technology and Industry created on the grounds of the former mine "Thorez ", the greatest attraction of the museum is the minig shaft "Lisia Sztolnia ".

Near Krakow, in the cities of Wieliczka and Bochnia, the great tourist attraction are two medieval salt mines functioning from the middle of the XIII century up to the 50's. of the XX century. They are important relics of technology, with a prominent positon in the heritage of world industry. The salt mine in Wieliczka possesses 9 levels, 2040 chambers and 300 km of corridors, as well as 28 shafts. The significance of the mine was appreciated by the UNESCO, which in 1978 inc;uded it on the List of World Heritage.

Up to now, over a hundred historical water power plants have been preserved in Poland. Most of them are leftovers of German industry. They are located primarily in Lower Silesia, on the Odra and Nysa rivers as well as in west Pomerania and the Mazury region. The most interesting power stations are the ones in Leśnie – dating back to 1907 on Kwisa river (the oldest water power station in Poland) as well as the power station in Pilchowice – from the year 1913, on the river Bóbr, where a reservoir was formed with the use of a 62 m high stone - concrete dam. In west Pomerania, in Rościno, an under-water hydroelectric power station, unique on the European scale, was built by Germany in 1936.

In the south - east of Poland lie the mountainous terrains of Podkarpacie, the cradle of the world oil industry. A Polish pharmacist, Ignacy Łukasiewicz became its creator, by obtaining naptha through the process of distillation in 1853. In 1854 Łukasiewicz opened the first petroleum shaft in the world, in Bóbrka. Extraction of the oil was carried out through a primitive method. Oil was drawn by pails from earlier dug wells. At present, Bóbrka contains a museum of the oil industry. There are also well-preserved XIXth century refineries of petroleum in Jasło and Jedlicze.

In the middle of the XIX century on the terrains of the Polish Kingdom light industry was increasingly being developed. The application of new industrial technologies, and access to markets, in the Russian empire, caused the development of Łódź (cotton processing), Żyrardów (flax), Białystok, Tomaszów and Zduńska Wola.

Ludwik Geyer built the first factory in Łódź equipped with a steam engine in 1839. At the end of the 60's of XIX century, the factory and housing complex in Księżny Młyn was built by Scheibler. Second in terms of size in Łódź was the factory complex built in 70's XIX by Izrael Poznański. The manufacturers from Łódź satisfied a significant part of Russian demand for cotton products.

Textile production was also concentrated in the area of Lower Silesia. In the whole area of Sudety numerous manufacturers of cotton, linen and wolllen products were active. Up to this days, the cotton factories established in 1805 r. in Bielawie are still active and use unique, perpendicular water pumps of Weise – Monski type from 1909 r. in the production process.

A very important part of Polish industrial development was the food products industry. In 1802 in Konary near Wrocław, at the initiative of German chemist Franz Carl Achard, the first experimental beet sugar factory in the world was opened. In 1826 the sugar factory "Łubna " in Częstocice was built, this was the first in the Russian empire. The most dynamic development of the sugar industry took place in 60's and 70's of XIX. century in the regions of Wielkopolska, Mazowsze and Lubelszczyzna. In the end of the XIX century over 100 such facilities were functioning in Poalnd.

On Polish lands, in typically rural areas, small scale manufacturing was very important, but was gradually replaced by the foodstuffs industry. Many historical buildings were preserved, like the operational water mill in Bondyrz in the Roztocze region. The food processing industry was primarily composed of breweries. Up to this day, old facilities like the ones in Tychy, Żywiec, Bojanów and Grodzisk Wielkopolski are still operating.

The antique channels of inland navigation, cable railways - ordinary- and narrow-gauge, monuments of bridge-building, form the material testimony of the development of transport technology.

Located in northern Poland, the Elbląg Channel, built in years 1844 – 1866, possesses five unique, dry ramps for the transportation of ships, which together allow for the crossing of almost 100 meters of height difference. The channel is an exceptional complex of industrial relics and hydrotechnical devices, and the ramps are very well preserved and have retained their original water drive.

The Augustowski Channel is the second important hydroengineering facility, built according to the design of Polish engineer Ignacy Prądzyński in the years 1824 - 1838. It runs through picturesque terrains, the forests and lakes of Augustowski Forest. It possesses the original construction of venticular mucus and power system supply channel by water. Talking of significant relics of hydrotechnical infrastructure, one should also mention the Bydgoski and Mazurski Canals.

The terrains of Poland abound in railway transportation relics. the first opened railway line on Polish terrain was a track from Oława to Wrocław opened in 1842. In 1845 this was followed by the line from Warsaw to Grodzisk, which was the first section of the later Warsaw-Vienna Railroad (Droga Żelazna Warszawsko – Wiedeńska). In the next years the development of railway transportation was very fast.

The largest density of railway lines built on Polish terrains was in the area annexed by Prussia, the density was somewhat smaller on terrains annexed by Austria, and the smallest on Russian-occupied areas. At present many local railway lines are inoperative and are even being taken apart. The abandoned monuments of railway architecture are decaying. there is hope that as part of the restructurization of the PKP (Polish National Railways), many picturesque railway routes could be restored and made functional. Among the most interesting relics of railways are the largest railway bridges in Poland in Stańczyki (region of Mazury) built between 1912 and 1926, an active open-air museum of steam railways in Wolsztyn, Chabówka and Kościerzyn, the Muzeum of Industry and Railways in Jaworzyna Śląska.

In 2001, PKP closed the movement on all narrow - gauged railways, simultaneously handing over part of the lines to local authorities. At the present 31 separate lines of narrow - gauged railways are still preserved, including 23 which are active in part or whole, and 4 are undergoing demolition.

The history of highway engineering is presented in the Museum of highway engineering in Szczuczyn, which possesses a large collection of road machines. In Maurzyce near Łowicz lies the first welded steel road bridge in the world, which was built in 1929. In Rybin in the Żuławy region it is possible to see two old highway drawbridges from 1934 r.

2. Threats to industrial heritage

The basic cause of the threat to former industrial facilities in Poland are the ongoing processes of de-industrialisation, particularly strong after 1989, and industrial modernisation, as well as the process of passing from an industrial society to an information society.

The systematic restructuring of various branches of industry leads to the expulsion of former methods of production, which are replaced by more effective technologies. The concentration of production is another phenomenon, it is common for one modern institution to replace

several older factories. Some branches of industrial production are totally abandoned, and replaced by different branches or imports from abroad.

Many former industrial facilities and old technological devices located in them have lost their original function. Unfortunately the lack of consciousness of the value of industrial heritage causes indifference of the owners of the facilities, state administration and the local communities to its fate. As a result of this there is insufficient funding, both from the state and from local authorities for protection of industrial heritage.

The relics of industry and technology in liquidated or privatized industrial facilities, don't represent any value for the new owners. Investors aren't interested in repairing old factory halls and devices. The division of large factory complexers among several new owners, leads to the loss of their spatial and architetural integrity and the loss of their original urban-planning layout.

Many facilities become completely derelict. They are defined often as "redundant infrastructure". This especially concerns inoperative railway lines, as well as defunct industrial facilities. In Polish conditions they are often looted and dismantled by scrap-iron thieves, which are capable of taking whole railway lines to pieces, as well as bringing multistorey factory halls to ruin.

3. Preservation of monuments of technique and industry

The "Bill concerning protection of heritage in Poland" regulates the legal principles of protection and care over monuments (Dz. U. Nr 162 of 17 September 2003, poz. 1658). The Bill includes four forms of legal protection of monuments: registration in the register of monuments, conferring the status of a monument of history, the creation of a cultural park and protection through local spatial planning regulations. The Provincial Conservator of Monuments carries out the registration procedure at the request of the owner, or as part of an internal procedure. The Status of "monument of history" is conferred by the President of Poland at the request of the Minister of Culture. A cultural park is created by the local authorities on the basis of an appropriate resolution. Protection through local spatial planning regulations is established within the framework of a ratified spatial development plan.

The regulations in the Bill oblige the owner of a monument to finance all conservation and adaptation works, and obtaining permission for them from the Provincial Conservator of Relics. The owner is also obliged to make buildings or art objects available for scientific investigations and provide information about the historical value of the monument or relic in his possession.

The Bill foresees the possibility of obtaining refinancing of conservation works carried out in or near registred historical monuments. Unfortunately the financial means allocated to this aim are insufficient and funding for industrial heritage monuments is granted rarely.

If a heritage building or object is threatened by destruction, or may be brought outside Polish borders, it can be confiscated on the basis of an administrative decision, with a recompensation payment equal to its market value. This regulation has not been used as of yet in the case of industrial heritage, once again due to insufficient financial means available to Provincial Conservators of Monuments.

The regulations of the Bill also include penal responsibility. The destruction or damaging of a monument or heritage object, or bringing it outside Polish borders without permission, is subject to the punishment of 3 months to 5 years of imprisonment. In the case of relics of technology, all objects older than 25 years are treated as potential heritage objects.

The policy of the country in the area of protection of heritage is formulated by the Minister of Culture. At the provincial level the protection of relics is the responsibility of Provincial Conservators, supported by specialized institutions of culture. The national Center for the Documentation and Research on Monuments with Regional centers for the documentation and Research on Monuments , are, apart from research work, co-responsible for the national register and record of monuments and relics. At the end of 2005, legal protection through the register of relics included 1791 industrial buildings and sites, 2574 machines and devices, out of a total of over ten thousand such buildings and sites, as well as 4468 antique machines and devices. Issues of protection of relics also belog to the responsibilities of the center for the Protecton of Public Collections, which specialies in the fields of fire protection and protection against robbery. At present, there are 132 technical museums or musuems possessing significant collections in the area of technological history in Poland. Among the largest is the Railway Museum as well as the Museum of Technology of the National Technical Organisation in Warsaw. The collection of antique cars, steam engines and narrow – gauged locomotives, are gathered in Muzeum of Kolejnictwa in Warsaw as well as in in Sochaczew and Gryfice. The Museum of Technology collects relics of all fields of production, the colections range from their beginnings to present times.

It includes a department in Gdańsk in an antique water smithy, in Warsaw in the former Norblin crockery factory as well as field offices in the region of the Old-Polish industrial district. these form an interesting touristic route, beginning with an old ironworks and foundry in Chlewiska, passing through the Museum of Ancient Metallurgy in the Świętokrzyski regionin Nowa Słupia, the antique water smithy in Stara Kuźnica and ending in the Muzeum of Zagłębie Staropolskie, which containins a former foundry, and rolling-mill in Sielpia.

Authorities of local administration are also obliged to protect relics, in the form of provincial, district and communal programmes of care over monuments and relics. Independently from this, all communes are obliged to form a communal record of monuments.

A significant part of activities in the field of protection of industrial heritage is carried out by non - governmental organizations. Local associations and foundations act effectively to preserve chosen objects of technical heritage. Only thanks to the commitment of non - governmental organizations was it possible to preserve a dozen or so antique narrow - gauged railways, which - not without difficulties - are in use until now. There are various licensed railway operators for example: The Association of Local Rail Transport, Foundation of Polskich Narrow-Gauge Railways, Pomeranian Association of Railway Lovers. In Lower Silesia the most active organisation is the Foundation of the Open Museum of Technology (Fundacja Otwartego Muzeum Techniki), which accumulated a collection of river vessels such as the steam powered tugboat "Nadbór ” from 1947 and the swimming crane "Wróblin ” 1939. A second initiative of the foundation is the organization of The Sowiogórskie Technology Museum, which includes the fan engine-house in Dzierżoniów from 1900, the farm Dieriga in Bielawa, the mine of silver "Silberloch ” in Walimie, the water power station "Lubachów ” -1912-1917, the normal-gauge railway line Jedlina Zdrój - Świdnica Kraszowice from 1902-1904.

Problems of protection of technical heritage are also the concern of international organizations, and among them the Polish Committee of TICCIH.

4. New functions for industrial facilities

Preserving industrial monuments requires giving them new socially useful function. Sometimes the expansion of hitherto existing activity to including new cultural functions is sufficient.

This is the case in Częstochowa Match Factory which produces matches based on an old production line which comes from the beginning of 30's of past century. The unprofitable production of matches was augmented by museum activity. The factory was transformed into a living technology museum, in which tourists can get acquainted with the process of production, can get to know the history of the institution as well as buy commemorative matches.

One of the better methods of activation of postindustrial facilitites is industrial tourism. This new role is important for sucj facilities, as the Jelenia Góra complex of water power stations, situated on the Bóbr river. Built in the years 1912 – 1932, the power plants are composed of stone dams and power stations, and constitute an attractive supplement of the mountain landscape, even the most demanding tourists will be impressed by this picturesque scenery. The production of energy takes place with the use of antique generators working incessantly for almost 80 years. In the power stations, Siemens or AEG dynamos, and water turbines of the Francis or Kaplana system were installed. The individual generators are characterised by beautiful XIX century polished brass details. At the present the power plants are open for organized guided touristic groups.

The adaptation to touristic functions is the most effective way of preserving transportation relics. Local railway lines, including narrow - gauge railways, and former inland channels constitute transportation axes collecting and steering touristic activities in areas of attractive landscapes, in this way contributing to their protection. Former transportation systems gradually coalesce with their surroundings and are a durable element of the landscape. Simultaneously, transportation equipment presented in motion is an undeniable tourist attraction. Railway lines served with historical steam engines possess a specific charm and retain the atmosphere of historical voyages. At the present 23 independent narrow - gauged touristic railways are functioning in Poland, along with three open-air museums of steam engines, and two inland canals equipped with operational antique ramps, with regular cruises of excursion ships.

The site planning for deserted postindustrial facilities often requires a total change of their hitherto existing function. The Techical University in Łódź (Politechnika Łódzka) adapted the complex of Wilhelm Schweikert's former factory built in 1908-1913, (after 1945 "Lodex"). The Institute of Information Science and the Main Library were placed in factory buildings. They retained the original historical elevations, and modern windows with divisions similar to the historical ones were used. The interiors of buildings were adapted to new functions, but historical elements such as cast-iron columns supporting ceilings were preserved.

A different way of revitalizing postindustrial complexes is adapting them for commercial functions. In Konstancin - Jeziorna near Warsaw, on the premises of a burnt paper-mill from 1838, the shopping centre "Old Papiernia" was built in the 1990's. Burnt ruins transformed into a lively urban shopping area with 50 shops.

The largest adaptation project currently being carried out is the adaptation of an extensive factory complex of the Izrael Poznański former cotton factory in Łódź, built in 1872-1912, { after 1945 r. named "Poltex "). The terrain, which includes numerous red brick factory halls, has a total surface of about 27 hectates, the floor area of 12 historical buildings is 90 000 m2. among the most interesting buildings are a 5-storeyed weaving mill with a length of 170 m, and a brick entrance gate with decorative forged steel doors. This project however involves some controversies. The realization of the investment will require substantial interference into

the historical architecture. The concept requires the creation of about 95 000 m2 of new buildings, including a mall. In the case of the weaving mill, only the external walls of the building will be retained, and the interior will be transformed into a 2-storey car park.

Postindustrial buildings with large usable floor areas are often adapted into offices. A good example is the reconstructioni of the production hall of a former rubber tape factory in Łódź into an editorial office belonging to the newspaper "Gazeta Wyborcza" by the company Agora, or the successful adaptation of buildings of the former Kopisch textile factory in Łódź into offices by the Industrial Bank S. A. Also in Łódź, an interesting adaptation of a fire station 1884 located in the Scheibler factory complex in Księży Młyn was carried out. Office rooms were arranged in the administrative part and in former stables, closes by wooden gates.

The most interesting monuments of technology should be protected as a testimony of material culture, with full exposition of their original function. The fullest protection is assured by transformation into a museum, open-air museum or cultural park. Not every architectural monument, however, can become a museum, and the lack of public financing in Poland does not favour the creation of new institutions of culture. In 2001 the Museum of Nature and Technology came into being in Starachowice, encompassing the area of a blast-furnace complex from 1899, with a complete and well preserved technological line for iron smelting.

In 1998 in Krakow, the Museum of Urban engineering was created in a complex of former sheds of a narrow - gauged tram from 1882 -1913. In 2000 -2004 the restoration of part of the buildings was conducted. soon fter after the end of repairs in the next hall, the museum will gain a collection of antique buses and trams which after the reconstruction of the rail line will serve the municipal touristic routes.

Not all methods of protection of industrial heritage permit on durable preserve of individual objects. Their protection in the form of monuments of technology - machines, the devices, or engines placed on pedestals – often leads to abandonment by the former owner of the relic and their destruction. Using postindustrial complexes as so-called technology incubators does not bring about the desired effects. Investors are interested rather in obtaining quick profits than the renovation of former industrial architecture. This what happeed in Łódź Special Economic Area where complexes of Grohman's textile factories were surrounded by new sheds, and historical builduings were demolished or until this day haven't found new owners. In Poland there are no good examples of adaptation of postindustrial buildings into housing. The developers demolish the former industrial monuments with the aim of gaining plots for buildings in the most attractive parts of cities.

Despite positive examples, there is no complex policy concerning postindustrial objects. Very often restoration of the buildings is accidental and dependent on investor's whims. Not always the most valuable buildings are restored. It is very common in revitalization projects that earlier buildings which form part of a larger complex are repaired, but different ones, equally important for the architectural composition are demolished.

5. Scientific Conferences and Symposia

YEAR OF 2003

1. I Sowiogórski Festiwal Techniki – Fundacja Otwartego Muzeum Techniki Wrocław – DZIERŻONIÓW 2003

2. Kustosze i gospodarze. Nowe spojrzenie na gospodarowanie obiektami techniki – Muzeum Inżynierii Miejskiej w Krakowie i Muzeum Okręgowe w Nowym Sączu – KRAKÓW, NOWY SĄCZ;

YEAR OF 2004

3. Dziedzictwo czystej energii – Muzeum Techniki w Warszawie – WARSZAWA;

4. Pro-Revita Rewitalizacja miast poprzemysłowych Rola dziedzictwa poprzemysłowego – Instytut Architektury i Urbanistyki Politechniki Łódzkiej – ŁÓDŹ;

5. Technika w dziejach cywilizacji – z myślą o przyszłości. II Sowiogórski festiwal techniki – Fundacja Otwartego Muzeum Techniki Wrocław – DZIERŻONIÓW 2004, 2005, 2006

6. Bogactwo dziedzictwa przemysłowego jako wyzwanie i atrakcyjny produkt dla turystyki i rekreacji – Urząd miejski w Zabrzu – ZABRZE;

7. Atrakcyjność turystyczna mostów zwodzonych – Zachodniopomorska Regionalna Organizacja Turystyczna Szczecin, TICCIH – SZCZECIN;

8. Europejskie dziedzictwo techniki. Perspektywy rozwoju turystyki industrialnej – Polska Organizacja Turystyczna, TICCIH – WARSZAWA;

YEAR OF 2005

9. Dziedzictwo przemysłowe jako nowy produkt dla turystyki i rekreacji. Doświadczenia krajowe i zagraniczne – Urząd Miejski w Zabrzu, Górnośląska Wyższa Szkoła Handlowa w Katowicach – ZABRZE;

10. Wielcy twórcy Gór Sowich. III Sowiogórski festiwal techniki – Fundacja Otwartego Muzeum Techniki Wrocław - DZIERŻONIÓW

11. Zabytki Przemysłowe i kolejowe 2005. „Złomowisko”, czy Perełka Turystyczna? Muzeum Włókiennictwa w Łodzi – ŁÓDŹ;

12. Zabytki transportu – potencjał kulturowy i turystyczny – Muzeum Inżynierii Miejskiej w Krakowie – KRAKÓW;

Marek Barszcz

The Secretary TICCIH Poland