



THE INTERNATIONAL
COMMITTEE FOR THE
CONSERVATION
OF THE INDUSTRIAL
HERITAGE

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Kc4-332 in full steam running along the last operational narrow gauge (750 mm) railway in the Baltic countries.

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Inside:

The re-use of the Royal Tobacco Factory in Morlaix, France

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MUSEU DE LA
CIÈNCIA I DE LA
TÈCNICA
DE CATALUNYA

In 2003, several museums, heritage railways and non-governmental organizations from Greece, Great Britain, Netherlands, Spain, France and Latvia came together to implement a three-year international project for industrial heritage preservation called "SteamRail.net". The project was launched on 1st of June 2003 within the framework of the EU programme "Culture 2000". The main objective of the project is to establish a co-operation network amongst railway museums and heritage railways in Europe. This will enable them to share experiences in the restoration of steam locomotives and the preservation of railways as monuments of our industrial heritage and to promote railways as a unique part of Europe's cultural and industrial heritage. This is being done in conjunction with FEDECRAIL, the European Federation of Museum & Tourist Railways. SteamRail.net has been presented and managed by Thessaly University in Volos (Greece).

Four steam locomotives have been restored in the UK, Latvia, Netherlands and Spain, documentation of the restoration has been completed and a restoration manual will be produced at the end of 2005. In this project, Latvia is represented by the Industrial Heritage Trust of Latvia which, in cooperation with the private railway company "Gulbene – Aluksne banitis", has restored the steam engine Kc4-332 built in Czechoslovakia. That is particularly important for Latvia, where after a break of nearly 50 years steam engines returned to service on the Gulbene-Aluksne line – the last operational narrow gauge (750 mm) railway in the Baltic countries.

It should be mentioned that 424 of the Kc4 class locomotives were built from 1949 until 1951 in the Skoda factory at Plzen (Czechoslovakia) as part of the main production of the Russian Kolomensk factory. During the post-Soviet period, engines of this type were used in Latvia on peat and forestry railways, as well as by the State Railway for goods and passenger traffic. The restored engine Kc4-332 "Marisa" has been loaned from the Estonian Railway Museum in Lavasaare, which contains the best collection of narrow gauge rolling stock in the Baltic countries.

As well as restoring this heritage, the project is working towards further development of the Gulbene-Aluksne railway and adapting it for the needs of tourists. Multimedia and audio-visual products and multi-lingual books about heritage railway preservation have been produced and exhibitions staged for the general public in several countries about the restoration results.

The most important issue of the "SteamRail.net" project is to show the links between the industrial heritage of the steam railways and the historic, cultural, ecological, artistic and socio-economic activities in each region, country and in Europe as a whole.

It is interesting to note that implementation of the project has generated additional activities for promoting and developing the Gulbene-Aluksne railway, such as volunteers from Great Britain carrying out reconstruction works on the railway, training abroad of young Latvian volunteers, a local theatre festival, a summer session for art school's children, and so on.

In October, the regular partners' meeting of "SteamRail.net" took place in Haaksbergen (Netherlands) with the inauguration ceremony of the steam engine "Navizence" No 7853, restored by "Museum Buurt Spoorweg" (MBS). Swiss-built and Dutch-restored, this was a really great event for promoting industrial heritage in the Netherlands.

The "SteamRail.net" Project will end in half a year with the big annual conference of FEDECRAIL which will take place on 27th April – 2nd May 2006 in Volos (Greece). Anyone who want to know more about the project should visit the excellent website of the Gulbene-Aluksne line www.banitis.lv.

The project partners are University of Thessaly, www.uth.gr, Stichting Museum Buurt Spoorweg www.museumbuurtspoorweg.nl, Midland Railway Centre, www.midlandrailwaycentre.co.uk, Musée des Tramways à Vapeur, www.trains-fr.org/mtvs, and the Fundacio Museu del Transport in Catalonia.

Opinion

Andris Biedrins
Chairman of the Industrial
Heritage Trust of Latvia

The SteamRail.net transfrontier railway heritage preservation project

TICCIH news

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There is an on-line membership form on the web page.

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■ **April 28, 2006: ICOMOS World Monument Day.** The International Committee for Monuments and Sites (ICOMOS) has designated its 2006 International Day on Monuments and Sites, 18 April, to the theme of the Heritage of Production. The Resolution was adopted at the 15th General Assembly in Xi'an, China, on the 17th-20th October last year. Details of the Assembly can be studied on ICOMOS' web page [www.icomos.org] but it is worth quoting the full text of Resolution N° 30, which states:

Considering the interest of ICOMOS for all forms of monuments, sites and ensembles related to human activities, including the industries of various historical periods, whose recognition and conservation are affected by specific factors, Considering the collaboration between ICOMOS and TICCIH (The International Committee for the Conservation of Industrial Heritage) whose General Assembly held in 2003 in Nizhny Tagil (Russia) adopted a statement on the conservation of such heritage which has been distributed for information to participants at the 15th General Assembly of ICOMOS, Considering the decision of the Executive Committee to identify the Heritage of Production as the theme for the 2006 International Day on Monuments and Sites (18 April), The 15th General Assembly of ICOMOS, meeting in Xi'an, China in October 2005 resolves to :

- Support the suggestion of the Executive Committee on the theme of the 2006 International Day on Monuments and Sites and encourage all National and International Committees to organise activities to raise awareness for the industrial heritage and to help its conservation;
- Engage ICOMOS, in co-operation with TICCIH and taking into consideration its principles, in a specific reflection relative to the conservation of the industrial heritage in order to propose guidelines to the 16th General Assembly in 2008.

TICCIH's National Representatives have been notified of this exciting decision and encouraged to contact ICOMOS committees in their country and to organise events and activities to take advantage of the focus offered by ICOMOS on the preservation of industrial heritage. The TICCIH President and Secretary are already working with the ICOMOS secretariat to coordinate actions around the World Monument Day. One important issue will be how to work on the Guidelines for the General Assembly in 2008 mentioned in the Resolution, and

which will be based on the Nizhny Tagil Charter.

In past years, ICOMOS has chosen as its themes Earthen architecture (2004), Underwater cultural heritage (2003) and 20th century heritage (2003), and examples of the sort of projects that were put on to 'raise the public's awareness about the diversity of cultural heritage and the efforts that are required to protect and conserve it and to draw attention to its vulnerability' can be found on the ICOMOS site.

TICCIH members who want to participate in World Monument Day should make suggestions to their national representatives, or contact the Board (ticcih@gencat.net).

■ New rates for membership.

After holding the cost of being a member for over ten years, the TICCIH Board decided at the end of last year to raise the subscription rates in 2006. The rate for individuals changes to £20 (about 30€//\$), for corporate members to £40 (60€//\$), and there is a new rate for students of £10 (15€//\$), to attract younger members.

Membership income helps to cover the cost of producing and distributing the Bulletin, and of maintaining the web page. By joining TICCIH and by renewing membership each year, (or taking advantage of the discounted three-year membership), members receive the Bulletin and have preferential access to Patrimoine d'Industrie and to the TICCIH conferences.

But by being members, they also help to sustain TICCIH as an international organisation with the standing and weight to represent and defend the interests of the industrial heritage. Subscription invoices will be sent out in January. Please renew your membership, and encourage colleagues and friends who share our enthusiasm to join as well.

■ Change of electronic address

Please note Stuart Smith's new e-mail is stuartbsmith@chygarth.co.uk

■ **The new members** who joined TICCIH during the autumn are Olga Paterlini de Koch of the Universidad Nacional de Tucumán in Argentina, Christopher Irwin, Maria Leticia Ferreira, from Brazil, Eyvild Bagle of the Kistefos pulp mill museum in Norway, and Livorio Quispe Velasco in Cusco in Peru.

■ Situated in the small port of Morlaix (Finistère) on the north coast of Brittany, the royal tobacco factory (subsequently imperial, then national...) is recognised today as one of France's major industrial monuments, and one of its oldest too. It was built from 1736 to 1740, a few years after work began on another celebrated royal tobacco factory, at Seville. Designed by the king's architect François Blondel, the Morlaix workshops were originally conceived for the production of rolls of tobacco, made from American leaf imported via Bristol or Glasgow. Throred modernised in order to accommodate new forms of production and ughout the 19th and 20th centuries, under the centralised Parisian direction of the state tobacco monopoly, Blondel's original buildings were kept but constantly added to anew products: snuff, cut pipe tobacco, cigars and cigarettes. Towards the end of the 19th century, the factory employed as many as 1,750 women workers, most of them hand rolling cigars, ten hours a day, six days a week. The factory also

The Royal Tobacco Factory at Morlaix¹

Paul Smith

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Paris

produced large quantities of snuff, manufactured in an impressive battery of steam-driven grinding mills, installed in the early 1870s and kept in use up to the 1980s. But from the 1950s, Morlaix was primarily specialised in the production of cigars, activity which finally came to an end in September 2004 when the last workshop closed down and the last 37 employees left for early retirement.

Putting an end to more than 260 years of

the early 18th century but also the 19th- and 20th-century additions, in particular the remarkable battery of grinding mills and the curious reinforced-concrete structure of a 1920s workshop building known as the 'cathedral'. In 2001, before production ceased, the whole site was purchased from Altadis² by the Morlaix Chamber of Commerce which developed a long-term conversion project around a mix of new economic, cultural and educational functions, along with the creation of a dozen flats in the former residence of the factory's director. One of the advantages of this project is that the site has never been left in a state of dereliction. Even before the last cigar workers left, the educational component of the project was already under way with the arrival, in January 2004, of 220 students at a new technological university, comfortably installed in a 1920s workshop building. The 'cathedral' is presently being converted to accommodate offices for a local authority, and some economic activities, including a Breton publishing house, have also occu-



Aerial view of the Royal Tobacco Works in Morlaix

Photo: P Smith

1. For further details on the project presented here, see *L'Archéologie industrielle en France*, n° 46, June 2005. In the same review, the issue n° 28 of June 1996 presents the history of the factory, recently studied also by Laurent Fievre, *Les manufactures de tabacs et d'alumettes, Morlaix, Nantes, Le Mans et Trélazé (XVIIIe – XXe siècles)*, Rennes, Presses universitaires de Rennes, 2004, 292p.

2. The international group Altadis was formed in 1999 from the fusion of the former tobacco monopolies in France (Seita) and Spain (Tabacalera). Readers may be surprised to learn that the most traditional and most characteristic of French cigarettes, the Gauloise, is now manufactured at Alicante in Spain.

uninterrupted industrial use, and terminating an even longer historical association between Morlaix and tobacco (the earliest workshops, installed in a manor-house overlooking the present-day site, were opened the 1670s), the closure of the manufactory has been something of a trauma for the town. But the preservation of the historic buildings and the initiatives under way for the conservation of the memories associated with them perhaps offer some compensation. The factory itself was given statutory protection ('classé monument historique') in September 2001, a measure covering not only the buildings of



Up. The remarkable snuff grinding mills.

Down. The interior of one Blondel's courtyards

Photos: P Smith

pied some of the available space. The cultural component will comprise a site museum centred on the showcase snuff mills but also integrating the town's fine art museum, the Musée des Jacobins, presently homeless. When the whole project is completed (the opening of the museum is planned for 2009), the former manufactory will have become a new urban neighbourhood, hopefully an agreeable and lively one, structured around a splendid 18th-century public square and respectful of the exceptional heritage that the French tobacco monopoly has left the town.

Finland

Invitation to the Second Plenary Conference of the Tensions of Europe Network, Technology and Rethinking European Borders, and the launch of the Tensions of Europe Research Program, Lappeenranta University of Technology, South Karelian Institute, May 25-28, 2006

Tuija Mikonen

Bulletin correspondent in Scandinavias

■ The conference has now published a comprehensive programme of papers on the its website www.lut.fi/eki/toe2006/index.html, grouped into different sessions. There are papers on technology transfer between what we used to refer to as the East and the West, as well as between Europe and its colonies, on the effects of networks across national borders, on Stalinist technology and looking at how to develop a pan-European history of technology. The meeting will provide an opportunity for graduate students, post-doctoral scholars, and senior researchers who are interested in the history of technology and the making of modern Europe to meet and to participate in the further development of the Tensions of Europe Research Program. The aim is to encourage multidisciplinary and multinational research cooperation in the fields related to the Tensions of Europe research agenda (see www.histech.nl/tensions).

The main themes are Networks and infrastructures; Circulation and localisation of knowledge, skills, and people; Cooperation and competition between European nations and the world beyond the European continent, including colonies, the USA, and the USSR; and Reworking of consumer goods and artefacts for local, regional, national, European, and global use.

France

Feasibility study for a distance-learning project on the restoration of the architectural heritage of the 19th and 20th centuries

David Bernfeld

■ The aim of this new project is to study the feasibility of a continuous education distance-learning course directed at

professionals working in different countries on the care, restoration and appreciation of the abandoned industrial buildings of the last two hundred years. The course will be post-graduate and on-line. The course site will consist of two 'spaces', one for teaching and the other for work on practical tasks or in restricted groups, as well as a series of contact points between students and with the course organisers. The modular course will have three 'cycles', aimed at students with different profiles.

When the project comes to an end, the ownership and use of the website will be established by agreement between the partner institutions. The eight partners are the Ecole d'Architecture de Strasbourg, « CRESAT » / Université de Haute-Alsace de Mulhouse, and the Institut Régional de culture ouvrière et de services « I.R.C.O.S. » in Strasbourg (France), the Escola Universitaria « Vasco da Gama » de Coimbra (Portugal), the Istituto Universitario di Architettura in Venice and the Istituto per la Formazione professionale « IAL », Rome (Italy), and the Universitatea de Arhitectură și Urbanism « Ion Mincu » and the Uzinele « FAUR » from Bucharest (Romania). There are in addition thirteen associate partners in museums, industrial heritage sites, local administrations and architectural associations. This joint project is being led by Eurocultures and funded by the EC Leonardo Programme.

The Cycle A group of modules will be designed for architects, town planners and students, Cycle B will be aimed at museum curators and site managers, while Cycle C is conceived more for staff in institutions with responsibility for the care and presentation of historic sites.

There are two conferences planned during the project at the start of 2006, the first in Bucharest and the second in Mulhouse. More information can be obtained from David Bernfeld, Secretary General of Eurocultures, bernfeld.david@wanadoo.fr The Forcopar site will be available before long: <http://forcopar.edusystem.net>

Spain

A unique route to industrialisation: 150 years of Catalan industrial colonies

Jaume Puig

■ The dense clusters of industrial settlements, or *colònies* to use their local name, that extends along the three main rivers of Catalonia is considered to be one of the most intense exploitations of hydraulic energy in the world. 2005 was



the 150th anniversary of the Colonies Act, part of the national legislation to encourage the resettlement and economic development of depressed rural Spain, which gave birth, albeit coincidentally, to a unique industrialisation process that defines the modern economic history of Catalonia, and created this distinctive linear landscape of textile mill towns.

The plan form and architecture of the textile *colònies* do not differ notably from such settlements in other regions. It is their density that is so remarkable, with around 100 colonies closely-spaced along the Llobregat and Ter basins, tight beside the typically inconsistent and seasonal streams that descend from the Pyrenees mountains to the Mediterranean. For much of the course of the rivers there is a fall of barely 20m between the weir of one mill and that of the next.

The typical *colònia* began with the building of the mill, most of which have two or three stories and 20m span, with a wheel and later turbine over the canal that led back up to the river. Workforce accommodation quickly followed, the earliest examples with communal kitchens, and bakers, laundries and shops, dispensary, and schools, the church and the house of the owner or manager made each *colònia* a self-contained and self-sufficient one-company town. A large settlement such as the *Colònia Sedó* had 1,800 inhabitants and twice that number of people in work. There was a brickworks, a foundry, a laboratory as well as specialised workshops, teams of builders, a fire brigade, and an introspective way of life that extended over four or five generations and gave rise to a distinctive social identity – people in the colonies were neither rural nor urban but characteristically *de la colònia*.

There are two competing explanations for the intense regional deployment of this particular industrial-social typology. One school maintains that the high cost of imported coal obliged industrialists to make best use of the available hydraulic power – 'white coal' as it was known –; while the other emphasises the advantages of social stability and control and independence from municipal authority that the colonial project gave to

the industrialist, compared with the notorious industrial strife and class violence he had to face in cities like Barcelona. Nor is there an accepted interpretation of the pattern of internal life in the Catalan colonies. A feudal exploitation of an impotent work force, or the paternalistic social paradise that Robert Owen had dreamed of in New Lanark? The debate continues.

After the Spanish Civil War, the economic life of the *colònies* continued through the period of the Dictatorship until the textile crises of the 1970s and '80s precipitated the closure of numerous mills and the

progressive abandonment of the *colònies* as families and younger workers went off to find other work. The process of study, appreciation and conservation that followed has more recently been complemented by strenuous efforts at regeneration to maintain the *colònies'* special landscape and distinctive morphology.

There are now modern interpretative projects and museums in at least three *colònies*, the famous Colònia Güell, for which Antoni Gaudí created the master plan and designed the extraordinary church (only the crypt was built), the

Colònia Sedó and the Colònia Vidal, both part of the national Museu de la Ciència i de la Tècnica de Catalunya. The Parc Fluvial [www.parcfluvial.org] is a consortium that promotes tourism and investment in the most closely-settled stretch of the river Llobregat, and other initiatives accompanied the celebration last year of the 150th Years of Industrial Colonies, using the traditional phrase Soroll de telers, soroll de diners: very loosely rendered by the author into English as 'where looms bash, there's cash'.

Publications

IndustrieArchäologie

The German-language magazine IndustrieArchäologie is produced four times a year in Switzerland by Oskar Baldinger. There are usually four or five scientific articles with a geographical scope extending across Europe, and covering a wide range both of sites and buildings as well as technical subjects such as vehicles or machine tools. The cover article of the summer (2/2005) issue presents the famous Vienna gasometers (see TICCIH Bulletin 16, 2002) which have been recently converted in contrasting ways by different stellar architects including Jean Nouvel and Manfred Wehdorn. The other long piece in the summer issue compares eight Baroque theatres in France, Germany, Finland, Russia and the Czech Republic, and analyses the technical means that were developed in the 18th century to create complex scenery and effect rapid changes from one act to the next.

The magazine always has high-quality colour photographs and is excellently produced, and costs 59 € for a year's subscription, or 16 € for a single issue. It can be ordered from the publisher at editor@dplanet.ch.

La lettre du CILAC n°81

INFOCILAC, the electronic newsletter sent by the French IA association leads with one of the *cause célèbres* of Parisian industrial heritage, the attempts to save and restore the great transit sheds known as the Halle d'Eugène Freyssinet, designed by the eponymous engineer and pioneer of reinforced concrete. The transit sheds are in the middle of the 13th arrondissement and part of a major redevelopment of a run-down area of railway goods handling, and destined to contain a new justice building (TGI). The five-year struggle now focuses on a plan to integrate proposals for the TGI with the 1928 sheds.

The featured web page in this issue of the lettre is called *derelicta*. It brings together photographs and commentaries on a remarkable collection of ruined and abandoned industrial, military and underground sites around France. Perfect for everyone who secretly prefers their industrial heritage decayed and not conserved.

See <http://perso.wanadoo.fr/derelicta/>



'Understanding the workplace', Industrial Archaeology Review

ed. David Gwyn and Marilyn Palmer, vol. XXVII, 1, May 2005. ISBN 0309-0728

The current journal of the British Association for Industrial Archaeology publishes 19 papers from a conference organised by the AIA in June, 2004 with the intention of formulating a research framework for industrial archaeology in the 21st century. The issues discussed in the invited papers are summarised by Professor Marilyn Palmer, who concludes her article with a list of 'research themes' arising from the conference. These are continuity and change, production and consumption, understanding the workplace, industrial settlement patterns, class, status and identity, social control, paternalism and philanthropy, the use of scientific analysis in understanding the significance of sites and objects, historic landscape characterisation, and the international context of industrialisation. Keith Falconer's paper, 'Industrial Heritage Goes Universal', charts the widening international horizons of industrial archaeology, including TICCIH's own part in furthering contacts between professionals and practitioners in different countries. An interesting project would be to compare and contrast the results of the three workshops held in the last few years in the United States (Whither Industrial Archaeology?), France and now Great Britain to see if there is an international consensus on the direction of industrial archaeology and the conservation of its heritage.

Vestiges of Industry, Architectural conversion of industrial heritage in the Czech Republic

Research Centre for Industrial Heritage,
Prague 2005 ISBN 802395440-7

The publication to which Paul Smith refers in his conference review below is published in Czech and English, and contains a lengthy essay by Benjamin Fragner on the re-use and conversion of former industrial buildings. For anyone planning to organise a tour to the Czech Republic there is also an attractive bilingual guide, 'Industrial Trails through the Bohemian Mid-West' published by Kladno, www.mestokladno.cz



Prague

International Biennale 'Industriální Stopy', Vestiges of Industry

Paul Smith

Direction de l'Architecture et du Patrimoine, Ministère de la Culture et de la Communication, Paris

■ From 19th to 23rd September 2005, the capital of the Czech Republic was host to the third international Biennale on the vestiges of industry, organised by the Research Centre for Industrial Heritage at the Czech Technical University in Prague, in collaboration with the Technical Monuments Committee of the Czech Chamber of Certified Engineers and Technicians, the Czech Union of Civil Engineers and the City of Kladno. The Biennale comprised a certain number of exhibitions, visits to sites in Prague's former industrial neighbourhoods of Karlín and Holešovice and in the region of Kladno, a splendid succession of cultural events and a conference.

This last, held in the 1905 Bubeneč sewage works (an eco-technical museum since 1992), comprised three workshops. The first aimed to set recent developments in the Czech Republic within a European context, and heard talks of a largely retrospective nature by industrial heritage 'experts' from England, France, Germany, Hungary and Poland. The second workshop, on industrial heritage and contemporary culture, was for the creators, artists and organisers of site-specific cultural events, whilst the third heard several architects presenting recent projects for the adaptive re-use of industrial buildings in the Czech Republic. Although all three workshops were concerned with what can be done with and in former industrial sites, the points of view were very different. To caricature, the cultural entrepreneurs tended to oppose industrial heritage (dead) and contemporary culture (alive) and to see the 'experts' as 'heritage police'. The latter were not convinced that spectacular ephemeral events organised in abandoned factories offer lasting solutions for the preservation of the heritage. Nor could they share all the architects' enthusiasm for the way their own particular conversion projects took history into account and tackled the recurrent problems that all such projects are confronted with (windows, car parking facilities...). Further exchanges (more biennales, please!) are clearly necessary. Several exhibitions were opened during

the week: an exhibition on the German industrial architectural team of Fritz Schupp and Martin Kremmer active from the 1920s to 1940s; exhibitions of doctoral work by students at the VCPD on Czech industrial architecture between the wars; the 'Working Heritage' exhibition, produced by the Culture 2000 project of the same name and comparing approaches to the conservation and conversion of the industrial heritage in six European cities (Birmingham, Roubaix, the Colonia Guëll, Schio, Terni and Prague). Special mention must also be made of the exhibition curated by Benjamin Fragner and Alena Hanzlová at the Karlin Studios and presenting a selection of thirty factory conversions in the Czech Republic undertaken over the past five years.¹

The cultural programme of the Biennale comprised a contemporary ballet 'Yellow Ball', a Finnish-Czech creation put on inside the Bubeneč sewage plant, where

the 1905 steam engine was put into movement for the occasion; a concert (Dvořák and Steve Reich) performed in the pit-head changing rooms of the Mayrau coal mine (a remarkable open-air museum), and, last but not least, a nocturnal 'safari', by coach and train, around the dramatic landscape of the immense steel mills at Kladno, derelict since 1975.

To conclude, a word of congratulations to the dynamic team at the Research Centre for Industrial Heritage for organising such a stimulating and varied week of events, a week that coincided with one of the most delicious Indian summers seen in Prague for many years.



Bubeneč sewage works, Prague, now an eco-technical museum. Paul Smith



Mayrau open-air mining museum, near Kladno. Paul Smith

1. Benjamin Fragner and Alena Hanzlová, *Industriální Stopy/Vestiges of Industry, Architectural Conversion of Industrial Heritage in the Czech Republic*, Prague, VCPD, 2005, 167p. The Biennale also coincided with the publication of a guide to the industrial heritage of the Bohemian Mid-West: Eva Dvořáková, Tomáš Senberger, *Industriální cesty, Industrial Trails through the Bohemian Mid-West*, Kladno, 2005, 86p.

Italy

Industrial Heritage in Bologna

Jay McCauley

Board of Directors, Society for Industrial Archaeology

This account of the Society for Industrial Archeology (SIA) Study Tour, which was held in November last year in and around Bologna, presents some of the highlights of their visit and serves as a taster for the industrial archaeology and its conservation and interpretation that will be showcased in this September's TICCIH congress in nearby Terni. (Ed.)

■ The Museo del Patrimonio Industriale (Industrial Heritage Museum) was an excellent partner for the Tour and helped arrange visits to a wide variety of sites. Staff member Ms. Paola Papini was our guide, translator and good friend during the visit. The Museum is supported by the Associazione Amici Museo del Patrimonio Industriale, a group primarily composed of local industrial executives which helps bridge the gap between industry and the Museum.

The Museum had organized a workshop on Monday, 21 Nov 2005 in which Italian and US industrial heritage experts exchanged information. One of the talks was from Prof. Fontana of the University of Padua on Industrial Heritage and Development. The talk discussed the activities of the Italian Association for Industrial Heritage (IPAI) which is the TICCIH contact organization. Industrial heritage is an important discipline in Italy, with seven universities offering Masters programs.

The Museum itself is in a former brick factory that has been creatively adapted to its new role. The race track shaped Hoffmann Kiln is now used as an exhibit space, particularly highlighting the role of the Istituzione Aldini-Valeriani a local technical institute founded in 1842 in an effort to revitalize the local economy, which had been devastated by the collapse of its silk industry in the 1700s. The Galotti Brickworks (Forno Galotti) opened in 1887. The Hoffmann Kiln was a major innovation in brick making. In it, workers moved the fire around, while the bricks and terra cotta ware stayed stationary in one of the sixteen chambers of the kiln. This was vastly more fuel efficient and faster than conventional intermittently-fired kilns. Bricks and other ware were produced at the site up until 1963, when the supply of clay was exhausted and changes in

transportation and the overall economy made it no longer a viable operation.

An extensive reconstruction effort resulted in the Museum being opened in 1994, and it was completed in 1997-98. The reconstruction work was intended to represent the past structure, but not necessarily to recreate it. For example, the structure above the kiln was originally a wood framed, largely open structure. The reconstruction is a similarly shaped, enclosed steel frame structure which has some similarities with the previous structure in the construction of the floor. Other features, such as the chimney venting the kiln, were not reconstructed, as they would serve no useful purpose in the modern museum.

The Museum is sited on the Canal Navile, which was the outflow from an elaborate system of canals and pipes created from the 12th century on to supply water power to Bologna's growing industrial base. The canal connects to the Po River and on to Venice. The silk voile cloth, for which Bologna was well known, could be shipped to Venice by canal in around 40 hours, versus two weeks or more using the roads. Bologna's industrial heritage has as a foundation the perfection of a water powered, rotary silk thread spinning machine and the resulting production of silk voile cloth. Powered mostly by low flow, overshot waterwheels, these spinning machines replaced tens of people. They did need 24-hour tending so Bologna's industrial revolution, where people must adapt to the needs of machines, occurred several centuries before the steam age dawned in Britain. These machines were revolutionary in their production capabilities. By the 17th century, the silk industry had over 300 mills, employing 25,000 of the 60,000 inhabitants of the city.

The technical details of the spinning machine were a closely guarded secret. In 1538 the Senate of Bologna levied a sentence of death, in absentia, on Cesare Dolcino and Vincenzo Giovanni de Fradino who had disclosed the secrets of the spinning machine to workers in Trento.

This secrecy made it extremely difficult for the Museum to create one of its highlight exhibits, a $\frac{1}{2}$ scale operating model of a rotary silk spinning machine. None of the old machines remained, and there was very little extant information about their design. They relied on the drawings of Heinrich Schickardt who had constructed a spinning machine in Trento in 1599, based partly on the stolen information.

The overall flow of the silk trade made use of a complex, informal infrastructure composed of the local nobility, independent contractors, employees, and merchant

entrepreneurs. It began with the raising of silk moths on the estates of the nobility. By law, the moth cocoons, from which silk was made, could only be traded in the present-day Piazza Galvani, where the City taxed the transaction. (The nobles liked this scheme, as it allowed them to avoid taxation on their estates.) Independent contractors, by legend women from nearby Modena, unwound the cocoons and delivered skeins of raw silk thread composed of five to ten filaments. The mill wound these into thread, with different techniques used for the warp and weft threads. Mill employees tended the machines. The thread was then delivered by specially trained technicians to another group of independent contractors, women who owned their looms. The technicians set up the loom, ensuring uniformity and quality of the finished product. The process was managed by merchant/entrepreneurs who took the economic and organization risks to create the voile and who profited from its eventual sale in the markets of Venice and the world. The rotary mill's technical success, and the infrastructure to exploit it meant that Bologna dominated the world trade in voile for nearly 500 years, until changing tastes and the rise of silk production in Lyon eclipsed the Bolognese trade.

The skills necessary to construct and maintain these complex mechanical devices created a tradition of mechanical expertise that persists to the present day. A great many of the sites we visited emphasized this expertise. At the Ducati Museum, Lido Livo, the Curator, posed the rhetorical question of why four of the fastest road machines available (Ducati motorcycles, Ferrari, Lamborghini and Maserati cars) are all made within a few kilometers of Bologna. Similar sentiments were expressed by Daniele Vacchi on a visit to IMA, a leading manufacturer of packaging equipment. His observation was that despite having no significant natural rivers flowing through the city, by the 13th C, Bologna had the largest number of waterwheels of any city in Italy.

IMA is one of the largest of over 400 different companies building automated packaging machinery in and around Bologna. The area is sometimes referred to as "Packaging Valley" (those of us from Silicon Valley were amused...). High volume packaging machinery demands skill and experience in the design, construction and maintenance. The Industrial Heritage Museum has a "family tree" of the major packaging machinery manufacturers. In addition to the tradition of mechanical expertise, there is a strong heritage of entrepreneurship. Talented individuals leave

established companies and found new ones.

The City of Bologna and the Emilia-Romagna region were early adopters of the notion of preservation of industrial heritage. Inspired by the efforts at Ironbridge and the work of French industrial heritage preservation, the City started to think seriously about preservation in the 1970's. Although significant sites have been lost, there is a strong effort to renovate, rehabilitate and adaptively reuse significant industrial sites. For example the new Modern Art Museum will be housed in a former bread mill in the old port area. There are now strong laws regarding management of historic buildings. Passage of these laws took a long time, as there was under-appreciation of "young" buildings in an area where Roman construction can still be readily found.

The Neri Company in Longiano, east of Bologna, produces "street furniture", cast iron pieces ranging from lampposts to large gazebos, many of which are inspired (if not directly recreated) by items from the past. The firm also produces more conventional, contemporary products. Through the efforts of the firm's founder, Dominico Neri, his son and current company President, Antonio Neri, and Antonio's wife Rafaella, they have made a remarkable effort to preserve and recreate cast iron objects from Italy's past. A public museum, the Italian Museum of Cast Iron (Museo Italiano della Ghisa) is located in the former Santa Maria delle Lacrime Church in the hills above the town. The space is a wonderful venue to display tall lampposts and the associated interpretive materials.

It is an indirect consequence of the fragmentation of the Italian political system

prior to unification in 1860, that every city and town has their own crest on their historic lampposts. This provides an opportunity for the Museum to display historic lampposts (and other objects) with interpretive information that establishes the object's time and place through historic photographs, catalog pages, and prose. As you wander about the area, look at the lampposts to see these unique city crests. For those of us into industrial heritage, Bologna is a hidden gem. Far more accessible than larger cities, yet rich in the opportunities to glimpse the area's industrial heritage, sometimes on a personal level. On behalf of the SIA, we thank the Industrial Heritage Museum and all of the sites we visited, many of which were elided here (look for a more detailed story on the SIA web site...) for an enlightening and fascinating visit!

TICCIH Conferences

More conference information at www.mnactec.com/ticcih/news.htm

Chile

Valorisation of industrial heritage: Sites, Museums and Case Studies

TICCIH Chile
Santiago, Chile, 21-23 March, 2006

■ An international congress of

academics and heritage professionals from the Americas and Europe to compare and contrast current approaches to the evaluation and conservation of industrial sites. Official languages: English, Italian and Spanish. Info: Av. Apoquindo Nr 6275, Las Condes, Santiago, Chile, T: +562 201 7193, ticcihchile@gmail.com, or the TICCIH website for registration forms.

Italy

XIII TICCIH congress

TICCIH Intermediate conference
Terni, 14 - 18 September, 2006

post congress tours 18 - 25th.
Call for papers

■ The thirteenth full TICCIH conference will be held in northern Italy next year, and will be on the effects of industrialisation on the city and the territory. Terni is one of the Italian centres where industrial activity has been most intense and where the marks of the alteration of the landscape and of the city are most visible. There will be two plenary sessions, on Industrial heritage and urban transformation and Productive areas and industrial landscapes, and 16 workshops, Board and National Representatives

meetings, with the General Assembly on Monday 18th. There is an intense programme of study visits during the conference, and two tour options, one to Naples and the other the other the main Italian industrial and artistic centres, culminating in Rome. English and Italian will be the official languages. The conference brochure and registration form, in Italian, Spanish, English and French, can be downloaded from the TICCIH website.

Congress Secretariat: ICSIM, via 1 Maggio, 23, 05100 Terni, Italy, +39 74444 07187 icsim@icsim.it

World Conferences

historic structures. Info: www.chs-cambridge.co.uk; contact@chs-cambridge.co.uk

Russia

Heritage at Risk: Preservation of 20th Century Architecture and World Heritage

Moscow
17 - 20 April, 2006
Call for papers

■ Judging the importance of Russian architectural Avant-garde within the international context, it is evident that at least part of it belongs to the world community. Global fame is also connected with the monuments of the Stalinist architecture of the mid 1930s-1950s, the Moscow metro stations and high-rise structures. Working

languages are Russian and English. Moscow Architectural Institute, Rozhdestvenka street, 11, 107031 Moscow.

Finland

'Technology and Rethinking European Borders', II Plenary Conference of the Tensions of Europe Network

Lappeenranta
25-28 May, 2006
■ See Worldwide. The conference has now published a comprehensive programme of papers on the its website www.lut.fi/eki/toe2006/index.html

USA

SIA Annual Conference

Cambridge
St Louis, MO, June 1-4, 2006

■ Info: events@siahg.org, www.sia-web.org

Germany

21st IIC congress The Object in Context: Crossing Conservation Boundaries

Munich
4-8 September 2006

■ The Conference will examine the way that the context in which an object was conceived and created, and in which it has been kept or displayed, affect conservation decisions. Contributions to the conference are likely to be cross-disciplinary in nature. www.iiconservation.org/index.php

United Kingdom

II International Congress on Construction History

Cambridge
29th March - 2 April 2006
Call for papers

■ Building on the success of the inaugural meeting in Madrid two years ago. Themes will include construction history and the building industry, education, and the conservation of