bulletin

TICCIH

THE INTERNATIONAL COMMITTEE FOR THE CONSERVATION OF THE INDUSTRIAL HERITAGE

www.mnactec.com/ticcih

Documenting this workbench with all its tools, coffee-machine and sign "Coffee breaks 8.00-12.00 and 13.00-17.00" means that future exhibitions can tell a story about the workers' history. See Jørgen Burchardt's article inside.
Photo: Jørgen Burchardt

number 37
Summer, 2007

Inside:
What professional industrial archaeologists do.

This bulletin is produced and distributed with the support of the mNACTEC

MUSEU DE LA CIÈNCIA I DE LA TÈCNICA DE CATALUNYA

Opinion

Why and for whom do we teach industrial heritage?

Marie-Noëlle Polino
Dr Florence Hachez-Leroy

When we insisted on tackling the topic of professional training in industrial heritage at the TICCIH XIII Congress in Terni last September, we meant our talk to be a bit provocative. But it was not, as it sounds after the reactions we got, as professional heritage training in the academic world is now an accepted fact. We may hear about conflicts between 'classical' teaching and field training, about evaluation methods when it becomes clear that a good industrial heritage professional may not be an outstanding essay writer, of the difficult dialogue between architectural training and heritage preservation. But all of this is a matter of internal discussion. We teach industrial heritage as regular university courses, we give lectures to give a hint about industrial heritage to students following other curricula, we are involved in continuing education courses given to urban planners, county or town administrative officers, tour guides. To put it in a nutshell, we do our job.

The question that remains is if and how our teaching is adapted to the labour market, and whether the young people we train are efficient in the field of industrial heritage preservation, management, understanding and appreciation. In other words, is our work useful?

Professional training in heritage, and especially industrial heritage, is a recent addition to university training, at least in France, at any level, from Bachelor to Master 2 degrees and "specialized Masters". We could measure in Terni the achievements made by Professor Fontana's masters course at the University of Padova (including online courses). Large numbers of specialist consultants giving lectures, crowds of enthusiastic students, including – which is a weakness of the French system – students in architecture. Are they doing this for their own pleasure? If we turn first to the consequences of industrial heritage students' initial choice of study, we may state several facts, at least for the French case. First of all, students may be certain they didn't make a bad choice or not a worse choice than many others: a degree in industrial heritage studies won't get them a permanent job any sooner or later than young people with any other university degree coming into the culture or heritage sector: they need about three years, going from one temporary position to the next through months of unemployment till a permanent job is offered to them. But the perspective is not a bright one when it comes to the payroll, as a 5th year university degree is not taken into account and a beginner can hardly expect a salary above the legal minimum. Too often stated by former students is how industrial heritage disappears from their jobs after their first experience during their internship or short missions. They are faced with having a job and keeping it, or quitting it to deal more with industrial heritage, their employment being more uncertain. This clearly indicates that industrial heritage is not a profession. Employers look for skills – they hire a guide, a project manager, a records manager, a curator. Industrial heritage is a comprehensive field of specialized knowledge which may be used in different professional situations.

Nevertheless, we go on training more and more high-level specialists, however depressed the labour market in Western Europe may be, and whatever the employment prospects when it comes to culture and heritage. We are not only working to make supply match demand, but we are trying to elicit new types of job opportunities. We look to new professions and positions which may develop with the current changes in heritage policy in Europe and the development of private initiatives and corporate foundations. Thus new missions involved in urban renovation – studies and inventories of industrial heritage, assistance in planning, in the architectural project – should develop in the near future, at least in France. If our commitment to industrial heritage contributes to the development of new job opportunities, more specialists in industrial heritage also contribute to its acknowledgment as a field of study and activity. We mustn't focus only on the present employment opportunities. Here dwells our responsibility as teachers, for our students' future employment and for the development of industrial heritage as a professional field. How we do that should be a thread of thought for TICCIH members in the future and we shall welcome an open discussion.

Through the training of industrial heritage management specialists who are not only scholars but can act in the fields of tourism, renovation or culture, industrial heritage enters the realm of sustainable development. It will play a major part in technical and scientific culture and help people understand the dramatic technological changes they are subjected to. What is now at stake through the future of past industry is the part that memory and technology, tangible and intangible heritage, will play in today's society.

Marie-Noëlle Polino, Association pour l'histoire des chemins de fer en France, Université d'Artois, ahicf@club-internet.fr
Dr Florence Hachez-Leroy, Université d'Artois, f.hachezleroy@free.fr

TICCIH news

More agreements between TICCIH and national societies

In March, TICCIH president Eusebi Casanelles and the president of APPI, the Portuguese association for industrial heritage, signed the national society agreement, and in April it was the turn of the Irish Industrial Heritage Association of Ireland, and their new president, Mary McMahon. And as this goes to press the agreement with CILAC, the French *Comité d'information et de liaison pour l'archéologie, l'étude et la mise en valeur du patrimoine industriel* was about to be confirmed.

TICCIH conferences

A full list of all the congresses and conferences organised by or with TICCIH since 1973 is now on the TICCIH website, in the section called Documentation Centre. The list includes links to the relevant publications, some of which can still be obtained, such as the proceedings of the second congress, SICCIM (1978) in Bochum, which are held by the German Mining Museum. The price is 10,50 €. Copies of (almost) all the national reports and conference proceedings are in the TICCIH documentation centre of the library of the Museu de la Ciència i de la Tècnica de Catalunya in Terrassa, Spain, while John Powell, the Librarian at the Ironbridge Institute, England, has a complete run up to 1990.

World Monument Fund endangered sites list

The World Monuments Fund (WMF) announced its 2008 World Monuments Watch List of 100 Most Endangered Sites in June. This year's list highlights buildings and other heritage sites that are threatened by political conflict, unchecked development and, for the first time, climate change. In the latter group are the historic whaling town Herschel Island, Canada, at the edge of the Yukon, that is being lost to the rising sea and melting permafrost, and Scott's Hut, Antarctica, a time capsule of early 20th-century exploration. Ironically, it is being engulfed by vastly increased snowfall thought to be a result of changes in the weather—changes the station was built to monitor.

The fact that there are no industrial sites on the list, even among the 20th century category, is obviously an encouraging sign of the success of TICCIH and national organisation in conserving historic industrial buildings and manufacturing settlements.

Industrial museums prize

The European Museum of the Year Award, which is organised by the European Museum Forum, celebrated its 30th anniversary this year. Museum of the Year is the German Emigration Centre in Bremerhaven. On the site of the dock from which more than seven million emigrants from Germany and Eastern Europe departed, it pays tribute to those who left for the New World. Theatrical techniques and effective multimedia transport the visitor from dock to ship and eventually to shore, experiencing the uncertainty of the emigrants' arrival in the Land of the Free. The Gallery of Seven Million, containing documentation on all the emigrants from the port, leads visitors towards a modern research section.

The Micheletti Award for the technical or industrial museums went to I K Brunel's ss Great Britain in Bristol, U.K. It was judged to be an outstanding achievement by a privately financed Trust. The daring decision to tow a rusting hulk from the Falkland Islands to Bristol, followed by a major study to find the best solution for its preservation was a huge task in itself. The subsequent preservation, reconstruction and interpretation of the vessel has transcended all expectations and with its associated museum telling the story of the ship in reverse time order in historical, cultural and technical terms, visitors are provided with a unique experience. The installation of lifts within the ship's funnel makes accessibility available to all, which is rare aboard a historic ship.

The Railway Museum, Utrecht, The Netherlands also won a special mention.

National representatives

Janet Wright has taken over from Yvon Desloges as the Canadian National Representative of TICCIH. Janet is a Historic Sites Planner at the Western & Northern Canada Service Centre of Parks Canada.

Board meeting

The next meeting of the TICCIH Board has been set for 17th to 20th October in Freiberg, Germany, to review among other things the progress made in preparing for the 2009 TICCIH Congress.

New members

Krsta Paskovic was recruited at the recent canals conference in Wales to be TICCIH's first correspondent in Serbia. She lives in Belgrade and is involved with inland navigation vessels and waterway structures; Louise Boucher lives in Quebec and is interested in industrial landscapes, Barry Gamble is a metal mining specialist in Plymouth, UK, and Rowan Julie Brown from Edinburgh lists railways and collieries; Ruth Reller-Kempas lives in Berlin and is especially interested in historic machinery; in the US, Vance Packard is an archaeologist and former president of the SIA while David Hayes from St. Croix, VI is interested in Caribbean industrial heritage and steam engines; Ian G. McGillivray is based in Toronto and interested in architecture and electricity; Monica Garat Contesse , Aspsia Louvi-Kizi and Eleftheria Vlachou are historians of technology in Athens, and finally Maria Paz Valenzuela Blossin is at the Facultad de Arquitectura y Urbanismo of the Universidad de Chile in Santiago de Chile.

The Comune di Torviscosa in Italy and the Scottish Mining Museu, with its director Fergus Waters, are new corporate members.

TICCIH Officers

President: Eusebi Casanelles
Museu de la Ciència i de la Tècnica de Catalunya
Rambla d'Égara 270,
E-08221 Terrassa, Spain

Secretary: Stuart B. Smith OBE,
'Chygarth', 5 Beacon Terrace
Camborne, Cornwall TR14 7BU, UK

Editor: James Douet, office of the President

TICCIH is the world organisation for industrial archaeology, promoting conservation, research, recording and education in all aspects of industrial heritage. It holds a triennial conference and organises interim conferences on particular themes. Individual membership is £20, corporate membership £40, and student membership £10
Payment to TICCIH, Lloyds TSB Bank plc, 27 Fore Street, Redruth, Cornwall TR15 2BJ, UK; Account No: 1351659, Bank Sort Code: 30 97 00.

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

The **TICCIH Bulletin** welcomes news, comment and (shortish) articles from anyone who has something they want to say related to our field. The Bulletin is the only international newsletter dedicated to industrial archaeology and the conservation of the heritage of industrialisation. The TICCIH Bulletin is published four times a year and is sent to all members.If you have not received an issue, please contact the editor for a replacement. Back issues can be downloaded as a pdf file from the TICCIH web site.
Opinions expressed in the Bulletin are the authors', and do not necessarily reflect those of TICCIH.

Editor: The summer issue no. 38 will be posted in September, 2007; articles and news of recent and future events should be send to the Editor, James Douet, Museu de la Ciència i de la Tècnica de Catalunya, Rambla d'Egara, 270, 08221 Terrassa, Spain, ticcih@gencat.net.
Contributions: Richard K. Anderson, Jr., Jørgen Burchardt, Prof. Gràcia Dorel, Ute Georgeacopol, Matthew W. Grove, Dr Florence Hachez-Leroy, Patrick Harshbarger , Dr Helen Lardner, Marie-Noëlle Polino, Dr Paul Smith and Mark Watson.
Design: Xavier Solé/Disseny Visual, SL
Dipòsit Legal: B-23.114-1998
ISSN: 1605-6647

report

The Editor invited three professional industrial archaeologists to explain their work.

Retaining the value of the past

Helen Lardner
Melbourne, Australia

■ HLCD is an innovative heritage consultancy firm started in 1991. Led by Helen Lardner, a conservation architect, the firm has six employees and we work regularly with a team of subconsultants, including historians, engineers, industrial and aboriginal archaeologists, arborists, planners, quantity surveyors and others. This means we have a flexible range of skills and an experienced team to suit each project. We enjoy complex heritage sites where the significance may encompass technological achievement, social values to working communities and aesthetic importance. The challenge is often to retain the value of the past within the site's ongoing use. Industrial sites provide great challenges!

Our work usually involves the assessment of heritage values at the industrial site, with a historian, architect, industrial archaeologist and other specialists. In Australia, we use the Australia ICOMOS Burra Charter as the basis of our work and often have access to good historical records. Collecting information may also involve interviewing past workers, such as when we spoke to many elderly local brick makers during our assessment of the Brunswick Brickworks, incorporating the Hoffman continuous firing kilns. Or we might spend many hours on site surveying and constructing a database and building typology for over 500 buildings, which was necessary at the Maribyrnong Explosives Factory, Australia's major munitions producer from World War One onwards. Our work at the former South Pacific Tyre Factory found that it was modeled on overseas early 20th Century examples and involved interesting international comparative analysis. A more unusual case involved our arborist as the regional clothing factory, Fletcher Jones at Warrnambool, had a 1950s garden of national significance. In this provincial town, the benevolent factory owner provided an immaculate garden for the workers' enjoyment.

South Pacific Tyres factory, Footscray.
Photo HLCD

Hoffman kiln, Brunswick brickworks.
Photo HLCD

After understanding the significance of an industrial site, we are usually involved in developing policy to manage change. This may be to accommodate new uses for a redundant site or the introduction of new technologies at working industrial sites. The Australian Department of Defence is a major client which values heritage while having an ongoing responsibility to update and improve defence services. Our work at army, navy, airforce and laboratory defence bases has involved accommodating the need for change and encouraging the Defence force to take pride in its heritage.

For more publicly accessible sites, there is the opportunity for interpretation and to encourage the public to visit. The inner suburban Brunswick Brickworks will include an exciting public display highlighting the historic role of this firm in the growth of Metropolitan Melbourne. The Newport Railway Workshops redevelopment proposal allows the public to see the ongoing maintenance and restoration of rolling stock as well as appreciate the history of the site.

Our role as heritage architects is to design and document works for important industrial sites and to create contemporary facilities that complement historic sites. We work closely with permitting authorities at the local, state and national levels to bring our clients more certainty through the regulatory process. Our industrial sites are usually from the 20th century and we specialize in this period of development. In Australia, HLCD works on a range of heritage projects but we love to get our hands dirty on industrial sites!

New Conditions for Preserving Cultural Heritage

Jørgen Burchardt

Jørgen Burchardt is a senior researcher working in Denmark for different museums, often making a half year "packet" that includes documentation of an industrial plant with photos and videos from the current production and recordings with former employees, with a plan for collecting artefacts and with a book or DVD to present the business for the public. He was educated as engineer and social anthropologist and later trained in industrial heritage at the Deutsches Museum and the Royal Institute of Technology in Sweden.
joergen.burchardt@mail.dk

■ As we witness with satisfaction the growing understanding and support for preserving industrial buildings from before 1950, we have to turn our attention to the quite different attitude towards the industrial heritage of the twenty-first century. We have to preserve history almost synchronously with the present. If not, there will be no historic evidence of this period.

Our society is today international, complicated, and specialized. History is brought nearer to the present, due to machines and buildings lasting only a few years and we can no longer wait to collect the archives. Today we have to gather information while it is still in use. The extent of knowledge around complicated and huge production machinery has to be collected while the engineers and technicians are still at the company.

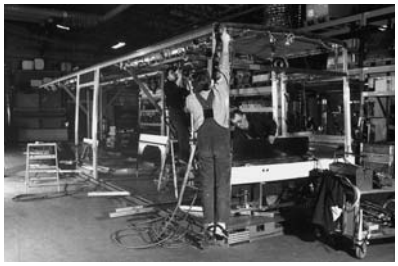
A new paradigm: present-day documentation

One of the most important issues will be present-day documentation, as SAMDOK, the voluntary association of Swedish museums of cultural history, has argued for more than 25 years. One of the most important tools will be fieldwork. The investigator has to be at the place where things are happening. It is the old-fashioned social anthropologist working under new conditions and using new theories and tools.

The most important of these will be the camera and the sound and video recorder. Using these relatively cheap media, contemporary time can be preserved or at least a memory of it secured.

Buildings and constructions can be preserved in their totality. There can be pictures of even the largest facilities. Interviews with constructors and users can give an extended picture of the use and the thinking behind the plants. In the same way, machinery can be documented, and again, interviews (and observations through the fieldwork) can secure information about the work, with the experiences of designers, engineers, mechanics, workers and managers.

With museum stores already full of stuff from previous periods, documentation will be the only way of keeping knowledge of newer machinery.



Only through videos, photographs, observations and interviews we can keep the knowledge of the art of building a bus with its more than 10,000 hours of work to gather the more than 23,000 pieces.

The study of work is a large discipline in itself. With these new working methods we have all the possibilities to capture knowledge in all aspects and not least in all the relations of the local, regional and international dimensions.
Working with the present always causes problems with the 'cultural views' of the investigators. It is a well-known problem for the social anthropologists and it will be enlarged many times when we are working with cultures closer to our own day and not with a strange and distant culture.
The work has to be carried out by specialists. Where before it could be done by interested amateurs, it will now be a specialist task. The investigator has to know about economy, engineering, human relations, electricity, chemistry, marketing, pollution and so on. On the other side this background will give results in a quite another class of quality.

The future is international
Many of the activities in modern business are international in their scope and international cooperation will be necessary around the world where the information and knowledge is located.
An infrastructure for this international cooperation had to be developed. Tiny platforms like TICCIH have to be extended, both organisationally and with practical matters like databases.

To document of large technical system like this steel works in Denmark is a job for specialists. The built-up area is on more than 143.000 m^2

With the new working conditions and their rather high expenditure, the number of investigations will be limited. We therefore have to work more effectively. But I think we will. The quality of the results will be much higher when we are working in a more research-like matter, and with international cooperation we can better help each other.

Industrial Archeology at Cultural Resource Documentation Services

Richard K. Anderson, Jr.

Cultural Resource Documentation Services is a one-man operation in the United States aimed at producing documentation of industrial sites and associated resources, either for public records and education (as required by Federal law in some cases), or as planning information for conservation, adaptive reuse, restoration, and maintenance. Documentation also serves as a form of insurance — it is striking to consider that in the United States about 40% of restoration projects suffer fires of one degree or another (the extensive fire damage to the ship Cutty Sark in London was recently in the news). Without documentation, I frequently wonder how site owners faithfully recreate lost design and appropriately substitute new materials, or whether they are satisfied with "Hollywood stage sets" in the end. I frequently team up with other people or firms who have specific complementary expertises, since the wide variety of projects requires a number of differing specialties. This permits me to be more flexible and tend to the technical aspects of the work (which I enjoy far more than administrative paperwork and countless meetings). Usually my clients and I arrive at a scope of work and costs via planning and negotiation, and jobs find me through "word of mouth" advertising. I rarely "bid" jobs competitively, since bid preparation consumes a lot of time and often results in disappointments. Cost is always a factor in any kind of work, but quality, thoroughness and expertise are also important when working with National Historic Landmarks and other significant properties.
What attracts me to IA is its interdisciplinary nature. As a child I enjoyed a variety of pursuits ranging from cartooning, to mechanical drafting and machine shop work, model building, model railroading, woodworking, architectural history, graphics and photography, general sciences and
engineering, chemistry, and history. Once I had obtained a Masters degree in Architecture, I decided to see what other forms of employment had to offer. In the process I came across industrial archeology as practiced by the Historic American Engineering Record (HAER) program at the United States' National Park Service. I remained with the program 12 years until
family obligations required me to return home to South Carolina and employ myself as a private consultant. During my years at HAER I wrote several guidelines and participated in a large number of documentation projects, all of which served me well as an "expert." My particular specialty was measured drawings, with a secondary role as researcher and writer as well as project manager. I have found that in the United States measured drawings projects are much rarer than those that produce researched papers and photography. As a consequence, I find it necessary for survival to work on a wide variety of resources ranging from southern plantation homes and workers housing to wind tunnels of the National Aeronautics and Space Administration, historic sailing and powered vessels, bridges, machinery, mining sites, parks and military sites. Larger buildings and sites frequently have archives of architectural and engineering drawings to work with, and in the past few years I have engaged a number of mapping projects, many of which rely on historical records as well as data from surveyors' total stations, GIS systems and aerial mappers' orthophotographs. CAD (computer aided design) has been an integral part of my work since 1994, since it offers efficiencies and aesthetic characteristics manual drafters can only dream about. On occasion I have used the output of 3D scanners for individual objects (such as a ship hull), but for the kind of detailed analyses necessary to thorough documentation or preparations for restoration, these instruments' output must be supplemented by hands-on measurements and considerable personal examination. Oddly enough, I have rarely done in-ground excavations in the manner of traditional archeologists!
With reference to the U.S. Secretary of the Interior's Standards for Architectural and Engineering Documentation, I am also concerned what constitutes a verifiable "field note" from electronic data-gathering systems and digital photographs, since digital files are much more ephemeral and
machine-dependent than traditional paper-based notes, images and other records. The immense efficiencies realized by computer-driven tools risk total data loss from a number of failure points.
An overly enthusiastic reliance on them appears irresponsible when records of past and current work must be consulted in the future to continue professional maintenance and interpretation of historic properties. Historically, digital data have become "locked up" in obsolete or proprietary file formats and media. These cutting-edge issues remain to be resolved.

world wide

Greece

The Greek Ministry of Culture takes the decision for the acquisition of two important industrial monuments in Thessaloniki

Olga Deligianni
TICCIH Greece

The Ministry of Culture agreed recently to the immediate acquisition by the State of two important industrial monuments of Thessaloniki (Northern Greece), in order to protect them effectively.

The decisions concern the textile factory YFANET and the OLYMPOS-FIX Brewery, two of the four most important industrial monuments of Thessaloniki and among the most impressive examples of the industrial heritage in Greece.

The wool-textile factory YFANET was built in 1921 by A.Makris as an extension of the early 20th century plant of the "Société Anonyme Ottomane pour la fabrication de fez et tissues" and developed during the same decade into a vast industrial plant of 4.500 m2. The industry included a spinning mill, a weaving mill, a washing and drying unit, a dying unit, soap factory and mechanical workshop. Up to 550 people (mostly women) worked in the factory in the inter-war period. A big part of the plant was destroyed by fire during the '50s. The buildings were restored but the company did not recover financially and ceased work in 1965. The National Bank of Greece appropriated the estate but never proceeded to its restoration, although the buildings were declared monuments in 1993.

The OLYMPOS Brewery was built in 1892 by the Allatini-Misrahi-Fernandez Company and included four units: a malt mill, an ice-factory, a brewery and a bottling unit. During the '20s the two breweries of Thessaloniki "Olympos" and "Naoussa" were unified and successively incorporated to the Greek "giant" of beer production: the Athenian company KAROLOS FIX. The '80s was also a transitional decade for the Greek industry, when most old industries closed down, and the same happened to KAROLOS FIX Brewery and its plant in Thessaloniki. A group of local investors bought the brewery in an auction in the early '90s and in 1994 the plant was declared a monument.

YFANET textile factory in the eastern part of Thessaloniki.
Photo: OPPETH archive.

Although many damages occurred to the buildings during the last 15 years, the plant - covering 20.000 m2 - represents today the most important industrial monument of Thessaloniki and one of the most important in Greece, having preserved a great part of its original machinery. For the above reasons, for its protection and for the enrichment of the cultural resources of Thessaloniki, the Ministry of Culture decided to proceed to its immediate acquisition or expropriation. The Ministry focuses to the scope of its reuse for cultural purposes. The Ephorate for Modern Monuments of Central Macedonia, the public service of the Ministry of Culture in Northern Greece, after having documented the importance of the protection of the OLYMPOS-FIX Brewery, has already proposed its reuse in the frame of the creation of the "Thermaikos Gulf Ecomuseum" (European program "Culture 2000", project: "Industrial Heritage between land and sea: towards a European network of eco-museums").

US

American conservation techniques and the Martinsburg roundhouse

Matthew W. Grove
AIA architect-of-record

This article presents technical details of a high-quality intervention to an industrial site combining professional and volunteer participation to secure its future. The original version appeared in the SIA Newsletter and it has been adapted here by kind permission of the author.

While many of America's abandoned industrial sites continue to decay and fade away, some are quietly being restored to, or close to, their original condition. The old B&O RR Shops in Martinsburg, presently known as the Roundhouse Center, has made great strides in reversing the effects of 134 years of weather, wear and neglect in just six years. Having secured status as a National Historic Landmark from the Secretary of the Interior and a National Civil Engineering Landmark from the American Society of Civil Engineers (ASCE) in 2004, all corrective and reconstructed work was completed in accordance with the Secretary of the Interior's Standards for Rehabilitation.

The extant structures on the 12-acre site include three principal buildings: the Bridge & Machine Shop (c.1866), West Roundhouse (c.1866), and the Frog & Switch Shop (c.1866). Other structures include the East Roundhouse Ruins (c.1871), the Saw Shop (c.1910), Car Shop (c.1948), and a handful of smaller metal sheds and structures. The West Roundhouse is the crown jewel of the campus, with two independent decorative cast-iron internal frames supporting a steep conical roof with a row of clerestories dividing the steep portion from the flat. At about 175 ft. (53.3 m) across, with track in place and a functioning 50-ft. (15.2 m) diameter turntable, this building is a museum piece for its building technology, the functions it housed and its design by noted American civil engineer Albert Fink.

Roof Restoration. It was clear to the newly formed Roundhouse Authority that the trees growing in the gutters of the old shop buildings had to go. After testing the strength of the rafters, it was determined that they would not support (by current engineering standards) what was originally a slate roof. Instead, a simulated plastic slate of about the same size as the original slate was chosen and approved. Many of the roof trusses in the two shop buildings needed new ends spliced on to preserve their structural integrity. Repairs were made in essentially the same way the B&O had done them in the past, using steel plates and thru bolts. Consideration was given to adjusting some of the sagging trusses by drawing up on the wrought-iron rods, but in the end the recommendation by all engineers was to leave them alone. A replica of the original cupola was designed and built for the Bridge & Machine Shop based on extant information and early photographs. It is presumed that this large cupola housed the bell which was rung to summon the workers at given intervals, to function as a hoistway for the internal freight elevator (hoist beams are still there) and for ventilation. Colors were selected for the cupola and eaves based on laboratory testing of extant paint.

Walls. The trees which had rooted in the walls were removed, the walls realigned and missing or broken bricks replaced with fallen brick from the East Roundhouse Ruin, mortared into place using a soft hydrated hydraulic lime and sand mix. Some damaged bricks were strategically reused, showing their best side, and new bricks were hand made by a nearby brickyard for specialty shapes necessary to restore the West Roundhouse walls. A 20th-century widening of a locomotive entrance into the West House was deconstructed and rebuilt in its original configuration. Many other imperfections in the brick and fenestration were retained so as not to erase the memory of the building's life. After the brick and mortar were back in place all surfaces were given a light cleaning to remove harmful agents which had built up over time.

Windows & Doors. After evaluating the wide range of deterioration, it was determined that the best approach to specifying the corrective work would be to define the end condition of the doors and windows and develop a performance set of drawings and specifications for restoration. In the process of surveying, we recorded many design variations that helped us understand the sequence of changes that took place. Paint color analysis revealed a progression of color schemes used at the plant. We used the sequence of color schemes as a tool to identify when a door or window was built, moved, or added to the plant.

Fortunately, enough original hardware remained to piece together a complete schedule of replicas. Surface bolts, lock boxes, tension rods, and doorknobs were all hand-forged by blacksmiths of the region.

Interior Cleaning. Having secured the buildings' exteriors, the work moved inside. Interior surfaces, including brick walls, cast iron, concrete slab, wood rafters, trusses, and decking required cleaning and refinishing. Years of paint were removed using dry media, including baking soda and a soft aggregate. Paint that could not be removed from some wood surfaces without doing damage was left and the surface was or will be repainted. Masonry surfaces were pointed using a natural lime mortar. A lime-based whitewash was

1998 view of the Martinsburg Shop complex before work began.
Photo: Matthew W. Grove.

specified for interior masonry surfaces.
Future. While much remains to be done, the Roundhouse Authority has accomplished the largest task by securing and stabilizing the buildings. These fine industrial buildings of the mid-19th century have been overhauled and tuned up for another hundred-plus years. Presently, they are being used as great industrial pavilions for community use and trade shows. We hope that tomorrow they will assume a larger and more significant role of interpreting industrial architecture and engineering, labor history (as the site where the great strike of 1877 began), Civil War history (featuring numerous attacks and Stonewall Jackson's great train heist), railroading history, and local social history.

(With thanks to Patrick Harshbarger, Editor, SIA Newsletter)

world wide

1st International Conference on Water Heritage 'Water in an Urban Context (XVIII-XX centuries)'

Coimbra and Lisbon, Portugal
22-23 March, 2007

José Manuel Lopes Cordeiro
Portuguese Society for Industrial Heritage, Portuguese national representative

■ This first conference on water heritage was organised by TICCIH, the Portuguese Society for Industrial Heritage (APPI), Coimbra Water Museum, and APOREM (Portuguese Association of Company Museum), and opened with the inauguration of the Coimbra Water Museum, a small company museum of the firm which supply water to this city ("Águas de Coimbra"). The new Museum reuses the 1922 pumping station.
In the first working session, Miles Oglethorpe (Royal Commission on the Ancient and Historical Monuments of Scotland) explained the Loch Katrine scheme and describe recent initiatives to record and protect Glasgow's historic water system. Mafalda Moura Pereira (Universidade de Coimbra) gave a presentation on the "Coimbra's water supply system (1834-1894)".
Álvaro Ferreira da Silva (Universidade Nova de Lisboa) and Ana Cardoso de Matos (Universidade de Évora) presented the research project "Networked cities: urban infrastructure in Portugal (1850-1950), water supply and waste-water systems", which follows the diffusion in Portugal of networked cities, tracing their patterns, agents and processes. Finally a paper on "Urban water supplies in Ireland, 1750-1950", by Dr Ronald C. Cox (Centre for Civil Engineering Heritage, Trinity College, Ireland) describing the development of urban supplies in Ireland during the period 1750 to 1950, with particular reference to Dublin, Cork and Belfast.
Next came the presentation of the "Model of the Museums Network of the Piraeus Bank Group Cultural Foundation: the case of the Open-air Water Power Museum in Dimitsana and the Museum of Traditional Crafts and Environment of Stymphalia", by Natasha Filippoupoliti and Elia Vlachou. Opened in 1997, Dimitsana was the first open-air pre-industrial museum in Greece and presents the basic techniques that used water as the main power source. Jorge Mangorrinha (Lisbon municipal architect and scientific coordinator of the Portuguese Spas Diagnosis) presented the "Caldas da Rainha's Thermal Hospital", describing its history and historic importance. Carlos Blázquez Herreo (Acualis) gave a richly-illustrated paper on the project "Iberia, two millenniums of water", a journey through the existing fountains in Portugal and Spain, highlighting their varied typology and aesthetic evolution. Jorge Tartarini (Architect and Director of the Museum of the Heritage - Palace of Water) gave a presentation on 'Buenos Aires' water heritage and the Palace of Water (1887-1894) one of the most beautiful buildings in Buenos Aires. Finally, TICCIH President, Eusebi Casanelles gave a presentation of the water heritage of Catalonia.
One of the most important contributions of the conference was the creation of the TICCIH Water Section, a new thematic section on the field of water heritage. Margarida Ruas (margrua@epal.pt), Director of the Lisbon Water Museum, was appointed secretary.
Early the next morning, participants departed for the post-conference tour to Lisbon. They visit the Águas Livres Aqueduct, one of the most remarkable examples of 18th century Portuguese engineering. The main course of the aqueduct covers 18 km, but the whole network of canals extends through nearly 58 km to supply the growing network of fountains from springs near Sintra to the reservoir of Mãe d'Água (Mother of the Water, 1834) of Amoreiras. Participants crossed the 35 arch aqueduct arcade which is 941 m long and has the biggest ogee stone arch in the world: 65 m high and 29 m wide.
The Conference ended at the former Barbadinhos Steam Pumping Station (1880). The exhibition traces the water supply to the city of Lisbon from Roman times to the present. The exhibition includes the plans made by Carlos Mardel for the Mãe d'Água reservoir and the Águas Livres aqueduct.

Fifth Romanian Industrial Archaeology Workshop

April 17-22, Bucharest

Mark Watson and **Ute Georgeacopol**
Conference organiser

■ A series of workshops shows the potential for industrial heritage to offer a connection with the past in a time of rapid change for Romania. Local and foreign participants discussed model approaches to documentation, listing and conservation that are applicable internationally as well as in Romania.
The workshop opened with an exhibition of very evocative photographs by Camil and Irina Iamandescu.
An intensive day of lectures on a wide range of subjects in the Ministry of Culture and Religious Affairs near the Museum of Villages was followed by a visit to Filaret (1869), the first railway terminus in Bucharest, now a bus station, customs warehouses, a former brewery and a still-active maker of pumps, safes and valves that is looking to realise the value of its land holdings through a sensitive conversion of part of the complex.
An important programme for the documentation and conservation of the mining and metallurgical landscape is bearing fruit around Resita and Anina in the Banat. "Industrial heritage in Mountainous Banat-European Value and Integration potential" developed a chart to define both material and intangible values, and the relationships between both.
Anina Mine is in the process of closing. Coal mining began in 1790. The main pithead boasts a very large twin tandem engine of 1910, made in Budapest. It was supplanted by a Russian winder in 1974, its headgear wheels superimposed at right angles on the older ones. A second shaft, Gustav II, is being filled. A washer, workshops, large power station (1898), volunteer fire station (1885) and neat rows of miners' houses complete the picture. A future economy based around a visitor experience, cutting new galleries at 60m depth, was put forward on advice by Belgian consultants. Some delegates suggested that conservation of what exists above ground might be a higher priority. The Anina-Oravita mountain railway, 1861-9, 14 tunnels and 10 viaducts over 33.4 km, was recently saved from closure and may prove an economic and tourist lifeline.
Grebla hydro electric station, 1904, draws on an extensive water-management system in the hills above Resita. UCMR Machinery Works makes turbines, cranes and locomotives. Several examples of older steam locomotives (1872 onwards) are displayed in a park, but Resita is dominated by the CSR, now TMK, steelworks. The two blast furnaces were recently reduced to one and even that is threatened as the steelworks consumes itself. Having passed from American to Russian owners, banners referring to the first coke-fired iron works of 1771 proclaim an ancient heritage. A collection of equipment is put aside for a museum. Continuous casting was recently installed so the old and the new may both be celebrated together.
In Timisoara, a superbly-kept art nouveau power station and an excellent outstation of the Ministry of Culture and Cults rounded off a

crowded itinerary. Momentum was maintained throughout under the patronage of TICCIH, ICOMOS Romania and the Romanian Association for Industrial Archaeology, the essential link in each case being Irina Iamandescu. The many participants from abroad got an opportunity to learn once more of the close international cooperation in the field of historic engineering. There we can sharply define another reason to preserve the prime examples mentioned above of our European heritage.

First International Seminar of TICCIH Mexico: Uses for the Mining Industry Heritage. New alternatives for a great past.

Miguel Iwadare
Treasurer of TICCIH Mexico

The First International Seminar of TICCIH Mexico concluded successfully at the main conference room of the former miner's hospital, now converted and restored as the Nicolàs Zavala Cultural Center and Museum of Work Medicine in Real del Monte, one of the most important mining towns of colonial origin in Mexico.

Seven themes were presented and analyzed: cases of rescue and reconversion of mining sites; plans and projects of rescue of mining sites and installations; mining heritage management and cultural tourism; mining archaeology and industrial landscape; mining sites as world heritage properties; memory, identity and historic value of the mines and innovations and technological process.

Several rescue projects were presented, ranging from industrial buildings and machines to mining landscapes. Two dossiers for the List of UNESCO's World Heritage were also presented, causing a lot of interest. These projects raised encourages us to conceive of the industrial heritage in its entire human context, that is, rescuing and protecting the memory of sites and the culture created by miners as part of their identity. Part of the culture created by miners is reflected in labour safety, especially in coal mines. Other examples include the creation of museums and the inclusion of educational programs at elementary and secondary schools.

The recommendations of the seminar focused mainly in the management and valorization of mining towns and sites. A call to authorities and organizations was made in order to start working on the dossier of the Ancient Mining District of Pachuca and Real del Monte for its inclusion in UNESCO's World Heritage List.

A National Corridor for Mining Heritage sites was also proposed to promote the exchange of experiences and collaboration.

Ronaldo A. Rodrigues, secretary of TICCIH Brazil, viewing the importance of the works presented in this seminar, proposed that the seminars continue on a bi- or triennial basis and launched the candidacy of Ouro Preto, Brazil, to hold the Second International Seminar of Mining Heritage in 2009 or 2010.

As part of the seminar, some visits were organized in order to have a deeper knowledge of the mining history of the region. The assistants to the seminar could appreciate the Acosta Mine Site Museum, as well as the Dificultad mine, which is in process of being restored. They also saw a pre-Hispanic mine system: the Cerro de las Navajas Archaeology Site is a series of obsidian mines and workshops dating from the Teotihuacán culture. The visits ended at the basaltic formations and the colonial hacienda of Santa María Regla.

Finally, during the works of the seminar, Marco Hernández opened his photo exhibition: "Industrial Heritage in Real del Monte and Pachuca" and Manuel Castillo Martos presented his book "*Bartolomé de Medina and the XVIth Century*".

The seminar was organized with the support of the Archivo Històrico y Museo de Minerìa of Pachuca.

TKM Resita blast furnace, founded in 1962.
Photo: Mark Watson.

First international conference on the food industry

Rheims, France, 3 – 4 May

Professor Gràcia Dorel
Conference organiser

The heritage of food production, extends to everything that concerns the industrialised production, storage, processing, delivery and sale of food stuffs. Included are buildings but also machinery and landscapes. Perhaps this last has become a rather debatable term recently, but there are landscapes of food production such as the Vall del Duero vineyards in Spain or the sugar mills of Cuba that already feature on the World Heritage list.

The first morning saw two presentations on the history of champagne: Benoit Musset on the presses used during the Ancienne Régime, and the consumption and promotion of champagne in Europe in the 18th and 19th centuries by Fabrice Perron. Following on from this, Keith Falconer presented the results of English Heritage's work on beer and the brewing industries, whose heritage is seriously threatened by concentration in the sector and by the modernisation of the pub. Franck Tourtebatte's contribution on the breweries of the Marne, France, spoke of the same erosion of the heritage as a result of the international concentration of the industry and the closure of numerous micro-breweries during the 20th century.

During the afternoon, Nicolas Loriette spoke on his thesis subject, the organisation, architecture and heritage of the grain silos in the wheat-producing region around Paris.

Samples of obsidian from the Cerro de las Navajas Archaeology Site.

David Worth on the same theme analysed the network of grain elevators erected by the South African railways during the 1920s, and used by the white maize producers.

Friday was dedicated to flour mills, with a presentation by Carme Gilabert of the Farinera de Castelló d'Empuries, part of the Museu de la Ciència I de la Tècnica de Catalunya. This early 20th century turbine-driven mill using Hungarian roller mills closed in 1996 only to re-open as a working museum where visitors can see the whole process of producing flour. It presents a solution that few other flour mills of the period, such as the Grand Moulins in Paris, have yet considered. Speaking about the Grand Moulin at Nogent-sur-Seine, Christel Werny explained that although the machinery was sold and exported to Morocco, the current owner, the Soufflet Blader group, is rehabilitating this immense space as offices, and conserving the exceptional collection of hydraulic turbines.

Two further papers on architecture concluded the morning session. Michael Mende presented two establishments which, like many others in the luxury foods sector, profited from their architecture to promote their company's image. At the Bahlsen biscuit works in Hanover, visitors could watch the whole process from making dough to packing biscuits, while the Roselius factory in Bremen made decaffeinated coffee and instant cocoa and was the first German example of the reinforced concrete frame recently devised by Albert Kahn in Detroit. Finally, Esteban Castenar-Muñoz presented a paper on the decorative language of market halls, an appropriate topic in Rheims where the 1928 Halles Centrales by Freyssinet is such a stupendous example waiting for a viable new use.

In the afternoon, papers on the sugar industry included Mark Watson's work in Scotland, which traced its the association with the slave trade and the important machinery industry that grew up after abolition of slavery led to greater mechanisation. Finally, not sugar but salt and the great saltworks of Arc-er-Senans. The site is changing its interpretative approach hoping that industrial history may prove more interesting to visitors than industrial utopias, the theme or interpretative thread chosen in the 1960s.

Finally, papers on divers themes, the sardine industry of Stavanger, Parisian slaughterhouses, jam making in Moscow and its implications for an emergent middle class, and the largest truffle firm in Italy completed a rich but highly digestible menu.

Thanks to Paul Smith for the information on the conference. Translation by the Editor.

events

New additions to the mNACTEC industrial museum network

■ The network of historic sites and local museums known as the Territorial System of the Catalan National Museum of Science and Technology (mNACTEC) has recently added five new centres. Modelled on other 'systems' such as the nervous system or the solar system that share a common basis in the laws that govern their activities, the mNACTEC now has twenty-five different component museums representing the history of industrialisation of this region of Spain.

The five new sites are:

The Museu de les Salines de Gerri de la Sal, a route through a medieval saltworks in the lower Pyrenees, including the galleries which were the source of the brine that fed the salt pans.

The Museu de la Rajoleta d'Esplugues presents the history of decorative tiles manufactured from the 14th to the 19th century in the ceramic town of Esplugues.

The Museu Hidroelèctric de Capdella is in an old hydroelectric power station that operated from 1914. For a country with a major coal deficit, hydroelectricity was critical to maintaining its progress to industrialisation and to participating in the industrial changes associated with the so-called Second Industrial Revolution.

The Parc Cultural de la Muntanya de la Sal de Cardona is in the middle of the extraordinary landscape of white mountains produced since the Neolithic of waste from the extraction of potassium salts, and includes a subterranean route through the high vaulted spaces created by the mining process – so different to those left by coal or most other mineral extraction techniques.

Finally the Museu de la Mina Victòria de la Vall d'Aran is a small territorial museum in the only Catalan valley that opens north into France. The old hard rock metal mine has left a relict landscape that is well adapted to a variety of leisure activities from rock climbing to trekking.

Inside one of the galleries of the Cardona salt mountain cultural park. © mNACTEC

The generating hall of the Museu Hidroelèctric de Capdella. © mNACTEC

TICCIH Conferences

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

World Conferences

Argentina

5th Latin American Colloquium for the rescue and preservation of the industrial heritage
Buenos Aires, *18 - 20 September, 2007.* Call for papers

■ The Argentine Committee for Industrial Heritage (COAPI) was formed in 2005 and includes the Argentine TICCIH Committee. The main themes are conservation, research, tourism and the interpretation of industrial heritage, and there will be tours to sites of interest after the meeting. Proposals for papers should be received by the organisers before 15 March, 2007.
Contact: Jorge D. Tartarini, ticciharg@yahoo.com or Museo_Patrimonio@aysa.com.ar

Croatia

III international conference on IH: 'Rijeka, historical traffic crossroad between Mediterranean and Europe'
Rijeka, *October, 2007.*
Call for papers

■ General topics on industrial heritage preservation, transport and the local shipbuilding heritage. Info: www.protorpedo-rijeka.org

Germany

Big Stuff 2007: the preservation of large industrial heritage objects
Bochum and Hattingen, September 11-14, 2007
Call for papers

■ Following the very successful Big Stuff 2004 in Australia, Big Stuff 2007 will be held in the Ruhr Basin (Ruhrgebiet). The conference will be devoted to the "monument-appropriate" preservation and interaction with large objects and infrastructure of industry and technology. There will be a major focus on difficult conservation conditions, in particular those in "open air sites" (e.g., pit head frames, blast furnaces, etc.). Organised by the German Mining Museum (Deutsches Bergbau Museum) and the Westphalian Museum of Industry (Westfälisches Industriemuseum). Conference info: info@bigstuff07.net www.bigstuff07.net or on the TICCIH website

Czech Republic

Industrial Heritage as a Force for Sustainable Development
Prague, Kladno and Liberec, September 17-23, 2007

■ The Research Centre for Industrial Heritage in cooperation with the Czech National Committee of ICOMOS, the National Technical Museum and the Technical Monuments Committee of the Czech Chamber of Certified Engineers and the National Heritage Institute. Part of the commemoration of the 300th anniversary of the founding of the Czech Technical University in Prague. Contact: Dr Benjamin Fragner, http://vcpd.cvut.cz or the TICCIH website.