

# TICCIH National Reports

## 2013-2015



**XVI INTERNATIONAL TICCIH CONGRESS 2015**

*Industrial Heritage in the Twenty-First Century,  
New Challenges*

Lille, France, 6-11 September 2015

Edited by  
Geneviève Dufresne and James Douet

**The International Committee Conservation for the Industrial Heritage  
TICCIH Congress 2015  
TICCIH National Reports**

The International Committee for the Conservation of the Industrial Heritage is the world organization for industrial heritage. Its goals are to promote international cooperation in preserving, conserving, investigating, documenting, researching, interpreting, and advancing education of the industrial heritage.

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## Foreword

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We are very pleased to offer this compilation of National Reports presented on the occasion of our 2015 triennial Congress in France. These reports represent much, if not all, of the breadth of activity, triumphs and, sadly, losses in the field of Industrial Heritage since our last Congress, in 2013, in Taiwan. From the 30 countries affiliated with TICCIH we listed at the beginning of 2015, 24 responded to the call: that is great and we thank all of the contributors.

This offering represents material from most of the nations where we have active members, and provide them in a new and exciting format. The digital rendering will, we trust, afford a broader spread of information, as well as allowing for greatly expanded access to information through active links to related material via the Internet. Readers can simply click on many relevant links to access significant amounts of detailed information not possible in a printed format. And while we have strived to distribute our former printed National Report documents widely, this format should result in greatly improved distribution through simple reference and sharing, as well as access via search engines. We hope this digital book will be a useful tool to conduct research, to compare, and to discover the constantly evolving and amazing field of Industrial Heritage.

Many thanks to Geneviève Dufresne, CILAC Vice-President and French TICCIH Representative, and James Douet, TICCIH Bulletin Editor, for their tenacity to obtain and to publish this first digital TICCIH National Reports.

Patrick Martin

TICCIH President 2009-2015

Florence Hachez-Leroy

Chair of TICCIH-Lille 2015



# Australia

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**Helen Lardner, Australian TICCIH Coordinator, with Dr Iain Stuart**

## Introduction

The Australian national group of TICCIH is an informal grouping of heritage professionals with an interest in industrial heritage. It operates informally because of members' limited time and resources as they bear their own costs of participation. Most members are members of Australia ICOMOS and have involvements with ICOMOS Scientific Committees at a national and international level as well as with other groups such as the Australasian Society for Historical Archaeology or the National Trust.

The inaugural meeting of TICCIH in Australia was held at the Sydney Opera House forecourt in November 2007. Australian member Dr Iain Stuart continues to be active as a TICCIH Board member elected in 2009. Australia currently has 17 full financial members of International TICCIH.

Eighty-five members subscribe to the TICCIH in [OZ discussion group site](#). This keeps colleagues interested in industrial heritage in touch with each other and allows topical issues to be discussed. The chat group is moderated by Iain Stuart. TICCIH also has a Facebook page for communication to members.

## Character of industrial heritage

TICCIH in Oz acknowledges the prior occupation of Australia by indigenous people and that - taking a broad definition of industrial heritage - there are places that have an indigenous industrial heritage value.

Industrial activities post-contact (the term for the arrival of non-indigenous people which occurred at varying times across Australia) include a mixture of pastoral, agricultural, maritime and extractive industries. There was a vigorous manufacturing sector buoyed by protective tariffs, Government assistance and the 'natural tariff' of the distance from the main manufacturing centres in Europe, USA and later Asia. Over recent decades the manufacturing industry has declined leading to the development of industries in the service sector and bio-technology. Farming and mining remain strong sectors of the Australian economy.

The bulk of Australian settlement has occurred along the coastal margins focusing on the major capital cities which are heavily urbanised. Urban development pressure has resulted in loss of industrial heritage sites as the economics of development mean that industrial sites are often redeveloped into high yielding residential or mixed use developments. Conversely rural industrial heritage is often overlooked as being remote and not prioritised.

At times Australian industry has been highly technologically advanced – the froth floatation technology was operationalized in the Broken Hill mines. In the late 1940s CSIR scientists built the fourth digital computer called CSIR Mark 1, which put Australia at the forefront of computing. It revolutionised everything from weather forecasting to banking. It even played the first ever computer music. In 1967 Australia launched its

first satellite (seventh nation to do so). In contrast, complete bulk handling of wheat was still not implemented in Australia until the 1970s.

A particular challenge for industrial heritage will be the identification and conservation of high tech industries such as bio-medical and pharmaceutical industries and the industries in the service sector. None of these are the traditional blast furnaces or mills that are typically recognised as being 'industrial'. Similarly, Australia is facing the phasing out of industries like car manufacturing and coal mining which have been important in the past.

## **Protection and management**

The current system for heritage conservation in Australia has three tiers, reflecting the three levels of government in Australia and the specific powers of the States and the Commonwealth as set out in Australia's constitution. The Commonwealth Government has primary responsibility for environmental matters of national and world significance, and the State and Territory governments have primary responsibility for matters of State and Local significance.

In practice the State governments undertake the bulk of heritage protection through legislation in each State, including legislation that allows local government to protect heritage places through listing in their planning schemes. These controls limit the development and use of the place in order to conserve its heritage values. The Commonwealth and the states all have heritage agencies and some local government authorities have staff positions dedicated to administering heritage controls, however no positions are specifically focussed on industrial heritage. Many heritage agencies have experienced reduced funding and resourcing in recent years. Similar pressures have been experienced by community-based, non-government organisations, such as The National Trust of Australia and other smaller volunteer heritage groups.

The most exciting recent development for industrial heritage is that the City of Broken Hill was added to Australia's National Heritage List in January 2015. The listing includes urban areas as well as mining along what is called 'the Line of Lode'. The great richness of the ore gave rise to the world's largest mining company BHP-Billiton (Broken Hill Proprietary-Billiton). The Broken Hill mines were successful for more than 120 years. With mining winding down from the 1970s onwards, Broken Hill struggled economically from the 1990s when the Council focused on tourism based on industrial heritage. The Heritage Advisory Service run since 1986 (primarily by advisor Elizabeth Vines) was successful in building community momentum for protection of Broken Hill's heritage. The joint [2010 ICOMOS/TICCIH Conference](#) which was held at Broken Hill helped focus attention on the full range of heritage, from restored buildings, mining sites to farming sites and beautiful landscapes. Progress on the nomination for listing was hindered by the need to establish an appropriate management regime for continued mining operations within the heritage listed area.



Broken Hill Line of Lode. © Helen Lardner 2010

Another project of interest is the City of Sydney Industrial and Warehouse Buildings Heritage Study, undertaken by City Plan Heritage in association with JCIS Consultants which is currently on public exhibition. The [link](#) provides information on the study which is expected to lead to greater protection of Sydney's industrial heritage.

### **Promotion and support**

The 2011 State of the Environment report noted the general cutting of government funding for heritage and the disproportionate funding allocated between funding for 'Natural Heritage' and 'Historic Heritage'. There is little in the way of incentives for non-Government owners of heritage places to undertake heritage conservation.

There are national 'Heritage Festivals', 'History Weeks' and a struggling 'Archaeology Week' which offer the opportunity to celebrate heritage in a positive way. To date these opportunities have only accidentally included industrial heritage and perhaps TICCIH could work with other groups to ensure that industrial heritage benefits from these opportunities to promote heritage. Similarly Open House held in Melbourne in July each year showcases many heritage places for public viewing and has industrial heritage as a specific theme. It is very popular and is being expanded to regional cities.

A number of small societies also undertake research into industrial heritage. In particular the [Light Railway Research Society](#) continues to publish well researched historical articles on the broad topic of industrial or light railways.

Research and identification work into Australia's industrial past has been revolutionised by the National Libraries Australian Digital Newspaper project which continues to make newspapers available on-line, in an easily searchable way and cost free. This makes detailed research in newspapers feasible within a significantly reduced timescale thus allowing better understanding of our industrial past.

Apart from this major advance there are experiments with Web based tools to promote industrial heritage. Heritage practitioners use on-line discussion groups sponsored by heritage agencies in NSW and Victoria to discuss matters of professional interest.

## Advocacy

There is not a specific program of advocacy for industrial heritage by TICCIH in Australia.

## Recent activities

One excellent web based resource was developed by [The Heritage Council of Victoria](#) to present 12 case studies and an issues paper to promote examples which inspire good outcomes for industrial heritage. It has been well received internationally.



Industrial Case Study 9: Paddington Reservoir, by Tonkin Zulaikha Greer. © Brett Boardman

Melbourne's cable tramway network of the 1890s was the second largest in the world and the present electric tramway system is still the largest. The comprehensive [Melbourne Metropolitan Tramway Heritage Study](#) was completed in 2012 by Gary Vines of Biosis Research, Melbourne.

## Education and training

Most heritage practitioners have a basic professional training at a degree level (e.g. architecture, archaeology, geography, planning, engineering) and then have developed an interest in heritage and either learned on the job or undertaken extra professional training. The degree to which these courses incorporate specific education in industrial heritage issues is unclear.

Many TICCIH/ICOMOS (Aust) members are taking advantage of overseas conferences and other opportunities to learn about the best management practices for industrial heritage with a view to broadening the portfolio of management techniques used in Australia. In addition, it is pleasing that Australia's heritage management practices continue to be held in high regard among many heritage practitioners overseas.



## **Publications**

In addition to the online publications already mentioned, Dr Alison Wain's 2013 thesis '[Size matters: seeing the values in large technology heritage](#)' examines the ways in which people value and manage large technology heritage.

Also *Architect Victoria*'s 2015 Summer edition, entitled '[Adaptive Reuse](#)' contained a number of articles on the adaptive reuse of industrial heritage places.

# Argentina

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**Mónica Ferrari**  
**TICCIH Argentina**

*Collaborators: Graciela Moretti, Graciela Viñuales, Jorge Tartarini, Adriana Ortea, José Zingoni, María Elena Méndez, Carolina Rainero, Víctor Ataliva, Jorge Martín, Daniela Moreno and Adriana Collado.*

## Introduction

TICCIH Argentina was formally organized in 2005 and was integrated with representatives of different regions of Argentina. From 2003 to 2012 it celebrated many scientific meetings in Buenos Aires (2003)<sup>1</sup>, (2007)<sup>2</sup>, Mendoza (2008)<sup>3</sup>, Córdoba (2009)<sup>4</sup>, Chilecito<sup>5</sup> (2014) and Tucumán (2014)<sup>6</sup>.

The V° Latin American and International Colloquium on Rescue and Preservation of Industrial Heritage in 2007 was celebrated, with 20 countries. During the event, it drafted the “Ibero American declaration of Industrial Heritage” signed by representatives of Argentina, Chile, Uruguay, Brazil, Mexico and Spain. The representatives of TICCIH Argentina were: Graciela Viñuales (2005-2008) and Laura Amarilla (2009-2012) - who died in 2012. During 2014 the regulations of TICCIH Argentina was approved in assembly.

## Changing public policies

During January of 2015 the Argentine Legislative Body approved the reform of the Federal Law N° 27.103 which modified the Law N° 12.665 and its modifications. The new rule re-established the responsibility of the National Commission of the Monuments, Sites and Historic Assets and introduced other categories for the protection of cultural heritage. Among them is the industrial heritage category called “historic industrial national interest asset”. This national politic opened an important age in the history of the industrial heritage in Argentina, bringing it a deserved recognition. These ideas were promoted by the architect Jorge Tartarini, member of TICCIH Argentina who is also a member of the National Commission.

In a general framework, in the last decade the CONICET (National Council of Scientific and Technical Research) contributed actively, subsidizing research projects relating to manufacturing and industrial heritage of Argentina, and overall, the cultural and industrial

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<sup>1</sup> 1<sup>st</sup> Conference of Industrial Heritage: Strength and Wealth of the Collective Work. Buenos Aires: CICOP. 1- 2 July 2003.

<sup>2</sup> V° Latin American and International Colloquium: Rescue and Preservation of Industrial Heritage. 18– 20 September 2007

<sup>3</sup> 1<sup>st</sup> Agro Industrial Heritage and Cultural Landscapes Seminar: Wine, Bread, Sugar and Coffee. Mendoza: Institute of Architecture and Urban Culture. School of Architecture, Planning and Design, University of Mendoza. May 2008.

<sup>4</sup> II Meeting: International Agro Industrial Heritage. Córdoba: College of Civil Engineers. 4- 7 November 2009.

<sup>5</sup> International Congress: Heritage, Industry and Environment. Chilecito, La Rioja, 5- 7 November 2014

<sup>6</sup> IV Seminar: Agro Industrial Heritage International (SIPA). Tucumán: Institute of history and heritage. Faculty of Architecture and Urbanism, National University of Tucumán.

landscapes of the region of Cuyo, sugar fabrics of the region of NOA, as well as port heritage of CABA, Rosario and railway heritage (in different parts of the country).

During January 2015 an agreement was celebrated between the Ministry of Labour, Ministry of Culture, and the National Commission of Museums, Monuments, Sites and Historic Assets in order to identify and enhance heritage work.

### **The progress with industrial heritage inventories**

During 2012 – 2015, the National Commission of Monuments, Sites and Historic Assets has been working on a National Industrial Heritage Plan. It made field works, documentation, inventories and legal protection of assets which have patrimonial values and need legal protection.

Meanwhile, some provinces developed inventories in general that include industrial heritage like the provinces of Buenos Aires and Santa Fe. Another province, Mendoza, is promoting the program: Valorization, Conservation and Preservation of the Transandino railway system.

The Heritage Coordination of the San Juan Municipality is completing fieldwork and documentation of significant heritage in ironwork as urban furniture and statuary located in public spaces and made by European foundries. The aim of this work is to make a declaration to protect them through a municipal ordinance and then by Law.

TICCIH Argentina worked on a database of Industrial Heritage Museums, developed a database, 2003/2014, of agro-industrial heritage teachers and investigators' publications in order to identify which are the industrial categories that need more investigation and who are the people working in each thematic. The sources are based in Industrial Heritage Meetings Publications and other publications like CEDODAL Editions and Aysa & INCUNA Editions.

### **Recent statutory protection**

At the national level, the National Commission declared as National Historic Monument (MHN) and Historic asset of National Interest (BHIN) the following fourteen assets:

- Lifting station of liquid sewage in Wilde, province of Buenos Aires. (MHN)
- Oil well N°1 of Plaza Huincul, province of Neuquén. (MHN)
- The first planes built in Argentina with motor reaction: "Pulqui I y II" (BHIN).
- Hangar for Junkers planes in the Aerodrome of Quilmes, province of Buenos Aires. (MHN)
- The monumental Tower Tank of Mar del Plata, province of Buenos Aires. (MHN)
- The rotating iron bridge of Ensenada, province of Buenos Aires. (MHN)
- Underground historic wagons of line A. Autonomous City of Buenos Aires. (MHN). Protected also by the city law N° 2796 y N° 4886
- The Siderurgic Mixed Society Argentina Building (SOMISA). Autonomous City of Buenos Aires. (MHN).
- Suspension Bridge "Hipólito Irigoyen" in Necochea, province of Buenos Aires. (MHN).
- Train to the Clouds in the province of Salta. (MHN).
- Windmill "Hércules" in San Esteban, province of Córdoba. (BHIN).
- Suspension Bridge "Engineer Candiotti", capital city of Santa Fe, province of Santa Fe. (MHN).
- Railroad and Port Sector of Bahía Blanca in province of Buenos Aires. (MHN).

- Hydroelectric Power Station on the river Suquía, province of Córdoba. (MHN).
- The Trasandino railway system (passenger building, station area, bridges, infrastructures, galleries and tunnels. (MHN)
- Molet Power Station in Córdoba (MHN)

During April 2015 a member of the National Senate presented a project to declare as Historic Monument a Bascule Bridge for railway and road over the “Río Negro”.



Bascule Bridge. © Senator Jaime Linares

### **The principal projects for conversion or rehabilitation**

- Project for the rehabilitation of railway heritage in Santa Fe city  
The rehabilitation involved a Franchino Mill as a Cultural Centre, an old locomotive house with “U” shape and the railways spaces which were converted into parks. The Marconetti Mill is still in rehabilitation and will be converted to a municipal school.
- Project for the rehabilitation of port and railway heritage in Rosario city  
The rehabilitation began in 2009 and a part of the great project finished during 2014. It involved the whole stores of the port, a sugar refinery, port great spaces converted in parks and a group of grain stores. Other isolated buildings inside the city were also rehabilitated like Rosario North Railway Station.





Stores of the port in Rosario. © Mónica Ferrari

- **Project for the rehabilitation of Industrial Heritage in Tucumán City**  
An important thermoelectric power station of 1951 abandoned during many years was rehabilitated by the National University of Tucumán in order to give to students other spaces for learning.
- **Rehabilitation Project: Railways in the metropolitan area of Buenos Aires**  
Developed by the National University of San Martín during 2013 in order to give sustainable urban system mobility. Based on different ways of public transport and an opportunity for the recovery and reuse of the railway.
- **Project to declare the cableway of Chilecito as World Heritage**  
The Government of La Rioja promotes the candidacy of the cableway of Chilecito. A technical team is developing a research and is preparing preliminary information tending to include this asset on the World Heritage List as a previous instance for the nomination by UNESCO.
- **Project for the rehabilitation in Mendoza and San Juan**  
Since 2012, three wine cellars of important architectonic value were restored. Wine Cellar Trapiche (with touristic and social use); Wine Cellar Los Toneles (which touristic and social use), and Wine Cellar Grafiña (converted in a Museum).
- **Sugar fabric Lastenia. Rehabilitation Project to install the Centre for Culture and Memory of the Sugar Industry**  
Since 2013, the ISES - CONICET counsels the rehabilitation and developed a project on a research (historical, archaeological and ethnographic) and instances of enhancement and redefinition of its facilities in the framework of programs affecting the local community.

## **New site museums**

CÓRDOBA. Museo Usina Molet

SAN JUAN: Museo Graffigna

SALTA: Museo de la Vid y el Vino

BS. AS. Museo del Automóvil

BS. AS. Museo del Cine

ENTRE RÍOS. Museo de Salto Grande. Binacional

CHUBUT: Museo del Petróleo, Comodoro Rivadavia.

ENTRE RÍOS. Molino Forclaz

BS. AS. Museo de la Cultura del trabajo y la identidad obrera

BS. AS. Links de museos ferroviarios de Argentina

## **Training programmes at university or other levels**

Post graduate Seminar

2013 – 2015. Every year CICOP, in Buenos Aires, teaches seminars about Industrial Heritage inside the Master Programme which is opened to the public.

Student Voluntary Programme

2014. National University of Tucumán made a program named “Students Volunteer”, developed “The working village tell us its history” referred to small villages belonging to Railroad workshop of Tafí Viejo.

Video and brochure

2012. The Sarmiento Thermoelectric Power Station was in ruins when the University decided to recover it. Ferrari M.; Bruna L. did a brochure and a video, in collaboration with N. Mozzi, about: *The Power Station at the Centenary*.

Doctoral and Master's Theses

MORETTI, G. Master Thesis: *Industry, Housing and Society in the villages of cement*. Master in History of Architecture and Urbanism Latin American. Faculty of Architecture and Urbanism, UNT, lecture 2012.

MARTINEZ, M. Doctoral Thesis: *The villages of the desert*. Urban planning Doctoral Program. UPC (finish in process).

CARACCILOLO, R. Doctoral Thesis: *Land of rails: individual strategies for the collective construction of the territory in the Central Region of Argentina*. UPC (theses in process)

RAINERO, C. *Identity and transformations: Marks in the Landscape Production of Rosario and its metropolitan area*. UPC (theses in process)

Investigation Projects

MORETTI, L. (Dir). Project: *Industrial Landscape and Modern Architecture*. University of Mendoza, 2012/ 2013

GIRINI, G. (Dir). Project: *The grapevine and wind Itinerary*. University of Mendoza, 2013/2013

SANTIBAÑEZ, G. (Dir). Project: *The material dimension of architectural heritage. Assessment techniques and materials in the Andes region* (Cuyo and NOA), includes studies of industrial heritage. Congreso University, 2012/ 2013

MICALE, A. (Dir). Project: *The ways of the grape in Ibero American. The company of Jesus as a spreader winemaking and its arrival to Mendoza: a cultural itinerary proposal*. Congreso University, 2012/2013

MORETTI, G. (Dir). Project: *Industrial Heritage in Mendoza: Planning, Architecture and Musealization*. Congreso University, 2013/ 2015

RAINIERO, C. Project: *Marks in the landscape of agricultural production: ex Corridor - Córdoba Rosario Central Railway, Management of assets and local development*. University of Rosario, 2012/ 2013

CAMPI, D. (Dir). Project: *"Actors and strategies. Employers and workers in Tucumán, 1850-1955,* (The project involves a program of rehabilitation and recovery of ancient productive spaces of the Lastenia former sugar factory). ISES - CONICET, 2009/ 2014

MORETTI, G. (Dir). Project: *Agroindustrial Network of the Company of Jesus in Latin America*. Participating universities: Congress University; Faculty of Architecture, Urbanism and Design, UNC; Faculty of Architecture and Design, UM; Faculty of Architecture and Urbanism, UNT, 2014/ 2015

Networks in Industrial Heritage

2013-2015: "Grape Network". Mendoza University (Cord), Participating Universities: National University of Tucumán, National University of San Juan, University of Sevilla, University of Chile

1st Student Forum of Industrial Heritage

2014. Celebrated in Tucumán during IV SIPA 2-5 September. (Cord: Santibañez, G; Logusso, J.)

Blog about cultural Action for the Conservation and Management of Industrial Heritage Food.

"Marca Liebig" is a blog managed by a member of TICCIH Adriana Ortea

Museum of the Sugar script

2013. ISES- CONICET. Museum of the sugar industry, museographic and museologic script. This research institution performs the monitoring and counselling about the exhibition and the heritage preservation.

Actions Research Laboratory, Conservation and Digital Processing Documentary Funds

Since 2013 the laboratory has been working on Document Scanning Industrial heritage and also began to draw a database that constitutes the Library of Sugar.

## Significant publications since 2012

FERRARI, M. (2012). Paisaje y patrimonio en la línea ferroviaria Jujuy – La Quiaca. Una propuesta de reutilización para el desarrollo local. En [II Seminario de Paisajes Culturales UdelaR/ UPC](#). Montevideo, Uruguay

FERRARI, M. (2012). La construcción del paisaje cultural en la línea del ferrocarril Jujuy – La Quiaca. En XIV Jornadas Internacionales de Patrimonio Industrial y Paisajes Culturales. Memorias del Desarrollo y II Conferencia sobre Patrimonio y Desarrollo Regional (CONPADRE'2012). Gijón, España

FERRARI, M. (2014). El ferrocarril de Jujuy a Bolivia. El proceso de poblamiento en las regiones de Puna, Quebrada de Humahuaca y Valles de la provincia de Jujuy. En Revista Labor & Engenho v.8, n.1, 2014

FERRARI, M. (2013). Viaducto El Saladillo en Patrimonio Argentino. Industrias, Estaciones, Puentes y Mercados. Buenos Aires: Diario de Arquitectura de Clarín

GIRINI, L. (2014). La revolución vitivinícola en Mendoza. 1885-1910. Las transformaciones en el territorio, el paisaje y la arquitectura. Mendoza: Idearium, Fondo Provincial de la Cultura

MORENO, D.; ROIG, J. (Coord.) (2014). Actas del IV Seminario Internacional de Patrimonio Agroindustrial. Organizado por el Instituto de Historia y Patrimonio. FAU – UNT. San Miguel de Tucumán, 2-5 de septiembre

ORTEA, A. (2012). Memorias Obreras de La Liebig. Patrimonio Industrial Alimentario de la producción y el trabajo de la carne. Editorial Académica Española

RAINERO, C.; LOMONACO, H.; DE GREGORIO, R.; BRARDA, A.; VERA CANDIOTTI, M.B.; ESCUDERO, S. (2015). *Paisaje de la producción del área metropolitana de Rosario*. Rosario: Las Bandurrias. (En prensa)

TARTARINI, J. (2012). Patrimonio Ferroviario Bonaerense. La Plata: Instituto Cultural de la Provincia de Buenos Aires: Dirección General de Patrimonio

TARTARINI, J. (2012). El Palacio de las Aguas Corrientes. De Gran Depósito a Monumento Histórico Nacional. Buenos Aires: Agua y Saneamientos Argentinos. AySA.

TARTARINI, J. (2013). El patrimonio industrial. Los espacios de la memoria del trabajo. En Patrimonio Argentino. Industrias, Estaciones, Puentes y Mercados. Tomo IX. Buenos Aires: ARQ Clarín/CICOP

TARTARINI, J. (2014). Sobre Patrimonio Industrial y otras cuestiones. Buenos Aires: Ed. Lazos de Agua. AySA

VIÑUALES, G. (2012). Qué hacer con nuestro patrimonio industrial. Experiencias, reflexiones y propuestas. En VI Coloquio Iberoamericano del TICCIH. San Pablo, Brasil

VIÑUALES, G. (2013). El bloque de cemento. Una tecnología de exportación. Labor & Engenho, v.7, n.2, Campinas

VIÑUALES, G. (2014) Puerto Belgrano, the military port of Argentina. TICCIH Bulletin, No. 63, 1st quarter

ZINGONI, J. (2012). Arquitectura Ferroportuaria de Bahía Blanca. 1880-1930. Bahía Blanca: Editorial Universidad Nacional del Sur

# Austria

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## Guenter Dinhobl, National Representative

*This report is prepared in coordination with the members of TICCIH Austria and with inputs of the Austrian Federal Monuments Office (Österreichisches Bundesdenkmalamt, ÖBDA) and the Vienna University of Technology, Institute of History of Art, Building Archaeology and Restoration*

## Introduction

The national group TICCIH Austria is small, with five members. They work at universities, administration and technical companies. Three of the members of TICCIH Austria are also members of ICOMOS.

## Character of industrial heritage

The industrial heritage of Austria has a broad range of monuments and includes one technical UNESCO World Heritage site, the [Semmering railway](#), but also several industrial properties in every other UNESCO World Heritage site of Austria.

While the Austrian Federal Monuments Office is working with an operational database 'protection of monuments', a general inventory of industrial heritage in Austria - which builds up on international inventory-standards like ICOMOS or docomomo - is still lacking. For some districts of Austria, inventories were done during the last decade (e.g. for Lower Austria by Gerhard Stadler in 2006). Furthermore, the website of [listed monuments](#) in Austria at Wikipedia includes also industrial heritage sites. This is a helpful tool to get a quick insight (to be chosen by district), but there is no filter for industrial heritage sites, nor does it fulfil international inventory standards.

Although a slight increase of listed monuments can be observed, still the highest share of the properties of industrial heritage in Austria are from the sectors of transport – both railway and road – followed by hydraulic engineering, food industry, and mining and metallurgy. But there are also fine listed monuments in the energy and supply sectors, paper production or aerial cableways. On the other hand, there are still industrial heritage objects which are not listed yet. Also some listed industrial heritage objects have been de-listed during the last years – which mostly result in their destruction.

The monuments register of Austria contains in 2013 more than 37.000 listed properties and approximately 6% of them are classified as industrial heritage. This classified industrial heritage distributes as follows:



Table: Austria - classified industrial heritage		
	number of entries* in database 'protection of monuments' (ÖBDA)	
	2012	2015
energy, supply	152	154
hydraulic engineering, navigation	308	310
machines	3	3
mining, metallurgy	163	171
production - building materials, glass	44	47
production - food industry	176	183
production - general	74	80
production - metal	140	145
production - paper, printing	10	10
production - textile, leather	60	61
trade	43	49
traffic - aerial cableway	13	15
traffic - railway	510	541
traffic - road	554	561
traffic - tram & underground railway	49	49
<b>classified Industrial Heritage - Overall</b>	<b>2.299</b>	<b>2.379</b>
<b>source:</b> Österreichisches Bundesdenkmalamt (ÖBDA), July 2012, April 2015		
*: at one database entry there might be several classified monuments summarised		

## Protection and management

The protection of industrial heritage is included in the general 'monuments protection law' (Denkmalschutzgesetz).

The responsibility for the protection of industrial heritage is situated at the Austrian Federal Monuments Office (Österreichisches Bundesdenkmalamt, ÖBDA). Up to 2012 one department was dedicated to industrial heritage. A re-organisation of the ÖBDA in that year result in a separation of responsibility for industrial heritage into the regional monuments offices (one for each county in Austria) and one centralized department dedicated to 'special subjects' which also includes technical monuments. In the long run it has to be observed if such a separation might result in a different handling of industrial heritage which depends on the practise of the regional monuments offices.

In 2014 the ÖBDA has published general guidelines on the preservation of monuments - [Standards der Baudenkmalpflege](#); unfortunately it does not address the specific peculiarities of monument protection of industrial heritage. Therefore there are still no common rules or best-practise issues for industrial heritage management in Austria.

## Promotion and support

The promotion of industrial heritage in Austria is still under-represented; but on the other hand it has also to be stated that industrial heritage sites participate at the Austrian monuments day every autumn. One reason for the under-representation is because industrial sites have to compete with the huge quantity of Austria's imperial and clerical heritage buildings (e.g. in the city of Salzburg) which is more attractive for tourism

advertisement. That is why it is still difficult to raise public awareness of Industrial heritage in Austria because of this 'common understanding' of heritage in Austria – the three C's of cultural heritage: castles, churches and city buildings.

The members of TICCIH Austria founded in 2013 the association [TICCIH Austria – Österreichischer Denkmalrat für das kulturelle Erbe von Industrie und Technik](#) to promote industrial heritage issues of Austria within the worldwide context. In 2015 a folder with information on the "Seeklause Hallstätter See in Steeg" was published (information on this site see article 'The Seeklause at Hallstätter See, Austria' by Peter STRASSER, [TICCIH Bulletin](#) No.67, 2015).

Also in 2013 the [Österreichische Gesellschaft der Mühlenfreunde - HERKUNFT ZUKUNFT](#) (Austrian society of mills friends) was founded. In late 2014, the 1st symposium on 'Old mills – New paths' was carried out in Vienna.

### **A selection of recent activities**

Success: local initiative and partly public funding to preserve hammer mill "Roob" from 1770 which is situated in Ligist (Styria; see [www.kulturhammer.at](http://www.kulturhammer.at), in german).

Open:

- Discussion of abatement of the monuments protection of road bridge across the Danube near the city of Krems / Lower Austria
- Future of the listed monument "Seeklause Hallstätter See in Steeg" (weir system), see article 'The Seeklause at Hallstätter See, Austria' by Peter STRASSER, TICCIH bulletin No.67, 2015



Seeklause Hallstätter See in Steeg.

**Losses:**

- Abatement of the monuments protection of rail/road-bridge across the Danube in the city of Linz (see *National Report 2012* and 'TICCIH Austria: Demolish? The Linz Railway Bridge' in: *TICCIH Bulletin* No.62, 2013, p.6), removal planned for 2016, afterwards building of a new, broader bridge.





Combined rail/road-bridge across the Danube in the city of Linz.

- Demolition of former office building of Brown-Boveri-company in Vienna, built in 1890/1 (with adoptions and enlargements in recent times). It is considered 'the oldest company buildings for electrical equipment within Austria' (Wehdorn/Georgeacopol).



Demolition of former office building of Brown-Boveri-company in Vienna.

- Demolition of Wolfdietrich-Berghaus in Hallein (Salzburg) from 1598 which was the main building of salt mining at the Dürrenberg.





Wolfdietrich-Berghaus in Hallein before demolition.

### Education and training

Vienna University of Technology, Institute of History of Art, Building Archaeology and Restoration, hold seminars, trainings (planning-tutorials and field research) and lectures on monument preservation including industrial heritage issues) within the [studies in architecture](#).

At Graz University of Technology and at the University of Innsbruck there are also courses given in the field of monument preservation as part of the studies in architecture.

The Danube University Krems offers at the 'Zentrum für baukulturelles Erbe' both a master and an expert course in 'renovation and revitalisation' which includes also general concepts in renovation and revitalisation of industrial heritage buildings.

### Publications

Roland ADUNKA: Carl Auer von Welsbach: Entdecker - Erfinder – Firmengründer. Klagenfurt 2015

Erich BERNARD, Günter DINHOBL: Strasshof an der Nordbahn – die Nordbahn an Strasshof. Die Bahn als Identität eines Ortes; in: Judith Eiblmayr (Hg.): Lernen vom Raster. Strasshof an der Nordbahn und seine verborgenen Pläne; Wien: Neuer Wissenschaftlicher Verlag – Architektur, 2013, S. 61-81

Hannes DENZEL: Österreichische Motorradraritäten aus der Vorkriegszeit: Regenten, Giganten, Titanen & Co; Purkersdorf 2015

Günter DINHOBL: Railways heritage. An overview; in: Anne McCants; Eduardo Beira; José M. Lopes Cordeiro; Paulo Laurencio (Eds.): Railroads in historical context: construction, costs and consequences, vol.I 2011, Foz Tua 2012, p. 445-462

- Günter DINHOBL: Industrielles Erbe in österreichischen UNESCO-Welterbestätten; in: ISG-Magazin 3/2013: UNESCO-Welterbe. Eine Herausforderung mit vielen Facetten, Graz: Internationales Städteforum Graz, 2013, S. 21-23
- Günter DINHOBL: querAlpin. Die Pustertalbahn im Habsburger Eisenbahnnetz; in: Martin Kofler (Hg.): Volldampf: Die Pustertalbahn 1869-1918; Innsbruck: Haymon Verlag, 2013, S. 28-37
- Günter DINHOBL, Kerstin OGRIS: Was die Eisenbahn noch braucht...Ein Überblick über Bauten für den Eisenbahnbetrieb; in: Industriekultur 1.13; 2013, S. 20-22
- Günter DINHOBL (review): Over the Alleghanies by Robert J. Kapsch; in: TICCIH Bulletin No.63, 2014, p.18
- Günter DINHOBL: Main & Secondary lines. Railways in mountainous and peripheral regions; in: Anne McCants; Eduardo Beira; José M. Lopes Cordeiro; Paulo Laurencio (Eds.): Railroads in historical context: construction, costs and consequences, vol.III 2013, Foz Tua 2014, p. 515-527
- Friedrich IDAM: Seeklause Steeg am Hallstättersee / Logging dam in Steeg at Lake Hallstatt; in: Österreichische Ingenieur- und Architekten-Zeitschrift, 159. Jahrgang, Heft 1-12/2014, S. 267-269
- Elfriede MEJCHAR, Ruth HORAK (u.a.): Elfriede Mejchar Fotografie (mit Beiträgen von Ruth Horak, Juliane Kücher, Petra Noll, Fritz Simak, Gerhard A. Stadler, Roswitha Straihammer, Peter Zawrel); Weitra 2014
- Gerold ESSLER, Gerhard A. STADLER: Der Molybdänbergbau im Valsertal 1941 - 1945: Ein Hoffnungsprojekt der NS-Kriegsmaschinerie im Licht der Baugeschichtsforschung. In: architectura. Zeitschrift für Geschichte der Baukunst, Band 43 (2013), S. 167 - 186.
- Peter STRASSER: The Seeklause at Hallstätter See, Austria; TICCIH Bulletin No.67, 2015, p.10
- Technisches Museum Wien (Hg.): Blätter für Technikgeschichte Band 73: Themenband Arbeit; Wien 2011
- Technisches Museum Wien (Hg.): Blätter für Technikgeschichte Band 74: Themenband Chemie; Wien 2012
- Technisches Museum Wien (Hg.): Blätter für Technikgeschichte Band 75/76: Themenband Mobilität; Wien 2014
- TICCIH Austria: Demolish? The Linz Railway Bridge; in: in: TICCIH Bulletin No.62, 2013, p.6
- Roland TUSCH: Wächterhäuser an der Semmeringbahn: Haus Infrastruktur Landschaft; Innsbruck 2014
- Roland TUSCH: Landscape as a Development Driver for the Semmering Region. Conference paper in: Dymitryszyn, I.; Kaczynska, M.; Maksymiuk, G. (Eds.) , The Power of Landscape. 2012

# Belgium

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*In Belgium, heritage is a competence shared between the three federal entities: Flanders, Wallonia and Brussels. In view of the 16th TICCIEH Congress, ETWIE (Expertisecentrum voor Technisch, Wetenschappelijk en Industrieel Erfgoed) and PIWB (Patrimoine Industriel Wallonie-Bruxelles) joined forces within the Belgian section, with both providing a written contribution for the National Report. The presidency of TICCIEH Belgium is being handed over to PIWB for three years.*

## FLANDERS

Robin Debo (ETWIE), with contributions by Filip Delarbre (Mijnmuseum), Joeri Januarius (ETWIE), Adriaan Linters (VVIA), Peter Scholliers (TICCIEH Belgium), Patrick Viaene (TICCIEH), Ann Van Nieuwenhuysse (MIAT), Tjil Vereenoghe (ETWIE)

Organisations, education and policy

The oldest volunteer organisation for industrial heritage in Flanders is the Vlaamse Vereniging voor Industriële Archeologie (VVIA, [www.vvia.be](http://www.vvia.be)). Founded in 1978, the association continues its activities to protect and preserve industrial heritage. [SIWE](#), the regional platform for industrial and scientific heritage, unfortunately ceased to exist in 2013. In 2012 the new organisation [ETWIE](#) was recognised by the Flemish government as the Centre of Expertise for Technical, Scientific and Industrial Heritage, focusing on the movable and intangible aspects of this heritage.

Museums

Between 2013 and 2015 a considerable number of museums of industrial heritage were renewed and reopened. The Jenevermuseum in Hasselt underwent a major facelift, now offering interactive ways to learn about the origin, the development, the place and the perception of the product jenever. In Kortrijk, the former flax museum moved to a new location and was re-launched as Texture, whereas in Izegem the collections of the National Shoe Museum and the National Brush Museum are merged into a new museum in the Eperon d'Or, a former shoe factory which is being restored. In 2013, the Museum over Industrie, Arbeid en Textiel (MIAT) in Ghent, one of the most important museums in the field of industrial heritage, won the Flemish Museum Prize, a yearly award for a museum that excels at presenting and conserving its collection while attracting and involving new audiences in an innovative way.

Education

Formal courses on industrial heritage remain rather sparse. Every year, VVIA organises the course 'Introduction to industrial archaeology'. Two universities offer courses about industrial heritage. At the Free University of Brussels, Peter Scholliers - national representative for TICCIEH in Belgium and chairman of ETWIE - teaches the course 'Industrial archaeology and industrial heritage'. At the University of Antwerp, Patrick Viaene - TICCIEH board member and former chairman of SIWE - teaches the Master course Monuments and Landscape Architecture. As one of the pioneers of industrial archaeology in Flanders, he dedicates a significant amount of his lectures to industrial heritage.

Policy

In 2015 a new Immovable Heritage Decree came into effect in Flanders, which directly and indirectly impacts the industrial heritage. One significant change to the policy of immovable

heritage is the increased stake and responsibility of cities and municipalities. In 2013 the renewed Maritime Heritage decree was approved. The revision expands the instruments for financial support and legal repercussions for the protection of maritime heritage, and affixes the new Maritime Heritage Inventory. In the field of movable heritage, the Topstukkendecreet (Masterpieces Decree) was renewed in 2014.

#### Protection

In recent years, several industrial heritage sites were recognised as a protected monument. In Antwerp, the interest of industrial archaeologists turned to the Petroleum-Zuid site, one of the oldest petroleum harbours in Europe. In 2014 a temporary resolution for protection of five buildings and installations on the site was signed. In Ghent, the power plant of Langerbrugge, built in 1911, finally became a protected monument. Unfortunately a lot of damage had already been done to the installations on the site since its closure in 2001. The brewery Vuylsteke in Kortrijk, with the nearly complete brew house dating back to the end of the 19th century, was protected. It will be renovated and integrated into the school. Further industrial remains which were (provisionally) protected in the past years include the malt house and brewery Verhaeghe in Anzegem, the water mill in Wanzele, a wine storehouse in the Antwerp harbour, the power station in Izegem, and the former rope works Van den Berghe in Berlare. Harbour crane Nijvelkraan DE 296 in Antwerp, was also protected.



View of the Petroleum Zuid site in Antwerp. © Tjil Vereenoghe, ETWIE

The latest additions to the 'List of Masterpieces' include several aircraft: two SV-4s constructed by the Antwerp plane builders Stampe & Vertongen ([www.stampe.be](http://www.stampe.be)), a rare tipsy trainer 00-EOT and the only remaining Fairchild C-119G used for transport missions in Belgian Congo. In 2011 a narrow-gauge locomotive from 1935 was added, which was built to transport visitors at the 1935 Brussels International Exposition.

#### Restoration and re-use



In the past few years several protected industrial sites were restored or re-used. This overview is only a selection of some interesting projects.

In Limburg, several mining sites have been redeveloped. The Be-Mine project for the adaptive reuse of the protected mining site of Beringen included brushing up the exhibition in the Mijnmuseum Beringen. The project aims at combining urban functions with cultural tourism. This project is similar to the protected mining site Winterslag near Genk, which was redeveloped into the successful C-Mine. Here, the objective was to create space for culture, creativity and communication. The site quickly attracted a movie theatre, food service industries, creative industries, a college of arts, the cultural centre of the city and the C-Mine Expedition attraction. In 2013 it won the Flemish Monuments Prize. In 2012, Manifesta organised the European Biennial of Contemporary Art in the protected mining site of Waterschei, attracting over 100.000 visitors. Now, the Waterschei site is being transformed into Thorpark, a new hotspot for technology, energy and innovation. In 2015, at the Zolder mining site, an industrial experience route was opened in the hoist room and a centre of adult education will move to the site.



The restored compressor room in the hoist building at the Zolder mining site opened in April 2015. © Luc Corthouts, ETWIE

Also in Limburg, the restoration project of the steam syrup factory Wijnants-Groenendaels in Borgloon – the winner of the television programme ‘Monument’s Battle’ in 2007 (see TICCIH National Report 2009) – is still ongoing. The old distillery complex in Wilderen (near the city of Sint-Truiden), including the completely preserved technical installation, was restored by the private owner at his own expense. The stables are now housing a modern brewery ([www.brouwerijwilderden.be](http://www.brouwerijwilderden.be)). This restoration project was a laureate for the Flemish Monuments Prize in 2012. In Leuven, Brewery De Hoorn was restored. Nowadays it functions as an event hall (amidst six large copper wort boilers). However across from the De Hoorn, the Brewery De Dijle was demolished in 2012, despite actions from SIWE and the Historical Society of Leuven. In 2015 also the restoration of the Mouterij Van Roye in

Halle was finished. The regional museum and archive service are now housed in the building, which also offers an experience trail on the malt house.

In Ghent, an interesting case of re-use is the site of the former textile factory De Porre, which was transformed in a new public park, integrating some of the remains of the former factory. The old walls now function as the garden walls and part of the walkways, prominently featuring pictures and stories of former employees. The unique STAL steam turbine has been restored and protected by a glass pavilion, and now functions as an eye-catcher. Another example in Ghent is the site of the gas factory, which will become a residential district, offering spaces for trade, recreation, services and offices. The site includes a gas factory, two gasholders and a large mill. Nearby at the ACEC site, a similar plan for redevelopment is already underway. The new area, called Dok Noord, will remain dotted with industrial archaeological remnants, including the factory facade.



The former textile factory De Porre in Ghent was transformed in a public park. © Tijn Vereenoghe, ETWIE

Other interesting examples of restoration and reuse include the power plant of Zwevegem (now Transfo Zwevegem), which is being redeveloped into an event location, park and recreational area, the industrial site Van Coillie in Lichtervelde, and the Slijperij Lieckens in Nijlen, where a new diamond experience centre was opened in 2014.

In general the heritage of ports and harbours has attracted quite some attention. In the north of Antwerp, the harbour area, which features a lot of maritime and industrial heritage, is undergoing an important renewal, thanks to private and public investments. The city museum MAS and the new migration museum Red Star Line, which opened its doors in 2013, play an important role in this evolution. Initiatives to preserve the Charlesville, the last remaining 'Congo Boat', however, failed. In May 2013 the ship was towed towards Lithuania to be scrapped. During the trip, the ship sank under circumstances which are still unclear.

Throughout Flanders, several factory chimneys were torn down. The alarming rate at which chimneys seem to be disappearing has prompted the VVIA to dedicate extra efforts to raise



awareness for industrial chimneys, as part of the European Year of Industrial Heritage 2015.

#### Publications and research

Several journals dedicated to industrial heritage in Flanders have been abolished in recent years, including the SIWE-Magazine and MIAT's Tijdschrift voor Industriële Cultuur (TIC). In the future MIAT will publish scientific articles in its new digital knowledge centre ([www.miat.gent.be/nl/miat-factory](http://www.miat.gent.be/nl/miat-factory)). The journal 'Erfgoed van Industrie en Techniek' is currently the only journal dedicated to the study, preservation and management of industrial and technical heritage in the Low Countries. The 'Industrial archaeology and industrial heritage bibliography', previously managed by MIAT, has recently been integrated in the knowledge platform on ETWIE's website. ETWIE and MIAT now collaborate.

## WALLONIA

Jean-Louis Delaet (president of PIWB) with contributions from Jacques Crul and Claude Depauw (directors of PIWB)

The cradle of the Industrial Revolution on the European continent after England, especially in the provinces of Hainaut and Liège, Wallonia's rightful place was finally acknowledged by the inclusion of its four major mining sites on UNESCO's World Heritage List in 2012, a few years after the inclusion of the Canal du Centre's four hydraulic lifts. These results can mainly be attributed to the action developed by the Patrimoine Industriel Wallonie-Bruxelles (PIWB) association. Building on this momentum, the association addressed a "Memorandum to safeguard the vestiges of 20th century heavy industry", on 12 June 2014, to the negotiators within the Walloon Government. In response, a passage in the regional policy statement leads us to hope that there will be greater interest in the threatened vestiges of this industrial adventure; on page 77, there is mention of the new government's intention to provide for "greater integration of the reallocation of listed industrial heritage in heritage policies".

There are plenty of derelict industrial sites in Wallonia: there are still some thousand or so potentially polluted sites according to the Société Publique d'Aide à la Qualité de l'Environnement (SPAQuE), a company specialising in the redevelopment of industrial wasteland and dumps.

#### The regulatory and institutional framework

The recognition and protection of industrial heritage require a reasoned approach that takes into account recent developments in regulations. The CWATUP (Code Wallon de l'Aménagement du Territoire, de l'Urbanisme et du Patrimoine) of 15 May 1984, amended several times, and its various orders, relate both to the cleaning up and renovation of derelict industrial sites, and the protection and restoration of heritage. New elements were added to Book 3 of the CWATUP relating to heritage, in order to adapt it to developments in the context and the need to make management more efficient. One of the measures relates to the evolution of the conditions regarding the listing of heritage assets.

The list of exceptional heritage in Wallonia was reviewed in 2013. Established for the first time in 1993 and revised every three years by the regional government on the basis of a proposal made by the Commission Royale des Monuments, Sites et Fouilles, this list now includes 194 monuments (which are eligible for a 95% subsidy rate) and sites. Among the

newly listed assets are the Bois du Cazier in Marcinelle (Hainaut) and Blegny-Mine (Liège), both of which were included on the World Heritage List in 2012.

#### Museums and tourist attractions

However, besides protecting industrial heritage, it is necessary to determine the methods for managing this type of heritage, because the approach adopted can't always be as rigorous as the one applied to more traditional monuments since the circumstances are sometimes very different. Within this context, the regulatory framework has been completed in the past few years by the implementing of two major decrees: one that falls under the scope of the Wallonia-Brussels Federation, whose political responsibilities affect entities such as education and culture (Decree of 17 July 2002, amended by the Decree of 3 May 2012 in terms of the recognition and subsidisation of museums and other related institutions); the other one falls under the scope of the Walloon Region whose remit includes territorial development (Decree of 1 April 2004 relating to tourist attractions).

#### Public operators

On a more functional level, the Walloon Region, which has been playing a major role for several years as regards operators of cultural and tourist sites, has entrusted the management of its own heritage to two organisations: the [Institut du Patrimoine Wallon](#) (IPW) and the [Commissariat Général au Tourisme](#) (CGT). We should point out that many of these sites, especially those that fall under the scope of industrial heritage, even though they belong to the public domain, are privately managed in the form of a not-for-profit association (asbl), which provides greater flexibility than direct management by the Region or the Wallonia-Brussels Federation as regards museums.

#### Associations

Patrimoine Industriel Wallonie-Bruxelles is a not-for-profit association set up in 1984, whose aim is to federate, coordinate and promote industrial heritage. The association has been subsidised by the Wallonia-Brussels Federation since the beginning. PIWB has been receiving additional support from the Walloon Region since 2013, through a new partnership with IPW.

In terms of communications tools, PIWB has a website where users can consult a calendar of events, a library, publications, links, and make online searches. Some pages are in Dutch and English. PIWB also issues a newsletter five or six times a year, with a particular focus on threatened heritage sites. In addition, the association publishes an annual 80-page review called "Des Usines et des Hommes", with popular science articles on themes such as: "Application for the inclusion of the major mining sites on UNESCO's World Heritage List" in 2009, "Industrial heritage and housing" in 2010, "Walloon steel. Heritage for the future?" in 2011. "High voltage in danger? Electricity in the 20th century" in 2013, and "What part of 20th century heavy industry should we keep?" in 2014.

Founded in 1998, the not-for-profit association Musées et Société en Wallonie (MSW) aims to set up a communications network for museums, encourage exchanges with other professional associations and participate in discussions on employment in the socio-cultural sector. In 2009, a specific network was created which includes 14 Walloon museums with a focus on industrial, scientific and technical heritage (Patrimoine industriel, scientifique et technique - PISTe) [www.msw.be](http://www.msw.be).

#### Sites included on the World Heritage List

##### Wallonia's major mining sites

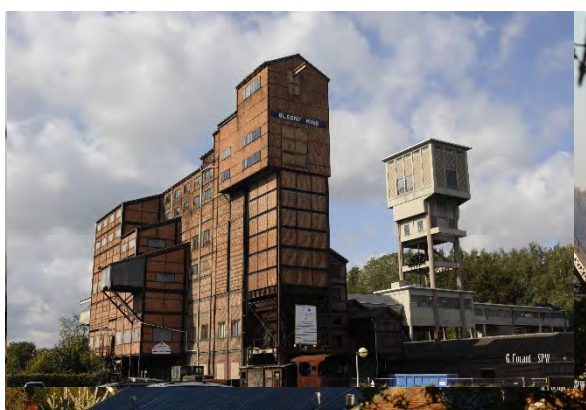
Wallonia's major mining sites have been included on UNESCO's World Heritage List since 2012. These sites are: Grand-Hornu, near Mons, for its architecture; Bois-du-Luc, close to La Louvière, for the social life of its mining community; Bois du Cazier, close to Charleroi, for the memory of the disaster of 8 August 1956 (all three in Hainaut) and Blegny-Mine (Liège) for its technical know-how. Contrary to the mining area in the Nord-Pas de Calais region, this listing covers four specific sites, not an evolving cultural landscape. They are complementary and form a coherent whole.



Grand-Hornu © Guy Focant – SPW



Bois-du-Luc © Ecomusée du Bois-du-Luc



Bois du Cazier © Guy Focant – SPW

Authenticity and integrity are the two criteria which have led to the recognition of their exceptional universal value, because these four sites are important places of cultural convergence owing to the contribution of Wallonia's engineers and workers to the history of the world, as well as the contribution of foreign workers to the development of Belgian mines. They are symbols of the Industrial Revolution that marked the whole of Europe in the 19th and 20th centuries.

Once included on the World Heritage List, it is vital to ensure the asset's continuity and to ensure it continues to respect the criteria which led to its inclusion by UNESCO. A regularly updated rolling management plan has therefore been established. It is monitored by four authorities: a Steering Committee, which makes the decisions; a Management Committee, which prepares and implements these decisions; a Scientific Advisory Committee; all three are supervised by the Comité Wallon pour le Patrimoine Mondial (CWAPAM) responsible for the overall policy and budget for all the UNESCO sites in the Walloon Region.

The management plan, common to the four mining sites, has seven key development areas which are divided into actions: management of built heritage, citizen participation, education and training, the promotion of culture and tourism, scientific research,

international cooperation, marketing and communications. Recognition by UNESCO has undeniably had a positive impact. For the moment, it is the dynamics in terms of society, culture and tourism that have benefited the most from the inclusion on this list owing, in particular, to an increase in the number of visits to the sites by a wider range of visitors.

Th Bois du Cazier has joined the European Network of Coal Mining Museums created in Zabrze (Poland) on 10 May 2012 which includes, besides Kopalnia Guido (P), the Centro Italiano della Cultura del Carbone in Carbonia (I), the Deutsches Bergbau Museum in Bochum (D), the National Coal Mining Museum of England in Wakefield (UK) and the Centre Historique Minier de Lewarde (F).

The four hydraulic lifts on the Canal du Centre

Each of the four lifts, which are more than a hundred years old, help to compensate for the difference in level of approximately 17 metres thanks to a single source of energy: water. These hydraulic lifts on the Canal du Centre are the only ones in the world, built at this time, to still be in their original working order. However, three of the lifts have been closed since 28 March 2014 by the Direction des Voies Hydrauliques, following safety concerns, among other things, in relation to the workers, who are too few and not sufficiently trained. Negotiations are well underway and could lead to a global investment and reorganisation plan with regard to the management of the lifts, which is currently the responsibility of the not-for-profit association "Voies d'eau du Hainaut", [www.voiesdeau.hainaut.be](http://www.voiesdeau.hainaut.be).

20th century heavy industry heritage

Saving the remains of the pioneers of 19th century industry has often been down to chance, local action or civic initiatives. However, as far as 20th century heavy industry heritage is concerned, is it possible to define certain selection criteria so that the most representative elements are given priority in terms of protection, restoration and reallocation? The situation today is urgent owing to Europe's accelerated deindustrialisation and the disappearance of whole sections of economic sectors. This was the subject of a symposium organised by PIWB, in partnership with IPW on 6 June 2014 at the Moulins de Beez, the old industrial mills close to Namur which were restored in 1998 and turned into an archive centre, public space and offices.

The steel industry has attracted our attention because we are indeed witness to the end of the hot phase in Wallonia: in Charleroi, since 2008, and undoubtedly in Liège, in 2014. There were some 50 blast furnaces in Wallonia in the 1960s! Now there are only four: two in Liège (HF6 in Seraing which is marked for demolition, HFB in Ougrée which has been mothballed for the moment as it may be brought into action again), HF2 in Clabecq in Walloon Brabant, which was dismantled, and HF4 in Charleroi (Hainaut), which is under threat. Consequently, a movement was recently initiated by the local population regarding HF4, which was taken up by the communal authorities. Will we be able to preserve one or two blast furnaces in Wallonia as a testimony to this industrial adventure? Will we have to adopt heavy investment programmes as was the case in the Ruhr, with the help of the European Structural Funds, at a time when these are dwindling for Belgium? In this case, it would perhaps be better to focus on elaborating innovative projects to reappropriate this heritage.





Blast furnace Nr 4 in Charleroi. © Gilles Durvaux - Postindustriel

This is why PIWB took the initiative to ask the heritage department, during the symposium organised by the Province of Liège on “Sites industriels de la Grande Région entre mémoire et innovation” on 2 April 2015, which gave a positive response, to meet the interlocutors from the two former steel-making areas of Liège and Charleroi in the coming weeks to establish a set of procedures in line with its “Memorandum to safeguard the vestiges of 20th century heavy industry”.

Protected, restored or demolished industrial heritage

Other mining sites

The Hasard coal mine, in Cheratte (Liège), is known for its neo-mediaeval style buildings (1907). The coal mine was protected in 1982 when the whole site was listed and tower no. 1 (Malakoff type) was listed as a monument along with its adjoining machine rooms. It became clear that only public acquisition would allow this testimony to the industrial past to be safeguarded and promoted. This acquisition was finally made in 2013 thanks to its recognition as a redevelopment site; SPI, the Province of Liège’s development agency, was able to proceed with its expropriation with a view to cleaning it up, which will consist of securing the site and demolishing unlisted buildings with the exception of the lamp room.

The Triage-Lavoir de Péronnes (Hainaut), inaugurated in 1954, was financed by the Marshall Plan subsidies. Closed in 1969, this coal washing facility was taken over several times before IPW began a procedure in 2001 to save the building. The exterior has radically changed because the concrete on the facade, among other things, has been repaired and repainted with the support of the European Structural Funds for a total of EUR 7 M. The Walloon Government’s policy decision of 2009 should finally come to fruition. The aim is to redevelop the vast surface area of the washing facility (14 000 m2) into a central archaeological deposit for the products of research accumulated over the years. Since

2014, the works to restore the site have continued with the construction of a part-buried building in the area surrounding the facility for the Régie Fédérale des Bâtiments, which will be home to the reserves of the federal science institutions and museums by 2016.

The Tour Saint-Albert in Péronnes (Hainaut), a few hundred metres away from the washing facility, is a remarkable and unfortunately unprotected element of Walloon heritage! It is threatened with demolition in 2015! Also built in 1954, it is a variant of the Art Deco style and in particular the streamline moderne style. At the top of the tower is an extraction machine that is still complete and intact, which was partly built at the neighbouring Ateliers du Thiriau. A committee comprised of local citizens was formed to oppose the tower's demolition by the owner, the pipeline company Fluxys, which manages natural gas transport infrastructure in Belgium.

#### New infrastructures inaugurated or planned

The Keramis Centre de la Céramique in La Louvière (Hainaut) preserves, studies and promotes the tangible and intangible testimonies to the ceramics produced by the company Boch from 1841 to 2009. In charge of purchasing the site upon its closure for a symbolic euro on behalf of the Wallonia-Brussels Federation, IPW restored the three bottle ovens built from fire bricks between 1865 and 1880, which were used to fire the pottery. The operation was carried out within the framework of European co-funding and the restoration of the whole site in order to house the Federation's ceramic collections. The centre was opened to the public in May 2015: [www.keramis.be](http://www.keramis.be).

The future Centre des Métiers de la Pierre in Soignies (Hainaut) will breathe new life into the industrial buildings of the Grande Carrière Wincqz in Soignies. These disused buildings were listed in 1992 and added to the list of threatened monuments in 2001. Ten years later, IPW carried out a feasibility study with a view to establishing a stonecraft centre on this site. At the same time, a project committee comprised of the various stakeholders in the sector was put together to create this reference centre in Wallonia. The stonecraft centre should open in 2016.

These two new infrastructures demonstrate the dynamism of a public operator like IPW. However, we should also mention the initiatives of local inhabitants and the private sector. The first one concerns the reallocation of an early 20th century water wheel (1902) in Clavier (Liège) by the Collectif Condroz Energies Citoyennes. Its aim is to transform three old mills into hydroelectric power plants with the help of the European Restor Hydro programme. The second one concerns the transformation of a water tower in Marchin (Liège) into housing by a private owner. It is an exceptional building dating from 1920, built entirely from reinforced concrete, that was abandoned 30 years ago. It is the only surviving building of the Godin paperworks, which were entirely demolished by SPAQuE in 2010.





Water tower of the Godin paperworks in Marchin. © Baudouin Stalport

#### A revealing failure

The chimney at the Cuivre & Zinc site in Chênée (Liège) was pulled down in 2014 despite its initial inscription on the Walloon Heritage conservation list! We are currently witnessing the indiscriminate destruction of factory chimneys, which are tumbling one after the other, under the often debatable pretext of a spontaneous threat of collapse. It was following a request from a neighbourhood committee in January 2013, in favour of protecting this brick chimney, that PIWB compiled a file concerning the interest of preserving it. Unfortunately, the heritage department, followed by the heritage minister, gave a negative response regarding its preservation. SPAQuE pulled it down several days later.

#### Research, exhibitions and publications

Obviously, we can't provide an exhaustive list of the research, exhibitions and publications concerning industrial and social heritage. PIWB's newsletters, available on its website ([www.patrimoineindustriel.be](http://www.patrimoineindustriel.be)), and the quarterly *La Lettre du Patrimoine* published by IPW, are vital sources. There is also a platform for historians and those who are passionate about heritage, and industrial heritage in particular: [www.minedhistoires.org](http://www.minedhistoires.org). Hence, the following list is entirely subjective.

Concerning mining sites, CRUL J., DELAET J-L, DEVILIER G., et al, *Les sites miniers majeurs de Wallonie, patrimoine mondial, Carnets du Patrimoine*, no. 96, 68p, is a must. To celebrate the tenth anniversary of its opening to the public, the Bois du Cazier held an exhibition, *At heart of progress. Coal, iron and steam since 1750*. Industrial imagery from the collection of John P. Eckblad, from 5 April to 3 June 2012. These engravings were exhibited for the first time at the University of North Carolina's Ackland Art Museum in

Chapel Hill. Catalogue in English and French. The Blegny Mining Museum recently held the exhibition *Des mineurs et des savants*, from 14 March to 17 May 2015. Put together by the University of Liège's Centre d'Histoire des Sciences et des Techniques, it shows us the miners who have helped science and even our world view to evolve (a catalogue is being drafted). Still on the subject of mines, after the publication of his booklet on the *Misère au Borinage* by Henri Stock and the social films in 2011, the Cinematek (Royal Belgian Film Archive) brought out *Les Mines. 14 films sur les charbonnages belges*, in 2012.

Within the framework of the cross-border INTERREG IV (2009-2013) programme, the *Itinéraire de la Culture Industrielle (ICI)* project invites us to discover the heritage common to Hainaut and the Nord-Pas de Calais. The French partners were: Mission Bassin Minier, the Communauté d'Agglomération Hénin-Carvin, the Musée d'Histoire Naturelle de Lille; and the Belgian partners: the Parc d'Aventure Scientifique (PASS) in Frameries, the Ecomusée de Bois-du-Luc and the Bois du Cazier. ICI has created many tools including a guidebook. This publication suggests five themed routes which take you across the border to discover the industrial experience, and includes 160 accounts. *Itinéraire de Culture industrielle, Carnet d'exploration, Bois-du-Luc*, 2011, 247p.

## **BRUSSELS**

Guido Vanderhulst, vice president of PIWB, president of BruxellesFabriques

In 1990, the 7th TICCIH Congress was held in Brussels and organised by TICCIH Belgium, the federation of Flemish, Walloon and Brussels associations for industrial heritage. Twenty-five years later, this contribution aims to measure the evolution in the preservation of this heritage in the Brussels-Capital Region.

There have been significant developments. Considerable advances have been made. Belgium was federalised and a Brussels region was created. It acquired the means to take care of itself in all respects, in particular, in terms of land-use planning, the management of infrastructures such as the port, roads, railway stations, managing the environment and heritage as well. A Commission Royale des Monuments et Sites for Brussels was established.





The Royal Depot restored. © Guido Vanderhulst

Of course, we must mention the Tour & Taxis site, a series of imposing buildings built between 1904 and 1907. Ten years of actions and tensions were required to save the site and reallocate it. A group was formed bringing together various associations coordinated by La Fonderie. After a press campaign, the involvement of neighbouring populations, an appeal to the Council of State against the regional government, involvement of the World Monument Watch representative, it finally won against the ridiculous Musiccity project which wanted to deface the site and adapt it to a purely autarchic and commercial project. It was actually the new owners who concluded that this commercial project was unprofitable. They understood that placing a stake on heritage was the only future value. The property developer funded a trilingual brochure and a permanent exhibition of paintings, among other things. For nine years, the Commission Royal des Monuments et Sites had its offices here.

Today, the site works very well, with offices in the old rooms of the Royal Depot, exhibitions and events in the old sheds and in the cellars. The most emblematic buildings were renovated with a genuine respect for their value. Sadly, none of the old railway lines were kept, even as a reminder of their original purpose. Outside, festivals such as Couleurs Café or circuses welcome a large influx of people under the big top. A nine-hectare park,

undoubtedly the biggest one to be developed for decades in the Brussels Region, is currently being planted. It is the work of the French landscape gardener Desvigne.

The site is currently filling up with new buildings; if you are a property developer, you try to make the most of your outlay, even if this means sometimes making unfortunate choices. These new buildings break with the historical layout determined by the rail sidings: this site was a marshalling yard for customs purposes, and the formation of trains. Public institutions have moved in here, such as the environment office or the Ministry of the Flemish Community, which will group all its services together here.

Another building project led to considerable discussions: the future of the former Poêleries belonging to Jean Baptiste GODIN (1817-1888) in Laeken, opposite the Parc Royal, on the banks of Willebroeck canal. This site was exceptional, and Godin's only construction besides the Guise site in France, which has been saved thanks to support from all the French and European authorities. Without telling the whole story of Godin's development in Brussels, the latter reconverted and developed the oldest industrial site in the region into an indienne.

Despite the criticism facing the construction of a huge car-based shopping centre, which belongs to a new era, in favour of saving this major exceptional piece of social and industrial heritage; despite widespread mobilisation; and despite the proposal to list the site, the government gave in to the developer. Only part of the indienne, the place the workers called the 'cathedral', was saved and will be restored, but nothing of Godin's original construction will be kept. We will have to explain the history of the listed Familistère, without the factory which was the reason for the building!

Another interesting piece of heritage was razed to the ground for the sake of a tower building, the biggest in the Brussels Region. They were the old Delhaize offices, warehouses and factories, on Quai des Armateurs. Adolphe Delhaize (1840-1899) had a complex built that was the finest example of an industrial and commercial site, built on the banks of the canal in the new port area, and connected to the railway line which came right into the factory, just below the bow-windowed offices, allowing the directors to check on the arrival of the workers, the freight cars coming in and the boats being unloaded. It was also the customs function of Tour & Taxis that explains this choice: Delhaize imported coffee, cacao, colonial foodstuffs and a lot of wine, which were all taxed. The building's architecture was remarkable, embellished with sgraffito decorations. The listing procedure was broken off owing to the pressure from property developers.

An old mill, the Meunerie Moulart dating from 1903, is in the process of being renovated and adapted. Built on the banks of the Charleroi canal, like several other flour mills, it benefited from arrivals of Walloon coal for the steam engine, and grain to be milled into flour. This flour mill is the only one still in existence, apart from the Ceres mill which is still in use in the outport. A historical study was carried out revealing that these bosses and patriarchs had a vision of industry while favouring their family. Thanks to European funding, the building will be able to provide space for start-ups as well as a space devoted to highlighting the history of the Cureghem neighbourhood, which was significantly marked by the canal, industries and social life.

The Atlas brewery (1913), an old brewery that dominates the landscape in Anderlecht, reflects the conversion of breweries that brewed local beer only produced in the Brussels Region – lambic and gueuze with a long, slow fermentation process – to directly available pils type beers. The two eras of brewing stand alongside each other. Unfortunately, a property developer has been authorised to knock down the old part, only keeping the brewery's 'cascading' tower. It will be turned into lofts!

A new association was created in 2008: BruxellesFabriques-BrusselFabriek. Its purpose is to study and highlight the region's social, port and industrial heritage, to collect the social memory of the 'last' witnesses and to raise awareness among the public to ensure the next generation looks after this heritage.

One of its current projects is to restore old machines from the Wielemens-Ceuppens brewery built between 1894 and 1905. Europa Nostra awarded BruxellesFabriques first prize in June 2013, in the "Studies prior to restoration" category. The project is progressing and the schedule to start the work is currently being negotiated. The study won an award because it associates the restoration of masterpieces of industrial heritage of at least European value with a programme to retrain people, and with a campaign to raise awareness among the general public with regard to these machines and their history, the 'soft' restoration system, the brewery and the neighbourhood. A major sponsor is joining this programme, thus covering almost the entire 'restoration' budget. The restoration works should take place in 2015.

Among the actions to highlight and raise awareness about the project, the association mobilised several heritage stakeholders, concerning the listing of the Avenue du Port, and the revival of jobs for pavers. This avenue was created by the port in 1907 as a real industrial boulevard, used to serve the port companies. One thousand five hundred metres long and 18 metres wide, it is composed of more than one and a half million porphyry paving stones, a true gem resulting from magmatic rocks from the region of Quenast in Hainaut. It is undoubtedly one of the last paved industrial boulevards in Europe. These paving stones were exported throughout Europe: even Red Square in Moscow and the main square in Nantes are paved with these stones laid by Walloons. The request to have it listed was refused by the government, and an appeal to the Council of State is in progress.

The abovementioned cases mean that Brussels' social and industrial heritage remain topical, despite the pressure of property developers and the choice of too many authorities to take risks on the future of a European capital region, by wiping away many jewels of our heritage.

## Ronaldo André Rodrigues Da Silva

### Introduction

The early activities of the Brazilian Committee for Conservation of the Industrial Heritage (TICCIH-Brazil) were developed between 2004 and 2009, during which the first activities of appreciation of industrial heritage took place. The recognition and preservation of sites of the industrial context as ways of cultural expression were also emerging.

During this period, participation in local, Latin American and international meetings allowed a scientific and academic background to develop. This environment led to a greater visibility of the Brazilian industrial heritage and guaranteed a concern, even if it was in its initial phase, of public and private agencies to recover and preserve it.

From 2009, with the possibility of holding an international meeting in Brazil (the Latin American Colloquium), a new stage of the actions and activities related to industrial heritage was envisioned. However, due to political and economic issues and without an adequate institutional support and sponsorship, the activities were forced to focus only in the participation of international meetings and academic research activities.

In 2012, as a reestablishment of the proposed activities, the Latin American Conference was held in the Escola de Belas Artes (School of Fine Arts) of São Paulo. The participation of a large number of researchers and the presentation of a total of 125 works from different countries confirmed the importance of the endeavor to establish relevant debates. These efforts were also essential to develop proposals of actions that seek the appreciation of the Brazilian and Latin American industrial and cultural heritage.

During the Latin American Colloquium of 2012, another event was held in parallel: the Second National Meeting on Industrial Heritage. On this occasion, the TICCIH-Brazil Committee was elected, whose representatives are: Ronaldo André Rodrigues - president; Ademir - vice-president; Vanessa Bello Gayego Figueiredo and Marco Zambello - general secretaries; Cristina Meneguello and Silvana Rubino - academic committee; Bernardo Bielowski Brazil - institutional committee.

This fact reflected in the later participation in the International Meeting of TICCIH in Taipei, in 2012, and the Latin American Conference in Mexico, 2013. And, once again, confirmed itself with the great amount of papers presented at the International Meeting in Lille in 2015.

In addition to participating in these meetings, the involvement of researchers linked to Brazilian industrial heritage in other several meetings for the dissemination of research related to the industrial heritage confirms the development of a Brazilian body of research in the area. This expansion is also seen in the analysis of the numerous post-graduate, masters and doctorate researches which were presented in the last years. The theme of these researches was focused on industrial elements and their relationships with the environment and its importance to the communities and local and Brazilian societies.

Thus, it has become a global concern to present certain continuity in the actions and activities related to heritage. Our intention is to promote, in 2016, the IV National Meeting on Industrial Heritage as a preparatory element for an effective participation in the Latin American Colloquium, to be held in Cuba.



## The Brazilian industrial heritage 2013/2015

The concern regarding the preservation of Brazil's industrial heritage can be observed in the last five years as a growing concern by public bodies for the inclusion of sites of cultural heritage in local, regional and national lists. Since then, there has been a widening regarding the perception of sites of the industrial heritage as manifestations of culture, both material and immaterial. There were also institutional activities such as:

List of Goods – IPHAN

State	City	Denomination	Situation
<b>2012</b>			
RJ	Quissamã	Conde de Araruama's Railway Station Complex (Building)	Dismissed
RJ	Rio de Janeiro	Boarding platforms of Barão de Mauá and Praia Formosa Stations and the ateliers of Praia Formosa Station (Architectural Complex)	Provisory
RJ	Rio de Janeiro	Building of the Old Docks Dom Pedro II (Edification)	Emergency
RJ	Rio de Janeiro	Eurico Gaspar Dutra Bridge, Burle Marx Road, Guaratiba (Equipment and urban infra-structure)	Dismissed
RJ	Rio de Janeiro	Santos Dumont Airport (Building)	Dismissed
RJ	Teresópolis	Governador Portela Square (Urban Complex)	Dismissed
SC	Florianópolis	São José I Whaling (Moving and integrated goods)	Instruction
SC		Remains of Viamão path, between the states of Rio Grande do Sul and Santa Catarina (Rural Complex)	Instruction
SP	Jundiaí	Building and Land of the Ex-factory Japy in Vila Arens (Building)	Dismissed
SP	São Paulo	Cine Belas Artes Cinema (Building)	Dismissed
MA	São Luís	Historical Site Vila Vinhais Velho (Urban Complex)	Instruction
<b>2013</b>			
CE	Capistrano	Capistrano Railway Station (Building)	Dismissed
RJ	Japeri	Japeri's Former Railway Station (Building)	Instruction
RS	Santa Maria	Vila Belga (Urban Complex)	Dismissed
<b>2014</b>			
AL	Mata Grande	Public Jail (Building)	Instruction
GO	Cidade Ocidental	Saia Velha's Hydroelectric Power Plant (Equipment and urban infra-structure)	Dismissed
MG	Ribeirão Vermelho	Architectural and Landscape Complex of the Ribeirão Vermelho Railway (Architectural Complex)	Instruction
RJ	Magé	Headquarters of the Magepe-Mirim Farm (Building)	Dismissed
RJ	Rio de Janeiro	DOI-CODI's Building (Edification)	Instruction
RJ	Tanguá	Factory buildings of the bankrupt Brazilian Antibiotics Company - CIBRAN (Edification)	Instruction
RR	Boa Vista	Architectural Complex of São Marcos Farm (Rural Complex)	Instruction
SC	Florianópolis	Old Airfield - 'Field of Aviation' (Equipment and urban infra-structure)	Dismissed
SP	Dois Córregos	Dois Córregos Railway Station (Building)	Instruction
SP	Jundiaí	RFFSA's Collection in Paulista Company of Railroads's Railway Museum (Collections and archives)	Instruction
<b>2015</b>			

PE	Recife	Courtyard of Cinco Pontas Railway (Architectural Complex)	Instruction
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As recent experiences, there are some cases that constitute the appreciation of heritage by the requalification and reuse of projects. The preservation of these sites, however, depends on maintenance of the memories and stories of the Brazilian industrial past. It also depends on the commitment of social agents to the preservation of the industrial cultural heritage, whether these agents are companies or government, people or groups of interest.

As an example complementary to those recognized by the federal agency of protection to the cultural heritage, there is the industrial complex of Tanguá (CIBRAN). Its search for recognition is a joint work of the community and municipal government. These groups formed a strong movement aiming at the formalization of the process to the protection to the patrimonial collection of the Brazilian Antibiotics Company - CIBRAN, which inherited the sugar industrial complex of Tanguá. The factory, located in the eastern region of the Rio de Janeiro state, emerged as an important alcohol production center in the 1920s. It also played an important social and economic role for Brazil and the international community between 1970s and 1990s due to its production of inputs for the manufacture of antibiotics.



Industrial Complex of Tanguá, State of Rio de Janeiro.(c) Rodrigo Rangel, 2015

A second example relates to the adaptation of the old São Luís Factory, located in São Pantaleão Street, in the district of Madre Deus, São Luís, Maranhão. With the financial aid from the federal government through “PAC2 Cidades Históricas”, the reform and restoration of the architectural complex with its sites of the industrial building that compose the apogee of Maranhão textile industry was made possible. This set of buildings is located in heritage site, in São Luís Historical Center. Currently, it comprises the Cultural Foundation with areas of artistic expression, technical resources and custody of the equipment of the events organized throughout Maranhão’s cultural calendar. Its future project is to install, after the

recovery of the complex, the headquarters of the municipal parliament. The project has to proposition to start the reconstruction on September 2015 and to end it in the middle 2017.

Unlike the previous examples, this complex is recognized as an intangible industrial heritage by the federal agency of cultural heritage (IPHAN), who considered the productive process of the Canastra cheese as intangible heritage of Brazil. Its making process has its own characteristics and is transmitted between generations in farming families. The Canastra cheese features are known as more cured texture, sharp flavor and a specific aroma. Its production takes place on farms in the Serra da Canastra region which is characterized by mountains, the nascent of São Francisco river and other natural beauties. With national recognition, the name "canasta" can only be used for cheese produced in the region.

Nevertheless, the slowness and difficulty in defining the situation of the Brazilian railroad heritage should be noted. The different interpretations as to the competence between different state agencies and, consequently, their jurisdiction are two factors that contribute to the difficulty of this process of recognition of rights and duties on their complex of elements.

One of the cases of national interest is pending since 2013. At this time, there was a proposal by IPHAN to prepare a Revitalization Project of the Railway Heritage which would result in the creation of the National Railway Museum (Museu Ferroviário Nacional – MFN). The idea was to restore and re-use the Leopoldina Railway Station, in Rio de Janeiro, to house a significant portion of the Brazilian railway system assets. The station was inaugurated in 1926 and known as the Barão de Mauá Station. The complex is now disabled for more than 10 years. Therefore, the project is expected to determine an appreciation of its space as well as the recovery and consolidation of the preservation of the national memory of railroads.

Another case of non-recognition and disregard for the Brazilian industrial heritage, and the subsequent appropriation of real estate speculation, refers to the case of Sergipe Industrial Company in Aracaju, Sergipe. Even after the academic and social mobilization, which developed petitions and documents that demanded the establishment of the factory as a heritage site and presented these documents to the Sergipe Council of Culture, the demolition of the factory could not be prevented. The only building left was the Industrial Chapel, which will be preserved in the central area of space where a shopping center stands.



Area of the Sergipe Industrial Company (with the Industrial Chapel in the center-left). © Ronaldo André Rodrigues, 2014

The factory was an important industrial center of the Northeast region of Brazil, especially due to the implementation of the textile industry in the beginning of the twentieth century. It represents the memory and history of the city as well as the valuation of local identity. It is also believed that the factory was a framework for the struggles of the working class and forming pioneer entrepreneurs in the region. The complex was composed of manufacturing areas, leisure areas and workers' housing. The only remaining element is located outside of the walls of the demolished complex, which comprises a couple of houses of the Workers' Village and the aforementioned chapel.

One of the cases that demonstrate the plurality of the Brazilian industrial patrimony, including both geography and regionally, is found in Joinville, Santa Catarina, where we have the closure of the 'Bunge Alimentos' activities. Its structure dates back over a 100 years and owns one of the most easily identified buildings of the city, the Joinville Mill. However, unlike previous cases, there is a social and governmental mobilization aiming to transform the cultural area into a space where activities related to arts, vocational training and museums would be developed. The proposal aims at the valorization of an envelope area in which is the Public Market. In this sense it has been sought to expedite the process of tipping and to set a valuation project in the area, which has not been consolidated since the end of 2013.

As well as in the previous cases presented, some others took place with the social mobilization, and they've ended up being converted into positive, but provisory, situations that led to the reflection and appreciation of industrial heritage. This refers to the steam-driven São Luiz Factory, installed in 1869 in the city of Itu, São Paulo, a pioneer in the spinning and weaving industry in the state.

It represents one of the most important examples of the first industrialization phase of the state and Brazil. In 2014 the demolition activities of a grand part of the factory began, with no concern for the fallen areas or the preservation of the complex. However, from the social mobilization there was a banning of the process and a reassurance of the importance of the factory for the social and economic history of the city and the region.

Recently, two important examples of the appreciation of industrial heritage have occurred in Brazil.

After the social mobilization in Recife, in June 2014, residents and public agencies of the State of Pernambuco promoted an intense process of protection and enhancement of the so called "Pátio Ferroviário das Cinco das Pontas" (Cinco Pontas Railway Courtyard) at the José Estelita Pier. The area comprises a rail complex located in an important valuation and real estate speculation region, which also has great importance for the formation and development of the city. The Railway Complex is the second oldest port-rail assembly in Brazil and consists of a group of buildings that consider the operational area an element of the train memory, whose representation is done through the preservation of the 'Estrada de Ferro Recife - San Francisco' (Railroad of Recife – São Francisco), the second oldest in the country and the first in northeastern Brazil.





View of Cinco Pontas Railway Courtyard (Recife, Pernambuco). © Edmar Melo/JC Imagem, 2015

With the recognition of the area as cultural heritage, in February 2015 the federal agency, IPHAN, presented the technical studies that determined its inscription on the Brazilian Cultural Heritage Railway list. This fact is important not only for the preservation of the memory and history of Pernambuco and Brazil, but also to help identify its importance and landscape values, historical and cultural. The importance of social mobilization, the movement "Occupy Estelita" and the Federal Public Ministry and the Ministry of Culture should be emphasized. Thus, there is the appreciation of the Brazilian railway and industrial heritage and the possibility of their redevelopment and reuse as an important identity space from inclusion projects and visibility of the space for the population and enhancing the social memory.

It is expected from this initiative that social groups and public and private institutions start to enhance the Brazilian industrial heritage and define solutions that lead to the coordination of city-wide planning projects that take into account not only the furniture speculation, but also the memory and the history of social spaces.

One last case in May 2015 refers to the Barão de Mauá Bridge, which was recognized as the first binational cultural heritage among the Mercosur countries, Brazil and Uruguay. It was built between 1927 and 1930 on the river Jaguarão and linked the towns of Jaguarão (RS), Brazil, and Rio Branco, Uruguay. The bridge constitutes a major axis of communication between countries and its importance is due to the approach and exchange, from political and economic objectives to social and cultural ties, between Brazil and Uruguay.



The Barão de Mauá Bridge - Jaguarão (RS), Brazil, and Rio Branco, Uruguay, 2013.

## Conclusion

It is noticeable that, in the second decade of the twenty-first century, the domain of the industrial heritage has been appreciated, recognizing its importance for the memory and the history of Brazilian society. The multiplicity of representations has also allowed verification of the diversity of possibilities that the industrial heritage includes; as well as the identification of elements whose reference is the formation of Brazilian society.

The preservation of the sites has occurred in several Brazilian regions and many heritage appreciation initiatives occur from the mobilization of civil society, through groups and local associations, as well as state agencies, private companies and institutions. However, despite the efforts, the number of cultural industrial heritage sites that are protected is still low, considering all of the existing possibilities in the country.

An important contribution to the Brazilian and world heritage, held with the support of TICCIH-Brazil, was the book *Paranapiacaba, a heritage for humanity*, coordinated by Prof. Dra. Vanessa Gayego Bello Figueiredo and Prof. Ronaldo André Rodrigues, both members of the Committee. The Village of Paranapiacaba, State of Sao Paulo, is an important example of preservation of the railway heritage, whose company town and railway complex make up a unique example of industrial landscape that is composed not only of an architectural structure, but also natural heritage located in the Serra do Mar and composed of an area of environmental preservation, and historical and technical railroad heritage. It is noteworthy that in 2014 the Village of Paranapiacaba was included in UNESCO's list to become world heritage because of the [English Village and Railway Systems](#) in the Serra do Mar Mountain Range.



View of Paranapiacaba Company Town. © Ronaldo André Rodrigues, 2012

In this sense, the Brazilian Committee for Conservation of the Industrial Heritage has sought to develop its actions by recognizing the field with the support from different institutions, such as the Brazilian official organs of preservation of cultural heritage, universities, research groups and others. The effective participation of members of the National Committee on academic events - national and international - has provided the institutionalization of the field and the formation of a network of collaborators for the enhancement of industrial heritage.

For the coming years, we intend to institutionalize the process of network and strengthen and encourage the participation in all Brazilian regions, as well as intensify the Committee's activities along with the official organs of Brazilian cultural heritage - in its local, regional and national levels. Thus, the Committee's role has sought, as principles, to identify and register, protect, preserve and conserve, educate and train individuals who allow the appreciation of national industrial heritage.



# Chile

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## Jaime Migone-Rettig

President TICCIH-Chile, Corporación Nacional Chilena para la Conservación del Patrimonio Industrial. TICCIH-Chile

TICCIH-Chile is a Cultural Development Non-Governmental Organization working for the conservation of Chile's industrial heritage. TICCIH-Chile has been involved in several activities aimed at sensitizing and disseminating the values that are the driving force of its members. Following is a summary of activities performed up to January 2015.

The Elevators of Valparaíso: full restoration of the transport system.

During the second half of the nineteenth century, the port of Valparaíso became the main centre for storage and redistribution of products in the South Pacific. Through it, the city experienced an economic splendour shortly noted in the urban development of this. The richness of the port industry, the flowering of new trade and the arrival of foreigners who were attracted to the investment opportunity offered by the port, completely changed the provincial level that characterized the first town of Valparaíso, becoming a cosmopolitan city, an icon of urban modernity in the Republic of Chile.

The history of the elevators goes back to the development of transport after the Industrial Revolution. While the idea of lifting objects using a rope attached to a pulley system existed long before (as shown in the engraving of the fifteenth century), it was in the nineteenth century, once the steel wire braiding was invented it went on to become a means of transportation that did not depend on human or animal traction.

NUM.	Elevator	Since
1	Concepción	1 de diciembre de 1883
2	Cordillera	16 de septiembre de 1886
3	Artillería	29 de diciembre de 1892
4	Hospital San Juan de Dios	octubre de 1898
5	Bellavista	16 de julio de 1899
6	Panteón	24 de junio de 1901
7	El Peral	7 de diciembre de 1901
8	Ferrovioario	18 de mayo de 1902
9	Reina Victoria	4 de marzo de 1903
10	Esmeralda	1905
11	Mariposas	14 de mayo de 1906
12	Florida	1906 a febrero de 1907
13	Arrayán	12 de marzo de 1907
14	Lecheros	15 de febrero de 1908
15	La Cruz	5 de marzo de 1908
16	Barón	17 de abril de 1909
17	Larraín	31 de octubre de 1909



18	Santo Domingo	16 de noviembre de 1910
19	Espíritu Santo	24 de diciembre de 1912
20	Monjas	1912
21	Placeres	1913
22	Villaseca	18 de octubre de 1913
23	San Agustín	1913
24	Merced	20 de febrero de 1914
25	Ramaditas	21 de noviembre de 1914
26	Polanco	8 de junio de 1916
27	Delicias	1921
28	Las Cañas	1925
29	Van Buren	1929
30	Perdices	19 de septiembre de 1932

From the second half of the twentieth century, the economic prosperity that had been forged in Valparaíso during the nineteenth and early twentieth centuries began to decay, producing a long stagnation in the development of port elevators.

On the one hand, the construction of the Panama Canal in 1914 made Valparaíso lose primacy in trade in the South Pacific. In turn, the beginning of World War II that year resulted in a diminution of trade between Europe and America. And finally, the global crisis of 1929 that triggered from the United States, affected Chile and its main port very strongly, due to economic dependency abroad had finally generated, the splendour lived by the locals started to disappear as decreased investment capital in place.

The group of Elevators of Valparaíso was included in the 1996 List of Endangered Heritage Sites of the World Monument's Fund. In addition, a multidisciplinary research, funded thanks to a grant, was the basis for submitting the candidacy of Valparaíso for inclusion in the [World Heritage list](#). The book "*Ascensores de Valparaíso, valor de un patrimonio olvidado*" was published. Now we are working on the restoration of Elevator Las Monjas and Elevator Villaseca. Last year, 2014, we won a competition at the Ministry of Public Works of Chile. The restoration will be comprehensive and aims to recover the transport system.



Ascensor Monjas



Ascensor Villaseca

Pisagua Saltpetre Port, Restoration of two historic monuments. Theatre and Clock Tower

The port of Pisagua is located over 2,000 kilometres north of Santiago de Chile and currently has less than 300 inhabitants. In its highest splendour, at the beginning of the 20<sup>th</sup>



century, it had some 2,000 inhabitants and was one of the major saltpetre shipping ports throughout the world.

There are five buildings with the top protection condition under the current law in Chile, the Theatre and the Clock Tower among them. In the enhancement program of this site are the projects of restoration and refurbishment of both buildings, an initiative led by the Ministry of Public Works of Chile.

In 2013, the Ministry of Public Works launched a public contest to carry out both projects of enhancement, won by our institution. Both projects are finished and in a phase prior to their completion. Both monuments were built at the end of the 19<sup>th</sup> and beginning of the 20<sup>th</sup> centuries and were part of the saltpetre port's infrastructure. The Theatre is a 1,650 square meter building with room for some 300 people and also has a market and the seat of the Town Hall as a part of its facilities.

The clock tower also dates from these times and has a clock machinery that besides telling the time of the day includes a carillon that marked the quarters, the halves and every hour with a two bell system, for the port. The clock is French and was made in approximately 1870 by the Collin Wagner Company, a Jean Wagner successor company, with its headquarters in Paris.

Both projects restore the buildings and refurbish their operations to be handed over to the development of the local community, as part of enhancement.

We will continue to focus our interest on the industrial heritage and we want to invite everybody to join in a multidisciplinary approach to the tasks of identification, documentation, and rescue in which we all have something to contribute.



Pisagua Port

Santa Laura Saltpeter Facility, Atacama Desert, Enhancement of a World Heritage site. Interpretation Center and the Iodine Museum.

The former Santa Laura and Humberstone Saltpetre facilities are part of UNESCO's World Heritage list since 2005. Both sites are also highly protected by the Council of Chilean Monuments, and are part of the Endangered World Heritage. These sites are run by the [Corporación Museo del Salitre](#) (Saltpeter Museum Corporation).

The enhancement program of this site comprises the restoration and refurbishment Project of the Old Management House of the Santa Laura Saltpetre, an initiative led by our office for over a year and currently on its last stage of execution. The Management House is an approximately 1,600 m sq building, with an additional 2,100 m sq patio area, built at the beginning of the 20<sup>th</sup> century as office headquarters and housing for the English manager of the facility.

Its current condition is precarious and it was abandoned from 1961 until 2000, when the Saltpetre Museum Corporation took over its protection and a complex and slow process of enhancement started. In 2012, the Ministry of Public Works launched a public contest to carry out the enhancement of the Management House that was awarded to our institution and is on its final development phase nowadays.

The project consists in the structural consolidation and restoration of this building, in order to maintain its current condition, as an example of industrial heritage restoration. This House will also harbour the Iodine Museum, a saltpetre by-product and quite unheard of within the productive process for so many years on the site.



Santa Laura Saltpetre

We will continue to focus our interest on the industrial heritage and we want to invite everybody to join in a multidisciplinary approach to the tasks of identification, documentation, and rescue in which we all have something to contribute.



# China

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## Liu Boying

Professor of Tsinghua University, School of Architecture, Chairman of the Industrial Heritage Committee under Cultural Relic Academy China

## Organizations

Recently, there are three organizations in the field of industrial heritage research in China. The first one, Industrial Architecture Heritage Committee under the leadership of Architectural Society of China (ASC) was established in November 2010. The second, Industrial Heritage Department under the leadership of Historic and Cultural City Committee of China was established in March 2013. The main representatives are the architects and urban planners in these two organizations.



The Industrial Heritage Committee under Cultural Relic Academy China (IHC of CRAC) is the third, and its founding ceremony was held in May 29 2014. IHC is a NGO organization, which consists of academic scholars in the fields of architecture history and technical history, urban planning, architecture design and environment science. Some factory owners and investors were invited to join the committee. IHC has 12 consultants, 74 members, and 21 directors.

Today, there are more than 10 TICCIIH members in China according to TICCIIH Membership Directory. We hope to make IHC represent TICCIIH in the People's Republic of China, and to establish the TICCIIH National Committee.

## Activities

More than 20 Chinese Mainland scholars participated in the 2012 TICCIH Congress in Taipei. From 2010 to 2014, we have held annual academic conference every November in different cities, Beijing, Chongqing, Harbin and Xian. The impact of the committee is increasing, and the size of the conference has reached 400 people in 2014. The 2015 conference will be held in November in Guangzhou.



Liu Boying, the representative of IHC, took part in the 2014 International Forum for Asian Route of Industrial Heritage, which was organized by Hsiao-Wei held in Taipei. The IHC has invited Hsiao-Wei to join the annual conference three times.

IHC cooperated with a media company and organized the Urban Regeneration Forum in Xian in April 2015. John Thompson (general urban planner of Battersea Power Station regeneration project, London) was invited to give a speech.

## Museums

There are currently 3,866 museums in China; among them, more than 300 are industrial thematic museums (some of them belong to industrial enterprises. 232 museums are of traditional technology themes, such as ceramic (<http://www.jdztcms.com/>), salt (<http://www.zgshm.cn/>), silk (<http://www.chinasilkmuseum.com/>) and paper (<http://www.ntzzbwg.com/>), etc. 68 museums are of modern industrial themes or belong to industry enterprises, such as chemistry (<http://chemmuseum.net/>), glass (<http://www.qhdblbg.com/>), railway (<http://www.china-rail.org/>), coal (<http://www.coalmus.org.cn/>) and automobile (<http://www.automuseum.org.cn/>), communication (<http://museum.chinatelecom.com.cn/>) etc. In addition, most historical museums, science and technology museums, and comprehensive museums have industrial relic collections (<http://www.chnmuseum.cn/>), (<http://www.shanghaimuseum.net/>), <http://www.sxhm.com/>, <http://www.cstm.org.cn/>).

On January 4, 2012, the Digital Museum of Baidu Baike was formally put into use. It is the result of cooperation between Baidu Baike and traditional museums. The Digital Museum is a universal platform synthetically making use of rich media, QR code, and virtual reality technologies, providing a full range of display of collections. By using computers and mobile phones, people can get access to information on 115 Chinese Museum collections. Every collection can be presented in 360 degrees, with professional verbal explanation.

There are 72 National Mine Parks with a variety of themes, including iron, coal, nonferrous metals, oil, and building material ore. There are abundant mineral geological relics, historical production sites, mining products, social life scenes, and mining development literatures. (<http://www.hnbsgjksgy.com/>, <http://www.byhyspark.cn/> <http://bbs.scjyjt.com/>)

## Achievements

### Research

IHC issued “*Designation Listing Selection Guide for Chinese Industrial Heritage*” in May, 2014, as the standard for research. The Committee undertakes research projects, helps government to issue relevant policies, and provides consultation for urban planning, architecture design, and creative industry operation.

### World Cultural Heritage

Dujiangyan irrigation system is the only Chinese industrial heritage listed in the World Cultural Heritage in 2000. The Grand Canal, the longest canal and artificial river in the world, with many industrial heritage projects, was added in the World Heritage Site List in 2014.

Huangshi Mining and Metallurgy Industrial Heritage (located in Hubei province), entered the Chinese World Cultural Heritage Preparatory Backup List in 2012. It includes four parts: Tonglushan Ancient Copper Mine Site, Daye Iron Mine Pit, Hanyeping Coal-Iron Industrial Site, and Huaxin Cement Plant Site.



Tonglushan Ancient Copper Mine started early from Yin dynasty (1000 BC.) and has lasted 3,000 years till today. A large number of ancient ruins were discovered here.





Daye Iron Mine Pit has become the largest Asian mining pit after more than 1,780 years of mining.



In 1890, Zhang Zhidong founded Daye Iron Mine and Daye Iron Work in Huangshi. They were the main bodies of Hanyeping Company which was the largest steel company in Asia at the time, and was called "the cradle of the iron and steel industry in China". The retained iron blast furnace base was built in 1921.





Huaxin Cement Plant was established in 1907 by royal assent, formerly named Hubei Daye Cement Plant and one of three cement plants in modern China. In April 1950, the plant was moved from Wuhan to Huangshi, and was combined with Daye Cement Plant, changed to the name of Huaxin Cement Plant. In December 1950, the second wet kiln production line was put into operation, and the plant reached the largest in scale in Far East. Huaxin Cement Plant Site includes many constructions and equipment, such as workshop, kiln, mill and packing machine. The existing three sets of large cement wet process rotary kilns; No. 1 and No. 2 kiln were imported from the United States in 1947, which are currently the only cement wet process rotary kiln equipment in the world. In comparison, No. 3 kiln was domestic, put into operation in 1977, and represented the advanced level of China's cement industry at the time. The above four industrial heritage sites are concentrated intensively in the region of 17 square kilometers. With the distinct characteristics of age-old, diverse category, spatial enrichment, and integrity protection, the four industrial heritage sites are the historical witnesses of city development and the technology level in different periods.



Patrick Martin (President of TICCIH) in Huangshi

## Chinese National Key Cultural Relics Protection Units

In 2013, the State Council promulgated 1,943 new National Key Cultural Relics Protection Units as the seventh installment. Among them, 170 Industrial Heritages (including industrial heritage before the Industrial Revolution) were included. Now, the total number of industrial heritage sites in the National Key Cultural Relics Protection Unit reached 329, of which 245 are ancient industrial heritage, and 84 are modern industrial heritage.



Changchun First Automobile Works



Old Millfun 1933 in Shanghai





Shanghai Yangshupu Water Plant

### **Statutory regulations**

- 1) A number of cities have investigated, sorted and promulgated the industrial heritage protection lists, and drawn up the protection plan for industrial heritage, such as Nanjing, Guangzhou, Wuhan, Hangzhou, etc.
- 2) A number of traditional industrial bases investigated and promulgated the industrial heritage protection lists, designated industrial heritage protection zones, such as Beijing Shougang, and Beijing Coking Plant, etc.
- 3) Some cities, like Wuxi and Daqing, issued local regulations.

### **Conservation and reuse projects**

Under the Urban Renaissance and New Urbanization policies, more than 130 urban regeneration projects were implemented across China in the past five years. For example, in Beijing, more than 10 square kilometers of industrial land have been changed in functions into residence, commerce, office, and creative industry park uses, etc.

Unfortunately, a large number of industrial buildings were demolished during the process of urban regeneration. The industrial heritage conservation is facing an extremely critical situation.

Some industrial heritage sites are changed into influential cultural and creative industrial parks through industrial heritage conservation and architecture reuse, promoting the socioeconomic transformation and development. Industrial landscape has provided the cities with a distinctive view.



Urban design of Shougang industrial heritage conservation and architecture reuse

## Publications

From 2010 to 2014, IHC has published 4 proceedings with more than 300 articles. The main contents focus on as follows:

1. Value assessment and investigation of industrial heritage
2. Foreign and domestic industrial heritage protection cases
3. Foreign and domestic industrial heritage protection systems
4. Industrial heritage protection and industrial architecture reuse
5. Traditional industry production technology
6. Public issues (policy/education/museum/tourism/environment) of industrial heritage protection

Zhu, Wenyi and Liu, Boying, *Chinese Industrial Architecture Heritage Investigation, Research and Conservation*, Vol. 1-4, 2011-2014, Published by Tsinghua University Press



# Czech Republic

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**Benjamin Fragner and Jan Zikmund**

## Introduction

Since 2013, activities connected with industrial heritage in the Czech Republic have been united through the Platforma Industriální stopy (*Vestiges of Industry Platform*), which has been behind a series of conferences, exhibitions and professional initiatives organised since 2001 under the same title. This platform was formed by the VCPD – Research Centre for Industrial Heritage of the Czech Technical University in Prague, which is the only institutional member of TICCIH in the Czech Republic, and the Kolegium pro technické památky (Technical Monuments Committee) of ČKAIT and ČSSI, and through its members it also collaborates with the National Heritage Institute, which is responsible for heritage conservation in the Czech Republic, the Czech National Committee – ICOMOS, the Ministry of Culture of the Czech Republic, and many other professional bodies and volunteer groups. A platform has been formed that unites professional and institutional activities in this field with informal amateur pursuits and non-governmental initiatives aimed at the conservation of industrial heritage at risk.

## Recent statutory protection and changing public policies

The recent era can be described as a time of defining the limits and identifying the difficulties attached to efforts to conserve industrial heritage by discovering adapted new uses for it. The pace of discussion of this issue has been accelerated by the rapid deterioration of the technical condition of technical and industrial heritage, large numbers of which across the land have been left unused and falling to ruin for several decades and especially since the profound transformation of the Czech economy in the 1990s.



Among the most talked about demolitions in recent years was the destruction of the boiler house of strojírny Rustonka, one of the symbolic reminders of the early stages of the industrial age in Prague. © Jan Zikmund, 2014

The atmosphere has also however been profoundly shaped by the multiplicity of approaches to industrial heritage and by the various motivations and objectives behind the interest in it, which has given rise to activities with a more practical and domestic focus.

In recent years a new heritage act has been in the works (on 6 March 2013 the Czech Government approved the factual content in resolution no. 156) that will have significant implications for industrial heritage conservation. For example, it will now be possible in the Czech Republic to define a type of heritage classed as 'heritage of local significance'. This could represent a lifeline for industrial structures that are form an integral part of the cultural heritage in the particular region in which they are located.

The greater attention the state is paying to industrial heritage has begun to show itself in that more and more technical and industrial heritage sites are being listed as protected monuments, and one factor in this has been the cooperation between the VCPD – Research Centre for Industrial Heritage CTU Prague, and the Ministry of Culture. Another crucial factor has been the involvement of state institutions is the submission of a proposal to list the Saxon and Czech Montanregion Erzgebirge/Krušnohoří on the UNESCO World Heritage List. A key Czech-German project is the *Central European Cultural Landscape of Montanregion Erzgebirge/Krušnohoří – the Path to a UNESCO World Heritage Site*, developed and created in a process of long-term cooperation between the Institute for Industrial Archaeology, History of Science and Technology (IWTG) at Freiberg University of Mining and Technology on the German side and the Ústí nad Labem Region (the coordinator of the project in the Czech Republic), the Regional Museum in Most, and the Karlovy Vary Region on the Czech side.

The change in atmosphere is also apparent from the conferences and frequent meetings that have been held. Among events of particular importance and consistent with the mission of TICCIIH was the conference 'A New Life for Abandoned Buildings' at the Building Fair in Brno 2013. Coinciding with the tenth anniversary of the publication of the Nizhny Tagil Charter for Industrial Heritage a Czech translation of this essential TICCIIH document was published, in an effort to symbolically draw attention to values and assets that are vanishing from the Czech Republic as a result of the increasing frequency of demolitions of neglected industrial buildings and grounds.

A better understanding of conditions in the countries of the former Eastern bloc was aided by an important international conference, Industriální stopy/ čtvrt století poté (Vestiges of Industry 2014 / A Quarter Century On), organised directly on the site of a former gasometer in Ostrava-Vítkovice, which has been converted to a cultural and social centre (Gong Multifunctional Space, Dolní oblast Vítkovice, 29 August 2014, organised by the VCPD – Research Centre for Industrial Heritage FA CTU, the Vestiges of Industry Platform (Industriální stopy), the Technical Monuments Committee of ČKAIT & ČSSI, the National Heritage Institute, the Association of Historical Settlements in Bohemia, Moravia and Silesia). It summed up the characteristic features of and the problems surrounding efforts towards the conservation and adapted re-use of heritage, but too often also the reason why industrial heritage has been at risk since the 1990s in countries that have repeatedly suffered from historical disruptions and political shakeups and have been been it by dramatic economic transformations. Papers were presented by participants from Poland, Slovakia, former East Germany, György Németh spoke on experiences and the role of TICCIIH in Hungary and Benjamin Fragner on the Czech Republic.



View of the gasometer at Vítkovice Ironworks in Ostrava, converted to Gong Multifunctional Centre in 2012. © Tomáš Souček

Opportunities for the cultural re-use of industrial heritage were the subject of a spontaneous public discussion at the international conference *Culture Factories and the City*, organised as part of preparations for *Pilsen 2015 – European Capital of Culture*. A direct outcome of the discussion was that projects with a shared focus were also successfully implemented in practice. (Světovar Brewery, Pilsen, 16–19 September 2013, in cooperation with the VCPD – Research Centre for Industrial Heritage, the Industriální stopy/Vestiges of Industry Platform, supported by the Swiss-Czech Cooperation Programme).

Since 2012, Technical and Industrial Heritage Day has been providing an opportunity to update the picture of changing public policies on industrial heritage and the social urgency of heritage issues. The events are usually held on the second Saturday in September to coincide with European Heritage Days, and are organised in cooperation with the Association of Historical Settlements in Bohemia, Moravia, and Silesia and the Czech National Committee – ICOMOS. These events have witnessed increasing involvement from museums, private collectors, civic initiatives working to protect monuments at risk, and even from owners of industrial objects. The day provides an occasion to visit places that are otherwise inaccessible and to draw attention to heritage that is at risk.

### **The progress being made by industrial heritage inventory programs**

Industrial heritage is systematically identified and assessed in the Czech Republic through several parallel research projects initiated and largely also funded by the Ministry of Culture. A primary one was the broad multi-year research project *An Industrial Topography of the Czech Republic* (principal investigator Benjamin Fragner together with the team at the VCPD – Research Centre for Industrial Heritage), which mapped still-standing structures and sites region by region and in reference to their historical and architectural values and regional priorities. The project produced a database that includes basic identifying information on structures and sites, typological classifications, and records of



structural history and authorship, and by the end of 2014 the database contained more than 17,000 entries. The database serves as the basis for filling in information and conducting further research on industrial heritage in the Czech Republic, and has served as a resource for publishing unique surveys of heritage in most regions of the Czech Republic in book and electronic format (see the List of Publications), including a popular online version available at: [www.industrialnitopografie.cz](http://www.industrialnitopografie.cz).

Other ongoing projects and inventory programmes that need mentioning include most notably *Surveys and Presentations of 19th- and 20th-Century Architecture* (coordinated by the National Heritage Institute) and the research project *The Industrial Heritage of Moravia and Silesia* (principal investigator Miloš Matěj with the staff of the National Heritage Institute and Petra Mertová and staff at the Technical Museum in Brno), which on its completion in 2015 resulted in a publication and a specialised map called *Technical Monuments of Moravia and Silesia*.

### **The principal projects for conversion or rehabilitation**

Despite the diverse range of professional activities and popular initiatives and events that have taken place in the past three years, new conversion projects have done the most to draw attention to industrial heritage. And this is despite the fact that from the perspective of heritage conservation and the more demanding perspective of architectural criticism these projects are sometimes questionable in terms of their concepts or approaches and above all the extent of new interventions into historical architecture they entail. However they still represent a form of hope and an approach to a heritage whose value we acknowledge and would like to protect, but for which it is difficult to find new uses because these sites continue to lack maintenance, fall to ruin, and see a deterioration in their technical conditions, so that they are ultimately lost entirely or turn into a new burden for the environment.

For this reason, in addition to conducting an inventory of industrial heritage, one of the objectives of the *Industrial Topography* project was to gather materials, experiences, and alternative solutions that could inspire a reassessment of the at-risk and neglected housing stock, and thus the sustainable use of industrial heritage and thereby also environmental restoration. Examples of projects for the conversion or re-use of the industrial heritage in the Czech Republic are included in *Industrial Topography/The Architecture of Conversion*, which provides an overview of the topic and a summary of an exhibition of the same name. It presents the most frequently discussed and often polar-opposite architectural approaches applied to conversions. One such example is the conversion of the industrial complex of Lower Vítkovice in Ostrava, the grandest such project in the Czech Republic, which includes the former gasometer used as a site for social events, the new attraction of the publicly accessible blast furnace, and many other structures converted to new uses. A different example is the unique attempt to rehabilitate Metternich Brewery in Plasy, which was in a devastated state, and where the Centre for Construction Arts of the National Technical Museum was established. The publication contains a selection of several dozen buildings and sites whose conversions represent a very diverse range of possible uses and above all distinct architectural solutions exhibiting the different degrees of intervention and the distinct motivations by the investors that can currently be encountered in the Czech Republic (this was designed to be a travelling exhibition in Czech and English and accompanied by an illustrated catalogue: see the List of Publications).





View of the interior of the brewery in Plasy renovated into the Centre for Building Heritage/ National Technical Museum. © Kateřina Uksová, 2014

### New site museums

As part of the long-term revitalisation of Lower Vítkovice in Ostrava an interactive exhibit called the Little World of Technology U6 opened in late 2012 in the former central power station of Vítkovice ironworks, which in an accessible way provides the public with information about scientific and technological development in the Czech Republic and in the world. In September 2014 it was joined by the adjacent Big World of Technology (Science and Technology Center). A similarly generous project was the conversion of two factory buildings of the Baťa Company in Zlín at 14|15 Baťa Institute, which since 2013 has been home to a regional gallery, a museum, and a library. The Glass Arts Centre at František Glassworks in Sazava offers an interactive exhibition of glass. In the meantime numerous less expensive exhibition projects have also emerged such as The Museum of Old Machines in the former Vonwiller factory in Žamberk (2014) or the exhibitions devoted to the history of brewing in the restored breweries in Lobeč (2014) and Kostelec nad Černými lesy



Smoke sent puffing from the restored smokestack of Lobeč brewery on Technical and Industrial Heritage Day in the Czech Republic. © Benjamin Fragner

## Training programmes

The majority of teaching activities and studying programmes devoted to industrial heritage at post-secondary institutions in the Czech Republic focus primarily on the subject of adapted re-use, usually within the framework of study programmes in architecture and civil engineering. At the master's level this includes the studio courses and student assignments to create alternative architectural projects, for instance, at the Faculty of Architecture CTU in Prague (National Heritage Institute FA CTU). The most important level of study for this field is the doctoral level (Institute of Architectural Theory and History), which partakes in the work of the Research Centre for Industrial Heritage and prepares materials for alternative projects for the re-use of industrial heritage in the Czech Republic. Within the framework of internal grants for doctoral study at the Faculty of Architecture of the Czech Technical University workshops have been organised for students of architecture on the subject of heritage re-use and on the renovation of Žižkov Freight Station in Prague (2012) and Winternitz Mills in Pardubice (2013), which were instrumental in achieving the conservation of these unique structures.

The Faculty of Civil Engineering CTU regularly calls for theses in the doctoral study programme of *Sustainable Development and Industrial Heritage*. Another area is the study of industrial heritage from the perspective of economic history (Institute of Economic and Social History at the Faculty of Arts of Charles University), and the study of the environment during the rise and boom of industrialisation is the focus of the Centre for the Complex Study of the Material and Landscape Aspects of Industrialisation at the Faculty of Humanities of Charles University.

## Significant publications since 2012

BERAN, Lukáš, ed. – VALCHÁŘOVÁ, Vladislava, ed. – ZIKMUND, Jan, ed. *Industriální topografie / Olomoucký kraj*. (Industrial topography / Olomouc Region) Praha: ČVUT VCPD FA, 2013. ISBN 978-80-01-05230-3 (introduction and annotation in English and German)

BERAN, Lukáš, ed. – VALCHÁŘOVÁ, Vladislava, ed. – ZIKMUND, Jan, ed. *Industriální topografie / Plzeňský kraj*. (Industrial topography / Pilsen Region) Praha: ČVUT VCPD FA, 2013. ISBN 978-80-01-05396-6 (introduction and annotations in English and German)

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BOROVCOVÁ, Alena. *The Cultural Heritage of the Kaiser Ferdinands-Nordbahn*. Ostrava: NPÚ, 2013. ISBN 978-80-85034-72-1 (published in Czech and English)  
*Charta průmyslového dědictví TICCIH*. (TICCIH Nizhny Tagil Charter for the Industrial Heritage, VCPD FA ČVUT), Praha: ČVUT VCPD FA, 2013. ISBN 978-80-01-05235-8.

FRAGNER, Benjamin – VALCHÁŘOVÁ, Vladislava. *Industriální topografie / Architektura konverzí, Česká republika 2005–2015. Industrial Topography / The Architecture of Conversion, Czech Republic 2005–2015*. Praha: ČVUT VCPD FA, 2014. ISBN 978-80-01-05592-2 (Czech and English)

MATĚJ, Miloš – KLÁT, Jaroslav – PLCHOVÁ, Jarmila – KYSELÁK, Jan. *Cultural monuments of the Rosice-Oslavany Industrial Area*. Ostrava: NPÚ, 2013. ISBN 978-80-85034-73-8 (published in Czech and English).

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RYŠKOVÁ, Michaela – JURÁK, Petr. *Kulturní dědictví textilního průmyslu Frýdku-Místku. The Cultural Heritage of the Frýdek-Místek Textile Industry*. Ostrava: NPÚ, 2013. ISBN 978-80-85034-77-6 (published in Czech, edition prepared for publication in English)

RYŠKOVÁ, Michaela – MERTO VÁ, Petra. *The Cultural Heritage of the Brno Textile Industry*. Ostrava: NPÚ, 2014. ISBN 978-80-85034-82-0 (Czech and English)

VALCHÁŘOVÁ, Vladislava, ed. *Industriální topografie / Královéhradecký kraj*. (Industrial topography / Hradec Králové Region) Praha: ČVUT VCPD FA, 2012. ISBN 978-80-01-05143-6 (introduction and annotations in English and German)  
KOLKA, Miroslav, *Technická zařízení na vodní pohon na Cvikovsku*. (Water-drive technology in Cvikovsko) Liberec: NPÚ, 2012. ISBN 978-80-904852-9-7.

VALCHÁŘOVÁ, Vladislava, ed. *Industriální topografie / Pardubický kraj*. (Industrial topography / Pardubice region) Praha: ČVUT VCPD FA, 2012. ISBN 978-80-01-05045-3 (introduction and annotations in English and German)

VONKA, Martin. *Tovární komíny. Funkce, konstrukce, architektura*. (Factory smokestacks: functions, structures, architecture) Praha: ČVUT VCPD FA, 2014. ISBN 978-80-01-05566-3 (English resume)



# Denmark

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## Frank Allan Rasmussen

President of the Society for the Conservation of the Industrial Heritage in Denmark

Denmark is a small country on the periphery of Europe with a population of approximately 5,5 million. As in other industrialized countries, the Danish landscape is shaped by centuries of human activity and only a few places are left untouched by man. Denmark is known for its design, architecture and engineering as well as agricultural products.

The strong relations with Great Britain have left a visible imprint on Denmark. Denmark experienced an industrialisation somewhat delayed compared to the larger European nations but certain industries gained international importance – notably in the field of diesel engines, maritime technology and cement.

### Protection and public policies

The Danish Society for the Conservation of the Industrial Heritage publishes *Factory&Dwelling* as one of its activities, but also engages in other topics related to the industrial heritage in Denmark. *Factory&Dwelling - the Industrial Heritage of the Nordic Countries* is an annual publication which presents academic articles dealing with the industrial heritage in Sweden, Norway and Finland. The editorial board welcomes international articles with a Nordic angle. All articles are peer reviewed and all major articles offer comprehensive summaries in English.

The purpose of the Danish national society is to generate interest in the documentation and exploration of the history of industrialization and for the preservation of buildings from the industrial epoch, housing and cultural environments. The President of the society is the national representative of The International Committee for the Conservation of the Industrial Heritage (TICCIH).

Denmark is rich in industrial sites and monuments. Some of them are protected by the Act of listed buildings which is administered by the Heritage Agency. The Agency is a body under the Danish Ministry of Culture. It has the regulatory responsibility for sites and monuments, listed buildings, and the many different museums working in the field of industry and technology. The Agency also holds the overall responsibility for industrial archaeology undertaken by the state-approved museums. Danish museums are regulated by law. The Museum Law was revised in 2012.

Physical planning is an important instrument for the conservation, development and promotion of the tangible components of our industrial heritage. Since 2007, the local municipalities have been the main stewards of industrial heritage in Denmark, in that municipal land-use plans are required to formulate guidelines and objectives to safeguard heritage assets. Those assets may be individual elements – from grand industrial monuments to more humble vestiges such as workers' dwellings.

There have been several good examples in Denmark over the last 10 years, but one is particularly outstanding. In 2012 the municipality of Halsnaes together with the local museum of industry launched a competition. The purpose of the architectural competition named "Steely Urban Spaces" was to show how the industrial heritage of the Danish town



of Frederiksværk could be enhanced and contribute to the future urban development in a way in which architecture and communication of the overall project support each other.

The winning project “Landscape, works and town” is based on an open and appreciative understanding of history as progressing from the past up until today and into tomorrow. Four historical layers hold stories and psychological imprints in the urban landscape and thus overlap each other. The project weaves together four methods of presenting the rich industrial history of Frederiksværk: the physical, the digital, the strategic and the cultural. The goals are clear. The municipality wants to use this exciting industrial history in making new opportunities for growth and development and in drawing new segments of tourists to the municipality.



Frederiksværk. The former gun foundry dating back to the 1760-ties

During the last decade, the interest in Danish industrial archaeology has been growing especially in the Copenhagen area. Some of the results are presented in Henrik Harnow, David Cranstone, Paul Belford and Lene Høst-Madsen (eds.), *Across the North Sea. Later Historical Archaeology in Britain and Denmark, c. 1500-2000*. University Press of Southern Denmark 2012.

In 2004-2007, the Cultural Heritage Agency implemented a special project to shed light on the heritage of the industrial society and to enhance museum research in industrial history. As one of the results, [25 industries of special importance](#) to Denmark were selected. The Agency also selected and described more than 160 regional sites and conducted a wide range of surveys. The Cultural Heritage Agency of Denmark has made several [on-line guides](#).

## Listed buildings and monuments

Industrial buildings give architectural as well as cultural insights into various periods in the history of Denmark. The Danish Agency for Culture is responsible for the listed buildings, whereas the local authorities are responsible for the buildings worthy of preservation. There are more than 9,000 listed buildings in Denmark including the industrial monuments.

For a number of years, the Agency has been focusing on industrial heritage in order to ensure that this important part of Danish history is valued and used as a resource in the future development of Danish society. For [further information](#).

### Overview of some of the listed industrial monuments and buildings 2013-15:



De Danske Spritfabrikker Aalborg 2015 [The Danish Distillery]

The Danish Distillery in Aalborg is a masterpiece of industrial architecture. It was completed in 1931 and was then the largest concrete construction in Denmark and a model factory in every way. The architect is Alfred Cock- Clausen.





Rønne Elektricitetsværk og Badeanstalt 2015 [Ronne power plant]

The industrial complex Ronne Power Plant and Bathhouse is listed because of its size and architectural characteristics which are typical of classic public buildings in the provinces of Denmark. The buildings were designed by architect Anton Rosen.



Ballonhangar i København 2014 [The Balloon Hangar]

The Balloon Hangar belongs to the past, but it has now been listed by the Agency. This most untraditional building has great architectural and historical value and represents a significant element in one of the green suburbs of Copenhagen.



Irmas Kafferisteri København 2014 [The Coffee Roaster]



The Coffee Roaster building in the suburbs of Copenhagen is a characteristic building that serves as a local landmark. The building was constructed in 1968 and is designated because of its excellent architectural and historical values. The building was designed by the architects Mackeprang and Klerk.

In Denmark, the task of promoting industrial heritage lies in the hands of the Cultural Agency, but the museums have a common strategy formulated within a national network: "The Industrial Pool". Once a year, the Danish museums working with industrial culture can apply to the Agency for funding for special tasks in the field of preservation and documentation as well as to a number of different funds. The Danish industrial museums are frequent users of social media such as Facebook and Flickr and generally use the web to promote their work with Denmark's outstanding industrial heritage. Selected examples:

- The Frederiks Vaerk Museum of Industry (Industrimuseet Frederiks Værk) [www.indmus.dk](http://www.indmus.dk)
- Danish Museum of Industry (Danmarks Industrimuseum) [www.industrimuseet.dk](http://www.industrimuseet.dk)
- Danish Museum of Technology and Science (DTM) [www.tekniskmuseum.dk](http://www.tekniskmuseum.dk)
- Brede Works (Nationalmuseet Brede) [www.bredevaerk.natmus.dk](http://www.bredevaerk.natmus.dk)
- The Workers Museum (Arbejdmuseet) [www.arbejdmuseet.dk](http://www.arbejdmuseet.dk)
- Energy Museum (Energimuseet) [www.energimuseet.dk](http://www.energimuseet.dk)
- GasMuseum (Gasmuseum) [www.gasmuseet.dk](http://www.gasmuseet.dk)
- The Danish Railway Museum (Jernbanemuseet) [www.jernbanemuseet.dk](http://www.jernbanemuseet.dk)
- Dieselhouse (Dieselhouse) [www.dieselhouse.dk](http://www.dieselhouse.dk)

Besides the governmental involvement there is a series of semi-official institutions in relation to the protection and management of the industrial heritage:

"House of Heritage" (Dansk Bygningsarv) is a private consultancy that advises funds, public authorities and building owners on the use, conservation and development of the built heritage. They activate and recycle buildings, structures and cities through interdisciplinary studies, projects and campaigns, and they see an active use of the built heritage as the best conservation strategy. [www.bygningsarv.dk](http://www.bygningsarv.dk)

"The Danish National League for Built Heritage and Landscape" (Landsforeningen for Bygnings- og Landskabskultur) is a non-governmental organization, established in 1990. While organizations of a National Trust type seek protection through possession, the legislation in Denmark encourages public participation in the process of physical planning and listing of buildings. For this and other reasons Denmark has been barren soil for the growth of a National Trust. Instead, it has motivated the formation of local societies for built heritage, more than 100 of which are under the umbrella of the National League. [www.byogland.dk](http://www.byogland.dk)

Finally, there is the abovementioned Society for the Conservation of the Industrial Heritage, and last but not least the abovementioned network, where museums with interest in the industrial heritage cooperate. The "Industrial Pool" hosts two annual meetings with presentation of new projects, sharing of ideas and coordination of initiatives in relation to the task of identifying, surveying, recording and protecting the industrial remains in Denmark for future generations. [www.industripuljen.dk](http://www.industripuljen.dk)

### **Recent activities**

In Denmark, surveying is fundamental for the study of industrial heritage. Such records include descriptions, drawings, photographs and video recordings. An overview of industrial

heritage in Denmark has just been published. The book presents to English-speaking readers some of the results of this commitment:

Caspar Jørgensen and Morten Pedersen (eds.), *Industrial Heritage in Denmark. Landscapes, Environment and Historical Archaeology*, Aarhus Universitets Forlag og Kulturstyrelsen 2014.

The Danish Agency has supported the industrial heritage work of a number of museums and municipalities through a special Appropriation from the Danish Parliament 2004-2011, and via the funds allocated to museum projects every year. This effort has created a greater knowledge of industrial environments and heritage. Currently the Agency is promoting the integration of industrial heritage and especially the 25 industrial sites of national significance into local planning and the values of the Danish industrial heritage as a resource for cultural tourism and development.

The Business Archives is a part of the National Archives in Denmark, which aims to collect and preserve important historical source material about Danish industrial and business development. Most of the records kept are from the commercial and industrial sectors, but there are also significant amounts of records from transport, finance and the insurance businesses. Unfortunately the Business archive is closed down for the next few years due to relocation.

In the course of the last 10-15 years a new generation of industrial historians has made its mark on the subject. This group has turned its focus from singular buildings, plants, machines and tools to a much broader concept of industrial environments, which has resulted in a number of publications of high academic standards.

During the last decade, a greater attentiveness to the industrial landscapes has evolved, as well as a greater concern for combining tangible and intangible history with the realisation that landscapes do not necessarily tell a single history but may consist of several layers of stories.

There are still many challenges. We need to develop a greater interconnection between the academic approach at the universities and the work done in our museums to engage a larger percentage of the population in using our common industrial past as a resource in the future development of our cities and landscapes.

### **Training programmes**

Within the last few years, Denmark has seen a growing interest in both education and training. New and larger target groups have been reached, but Denmark has no formal academic forum for training in industrial archeology, conservation and preservation. Three relatively small centres focusing on business history, with a twist of technology and industry takes care of the formal education of historians and researchers - one at The Business School in Copenhagen (CBS), another at the University of Aarhus and finally one at the University of Southern Denmark.

### **Publications**

Ellen Braae, *Beauty Redeemed. Recycling Post-Industrial Landscapes*. Ikaros Press/Birkhäuser Verlag 2015

Louise Karlskov Skyggebjerg, *Ellehammer. En historie om at arbejde med opfindelser*. Danmarks Tekniske Museum 2015

Henry Nielsen, Kristian H. Nielsen, Keld Nielsen, and Hans Siggaars Jensen. *Forandringens vinde. Ny teknologihistorier*. Nyt Teknisk Forlag 2015

Martin Jes-Iversen, *Turn Around. Kampen om GN Store Nord*. København 2015

Caspar Jørgensen and Morten Pedersen (eds.), *Industrial Heritage in Denmark. Landscapes, Environment and Historical Archaeology*. Aarhus Universitets Forlag og Kulturstyrelsen 2014

Jørgen G. Berthelsen. *Danmarks teglværker – Fredensborg og Hørsholm Kommuner*. Museum Sønderjylland/Cathrineminde Teglværk 2014

Verner Bjerger and Jacob Hanquist Petersen, *Danmarks teglværker – Horsens Kommune*. Museum Sønderjylland/Cathrineminde Teglværk 2014

Elisabeth Vestergaard, Torben A. Vestergaard, and Hans Schultz Hansen (eds.), *Sønderjysk Erhvervshistorie 1800-2000*. Syddansk Universitetsforlag 2013

Søren B. Andersen og Erik Lund, *Menneskeskabt – Grundbog i teknologihistorie*. Nyt Teknisk Forlag 2013

Kristoffer Jensen, *Beklædningsindustriens møde med globaliseringen*. Syddansk Universitetsforlag 2013

Henrik Harnow, David Cranstone, Paul Belford, and Lene Høst-Madsen (eds.), *Across the North Sea. Later Historical Archaeology in Britain and Denmark, c. 1500-2000*. University Press of Southern Denmark 2012



# Finland

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## **TICCIH-FINLAND**

*The Finnish Society for the Industrial Heritage (Teollisuusperintöseura ry – Industriminnesföreningen rf) is the Finnish national representative of TICCIH. For the moment, Tuija Mikkonen acts as the Chair of the Society. The other members of the board are Lauri Putkonen (Vice-Chair), Teemu Ahola, Maarit Grahn, Risto Hakomäki, Eerika Koskinen-Koivisto, Hannu Matikka, Sanna Kupila, Kirsi Ojala and Pauli Sivonen. Tarja Antikainen is the secretary of the Society. This report was written by the board members with help of other experts.*

Among other activities the Society gave a statement to the Helsinki City board against the initiative to deconstruct the historical dam of river Vantaa at Helsinki Vanhakaupunki rapids in 2015. The dam is an inseparable part of the historical power plant, which both are listed as historic properties by the National Board of Antiquities. The Helsinki City board finally rejected the deconstruction project in May 2015.

## **History of technology and industry – European Heritage Days 2015**

The Finnish Society for the Industrial Heritage (TICCIH-Finland) has actively promoted information about the European Industrial and Technical Heritage Year 2015. The society is collaborating with European Heritage Days in Finland and most of the events will be carried out in the autumn of 2015. Sanna Kupila, the Board member of TICCIH-Finland, has participated in a work group which is building a new network called European Heritage Communities in connection with the European heritage days.

In April 2015, *Satakunnan Historiallinen Seura* (Satakunta Historical Society) organized a seminar about Industrial Heritage of Satakunta region in Harjavalta municipality in Western Finland. The topics of the presentations varied from industrial history to reuse of industrial heritage. The seminar was part of the European Heritage Days' program.

## **National strategies give guidelines for industrial heritage work**

Finnish Government approved the resolution on the Cultural Environment Strategy 2014-2020 on 20 March 2014. An implementation plan was finalized by a working group led by the Ministry of the Environment in January 2015. The strategy bolsters the value and good management of cultural environment. Industrial environments are included in the sphere of the strategy. According to the strategy, a well-maintained and strong cultural environment increases people's well-being. In addition to this, it is an important aspect in the development of business and trade, and the creation of a comfortable living environment.

The Finnish Government also approved the resolution on the National World Heritage Strategy 2015-2025 on 16 April 2015. The strategy gives the guidelines about world heritage policy and how UNESCO World Heritage Convention will be carried out in Finland. Finland has one industrial World Heritage Site, the Werla Ground Mill in Kouvola.

## **Industrial heritage tourism**

Cultural tourism is an important part of the work around industrial heritage. The old Makkarakoski sawmill (built in 1875) in the Noormarkku ironworks area in Western Finland was renovated and opened as a sawmill museum in 2014. It is a typical Finnish sawmill from the late 19th century and early decades of the 20th century and one of two still existing industrial sawmills from the water-driven sawmill period. Finland's National Board of Antiquities has classified the sawmill building as an internationally significant sawmill heritage.



Log bed, log carriages (1880, Bolinder) and frame saws (1882) at the Makkarakoski sawmill museum. The sawmill was built in 1875. © Hanna Jaakola 2014

The exhibition 'Ahlström Voyage' situated in the old workshop building in the Noormarkku ironworks area will be extended, and the new exhibition was opened in May 2015. The original exhibition depicts the phases of the company's development from the very first up to the present. One of the new parts of the extended exhibition presents the history and famous glassware of Karhula, Iittala and Riihimäki glassworks which earlier were parts of A. Ahlström Corporation. Both the sawmill museum and the exhibition 'Ahlström Voyage' are private museums, held by A. Ahlström Kiinteistöt Oy, a real estate company.

### **Verla world heritage site**

Verla Groundwood and Mill is the only industrial World Heritage Site in Finland. A large reparation project at the mill was carried out during 2012-2014 when the shelter dam was built to separate the Verla board mill from the river. The shelter dam improves significantly the conditions of the site's long-term preservation. The partners of the project - the owner of the World Heritage site, UPM Kymmene Oyj Corporation; Verla power plant's owner, the energy company KSS Energia Oy; and the National Board of Antiquities - carried out the planning of the project for many years, since 2007.

The structures and objects of the board mill had suffered from too high humidity over the decades. In addition, the possibility of floods had increased the risks to safety of the site.

The shelter dam eliminates the water leaks through the granite wall to the board mill building and prevents the risks of floods. The free standing dam was built of steel and concrete. The space between the dam and the building was planned as a route and an exhibition space for museum visitors. The route offers visitors a new perspective to the authentic board mill complex and provides new ways of presenting the use of hydropower in the old times in Verla. The new route will be integrated to the 'Verla historic walk' that will be opened in summer 2015.



Verla rapids and the new shelter dam in the foreground. Verla groundwood and board mill behind. © Lassi Kujala 2014

### Recent documentation work

Finnish museums have collaborated as a network since 2009 to develop a common division of documentation and strengthen the present day documentation in museums. The network *TAKO* has seven pools and pool number 4 is focusing on Production, Services and Working life/Employment. The pool 4 has seven work groups including metal industry, plastic production, forestry sector, mining sector and game industry. The working groups are applying funds for documentation projects and are mapping the collections to create understanding of the big picture of the collections around the industrial heritage. The Museum of Technology is active in all five groups and is chairing the game industry group.

The Museum Centre of Turku has continued contemporary documentation of industrial processes. The Leaf candy factory in Aura municipality went out of business in 2013 and before the production line was set down the museum made a documentation of the production processes. Still operating factory Turun Uunisepät, which produces modern style stoves, was also documented in 2013. The factory also produces tiled stoves using tiles from another local factory, whose production process was also documented in 2014 by the Museum Centre.





Vesa Juntunen moulds prefabricated stove units at Turun Uunisepät. © Martti Puhakka

In 2013, the City of Turku constructed a new waste water treatment facility. The old one, which was situated on open ground in the brown field area, was demolished in 2014. Before the activities of the old refinery were stopped the Museum Centre of Turku made a photo documentation of the whole area and documented even the production process.

### **Statutory protection of the industrial heritage**

In Finland the Land Use and Building Act is the most useful means to protect buildings or building groups in local detailed plans that are made by municipal authorities. There is no common register about protection figures, but many industrial sites have been protected in detailed plans in different towns and municipalities. Outside the areas of detailed plans, especially in the countryside, the Act on the Protection of Built Heritage can be used. One example of using the Act is the protection of workers' houses of the Dalsbruk ironwork in Kemiönsaari municipality in Southern Finland in 2014.

In 2015, a new National Urban Park was established in Forssa, where former textile mills are an important part of the park.



The old spinning mills of Forssa, established in 1847. ©: Lauri Putkonen, 2015

### Reuse of industrial sites

*Shopping Centre Puuvilla* was opened in the former Pori cotton mill area in autumn 2014. The cotton mill was established in 1898, and the factory operations ended in 1994. The weaving mill burned down in 1981. One of the major steps in the development of the area was when the University Consortium of Pori moved into the area in 1999.

The new shopping centre was built mainly on the area where the weaving mill was situated before the 1981 fire. For the last years, the location of the weaving mill was used as a parking lot. The new shopping centre is owned jointly by a real-estate developer Renor Ltd and an insurance company Ilmarinen.

### Joint efforts of the museums

As a result of a unique collaboration of nine Finnish museums in connection to the 70th anniversary of World War II, eight different exhibitions were opened in April 2015.

The Traffic Museums Association started a joint exhibition project called 'On the Move! - Finland after World War II'. By jointly marketing, exhibitions and services, the project raises the profile of the museums and helps to attract more visitors. The project set up networks of industrial heritage and cultural tourism. One of the main goals of the project is to develop new concepts for providing joint exhibitions and mobile services.

In April 2015, the Museum of Technology opened a photo exhibition on *Strömberg* electrical engineering industries as a part of the joint exhibition. *Strömberg* played a vital role on the national electrifying project after the World War II.

### Kids, museum and technology – a new program at the museum of technology

The program *Kids, Museum and Technology* is designed to develop technology education for children from 6 to 8 years as part of their museum engagement. The main educational goal is to familiarize children with technology through creative activities and play. One of the main themes of the program is to introduce stories behind Finnish innovations, innovators and innovating. The program is co-operating with a research group *Learning Futures* in the Department of Teacher Education at the University of Helsinki. The program is funded by the Finnish Ministry of Education and Culture. The project uses versatile, multimodal methods that support children's creative engagement and meaning-making concerning technology. This includes the use of various artifacts and demonstrations, social interaction, media and communication technology, pictures, drawings, storytelling, playing and drama.

In the program *Kids, Museum and Technology* researchers, designers and educators together with children, first design museum spaces and activities, then test them in practice, and finally reflect and evaluate their work. This is a new model for creating exhibitions, workshops and activities for children in museum settings. The process integrates children's perspective in the pedagogical development of museum activities and environments.

### Education and training

Industrial heritage is one of the main subjects of cultural heritage studies at the degree program of cultural production and landscape studies at the University of Turku, Pori campus. Several courses dealing with industrial heritage are organized in Pori during 2013–2015. Industrial heritage is also one of the subjects in European master's program. The director of industrial heritage studies is Dr. Anna Sivula.

Also a few theses touching industrial heritage are published every year at the degree program of cultural production and landscape studies. The first dissertation of the program was published in 2014, when Maarit Grahn studied the role of cultural heritage - including industrial heritage - in corporate culture, identity and image of family business. The questions are addressed in the context of A. Ahlstrom Corporation, one of the oldest industrial companies in Finland.

A project that investigates the industrial heritage as a resource of the post-industrial era has been carried out during 2014–2015 at the University of Turku. The aim of the project is to give concrete guidelines for a controlled production, productization and development of industrial heritage in Satakunta region in Western Finland. The members of the project are PhD Anna Sivula, PhD Maarit Grahn and M.A. Anni Ruohomäki.

In 2013, Aalto University hired Dr. Mats Frilund as Associate Professor of Industrial history for a period of 5 years. He teaches courses related to Industrial history and History of Technology at Aalto University in Espoo.

City of Turku participates in an international IFHP Urban Planning and Design Summer School in cooperation with Aalto University. In 2013, the study object of the architect students was an old Soap factory in Turku. The students planned new uses for the buildings as a part of the studies.

In 2014, *New Waves - Emergent perspectives in Nordic history of industrialization and innovation* - a monthly symposia series - was arranged by Aalto University, University of Helsinki and the Finnish Economic History Association presenting new emerging research perspectives on the history of industrialization and innovation by researchers in the Nordic countries. Each symposia gather presentations around a shared theme from a Finnish and an invited Nordic researcher. The responsible program committee consists of Mats Fridlund, Professor of the History of Industrialization at Aalto University, Sakari Heikkinen, Professor of Economic History at University of Helsinki and Niklas Jensen-Eriksen, Casimir Ehrnrooth Professor of Business History at University of Helsinki.

### Recent publications

The journal *Tekniikan Waiheita – Teknik i tiden*, published by the Society for the History of Technology, is the main journal in the field of industrial heritage. The issue 2/2012 was dedicated to the industrial heritage. There were articles about the documentation of industrial work, reuse and history of industrial sites and the role of archaeology in industrial heritage work. Another thematic issue concerning industrial heritage was Nr 2/2014 dealing



with industrial heritage and cultural heritage processes in the context of different concrete examples.

Edited volume *Med industriarvet som inspirationskälla – Teollisuuserintö inspiraation lähteenä* (Industrial heritage as source of inspiration) was published in 2014. The articles deal with different industrial heritage cases both in Finland and Sweden. They are based on the seminar arranged in Sundsvall, Sweden, on 24–25 April 2013. The seminar was a part of a project called *KulturBygge* (2012–2013). The cooperation parties of the project were Satakunta Museum, Murberget the Västernorrland County Museum and Sundsvall Museum.

#### Monographies of Industrial Heritage:

Grahn, Maarit (2014): Perheyhtiö ja paikallisuus. A. Ahlström Osakeyhtiön historian perintö Noormarkussa. [Family Business and Locality: The historical heritage of A. Ahlström Corporation in Noormarkku]. Online: <https://www.doria.fi/handle/10024/94239>

Koskinen-Koivisto, Eerika (2014): Her Own Worth Negotiations of Subjectivity in the Life Narrative of a Female Labourer. *Studia Fennica Ethnologia* 16. Helsinki: Finnish Literature Society. <https://kirjat.finlit.fi/index.php?showitem=3031>

Marttila, Juuso (2014): Työ teollistumisen ja arjen rajapintana. [The importance of work in communities and the transference of industrialization into their everyday life - A case study of two Nordic ironworks communities, Ramnäs and Strömfors, 1880-1950.] Dissertation based on articles. Online: <https://jyx.jyu.fi/dspace/bitstream/handle/123456789>

# France

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## **Geneviève Dufresne**

Vice-President of the CILAC, TICCIH French National Representative

*English version, Paul Smith*

Since TICCIH's Taiwan congress in 2012, the interest for the industrial heritage in France has by no means diminished, even if economic difficulties and budgetary restrictions continue to affect both State and local authority initiatives. But the realities in the field vary widely in qualitative and geographical terms. The inventory of the industrial heritage, now placed under the auspices of the country's regional councils, is still in progress, but that progress is far too slow. In many parts of the country, the industrial heritage survey has not been properly commenced, and although some prestigious industrial heritage sites have recently been given statutory protection, many others, worthy of a measure of protection, are left in a state of dereliction and are threatened with demolition. For many local authorities, the preservation of abandoned factories—each day more numerous as deindustrialisation pursues its apparently inexorable course—is a major preoccupation.

Only too often, however, these local authorities are unable to come up with a viable and lasting reconversion project. The threats of demolition hang particularly heavily over urban industrial sites, their value as real estate hungrily appraised by developers and demolition firms which often buy up these sites, remove the buildings, depollute the soil and then sell off the land to promoters, making a tidy profit in the process. The unconsidered demolition of unprotected industrial sites is all too frequent an occurrence. Nonetheless, the last three years have seen some admirable projects coming to completion or well under way.

### **The advance of industrial heritage location surveys**

Today, inventory work on the industrial heritage, as on other heritage fields, is placed primarily under the auspices of the country's regional authorities, of which there are 26 at the moment (a reform is currently envisaged to reduce their number). Some of these regions employ full-time industrial heritage researchers, whilst others commission survey work from private researchers or agencies.

Since 2012, the inventory programmes undertaken in several departments have been completed. In the Hérault department (Languedoc-Roussillon region), in Calvados, the Pays d'Auge, the towns of Caen and Lisieux (Basse-Normandie) and in the Doubs and the Pays de Montbéliard (Franche-Comté). These programmes have resulted in several publications (see bibliography). The study of the industrial basin of Lacq, where natural gas was discovered in 1951, and of the associated new town of Mourenx (Pyrénées-Atlantiques), culminated in the organisation of an international conference, the proceedings of which have been published in the national 'Cahiers du Patrimoine' collection. The perfume industry of the city of Grasse (Alpes-Maritimes department in the Provence-Alpes-Côte d'Azur region) will also be the subject of a publication in the same collection. In Alsace, a landscape approach to the industrial heritage has been applied the study of the valleys of the upper Rhine and the Vosges, where industry shaped the territory. In Franche-Comté, work is being pursued on the local clock and watch-making activities.

### **The example of the Île-de-France Region**

Over the past few years, the general council of the Seine-Saint-Denis department, followed by the region's council, in collaboration with the departments of the Val-de-Marne and the

Essonne, and the CAUEs (Conseils d'architecture, d'urbanisme et d'environnement) of the Yvelines and Val-d'Oise departments, have all launched policies of 'heritage diagnostics' (mapping of sites, localisation on the ground, characterisation and evaluation...) for a certain number of their communes. The ambitions of these operations are varied and numerous, but the studies are primarily designed to be made available as rapidly as possible to elected representatives in the local authorities and to the various planning agencies concerned. The survey work is as exhaustive as possible, taking into account small workshops, larger industrial monuments and former industrial zones. This 'diagnostic' approach complements more traditional inventory programmes and the in-depth studies on major sites.

Amongst these major sites is the study undertaken at Champagne-sur-Seine (Seine-et-Marne) on the factories of the Schneider and Company firm. In 1901, the company, based at Le Creusot, decided to transfer its electricity works to this small village. The architect Paul Friesé designed a cathedral-like factory building which still dominates the centre of the village. A publication and a documentary film entitled 'Et l'usine créa la ville' (And the Factory made the city) both gave accounts of this remarkable story.

### **Recent statutory protections of industrial heritage sites**

It would be agreeable, from one national report to the next, not to have to repeat the same disappointing news of the steady decline in the number of industrial sites given statutory protection under the terms of French law on historic monuments. But in 2013 only thirteen industrial monuments were thus protected and only one of these, the former saltworks at Dieuze, in the Moselle department, was 'classé', the higher level of historic monument protection in France. The qualities and historic interest of most of the sites protected in 2013 had already been recognised for many years and the protective measures were only belated recognition of these heritage values. Amongst the sites protected, mention may be made here of

- The copper works at Cerdon (Ain); towards the end of the nineteenth century, this factory produced several reeling machines and copper basins exported to Japan for the Tomioka silk mill, recently inscribed on UNESCO's list of world heritage
- The Braquenié tapestry factory at Aubusson (Creuse)
- The former Ecurey foundries (Meuse)
- The boat lift at Fontinettes d'Arques (Pas-de-Calais), including its machinery, its ancillary buildings, its canal and lock
- The Gantois factory at Saint-Dié; this Art Deco building associates monumentality and classicism; its stained glass windows are also protected.

### **World Heritage**

At the 39th session of World heritage committee at Berlin (Germany) in July 2015, two new French sites have been inscribed on the UNESCO World Heritage List : Champagne Hillsides, Houses and Cellars (including the Saint-Nicaise hill at Rheims and the Champagne Avenue in the town of Epernay) and Climats, terroirs of Burgundy (associated with the cities of Dijon and Beaune).

### **CILAC's actions**

Since the Taiwan congress, the activities of the CILAC have been very much oriented towards the preparation of the sixteenth TICCIH congress to be held in the Lille region in September 2015. Although times are financially difficult for all associations and voluntary organisations, the CILAC has still managed to maintain its rhythm of two issues per year of its review, *L'Archéologie industrielle en France*. For its issue (n° 65), the review is going to change its title to *Patrimoine industriel, archéologie, technique, mémoire*, and will have a new layout design.



The preparation of the TICCIH conference, under the direction of Florence Hachez-Leroy, has mobilised a CILAC team in France, with the active help of Massimo Preite, of the University of Florence, a TICCIH board member.

In October 2014, the members of the association, and many others, were deeply upset by the sudden death of Louis Bergeron. Louis's disappearance is a great loss for all the friends and defenders of the industrial heritage, for those who had the good fortune to follow his seminars and for all those who worked with him over the years.

### **A selection of industrial heritage conservation and conversion projects**

- Tarare (Rhône), the Turdine dye-works.



© Ja gonnard / vurpas architectes

At the entrance to Tarare, near Lyon, an impressive building bears witness to the industrial past of this city. The factory, constructed over a river, accommodated the dye-works specialised in ennobling processes. It is a masonry building, erected in 1905 with an extension in reinforced concrete after a fire in 1947. In 2006 this three-storey building, 200 metres long and developing 6,500 square metres in all, was converted by the Lyon architectural agency Vurpas to house a brasserie, a restaurant with concert facilities, offices and headquarters for the local chamber of commerce.

- Dunkirk (Nord), the sugar hall. © jf leca cud



The warehouse buildings, designed in 1897 by the architects Jules Denfer and Paul Friesé, were originally intended for storing foodstuffs and sugar in particular. It is a brick building 60 metres long and 40 metres deep. Abandoned in 1990, it has been converted to accommodate a large range of public uses, including a library, a documentation centre, a learning centre and the offices of several local authority administrations. This conversion project is emblematic of the way the port of Dunkirk is changing today.

- Paris, the Freyssinet hall © Wilmotte & Associés





This hall, also known as the SERNAM hall (Sernam was a freight company owned by French rail), was designed in 1927 by the engineer Eugène Freyssinet as a warehouse for goods arriving in Paris by rail. Situated close to the Austerlitz station, it was threatened with demolition in the development plans for this neighbourhood in the thirteenth arrondissement. But it was finally saved and given statutory protection and conversion work is presently underway, following the project of the architectural firm of Jean-Michel Wilmotte. A partnership formed between the City of Paris, the Caisse des Dépôts et Consignations (a public investment bank) and Xavier Niel, a well-known French industrialist active in the field of telecommunications, has developed a project which keeps the original hall as a shelter for use as a startup incubator: 30,000 square metres are supposedly to house up to a thousand startups.

Several other operations in progress in the Seine-Saint-Denis department to the north of Paris may also be mentioned. Since the conversion of the former flour milling complex at Pantin, transformed into back offices for the BNP bank's Securities Services, and drawing 3,200 employees every day to this suburb immediately to the north-east of Paris, several other projects have come to fruition. The Pantin flour mill operation indeed seems to have been an encouragement for other Paris-based businesses to look to the former industrial suburbs for new accommodation.

- Pantin (Seine-Saint-Denis): The former Magasins généraux, general bonded warehouse. © Jung Architectures





France's leading advertising agency, BETC, has chosen to rehabilitate the former general warehouse complex, in order to install its headquarters and their 750 employees. Situated at Pantin by the side of the Ourcq canal, this five-storey edifice, 150 metres long, comprising two twin buildings, was constructed in 1930 as a bonded warehouse. Closed in 2000, the site was first purchased from the city of Paris by the municipality of Pantin in 2004. The financing of the operation was delicate: the site is now the property of the Klepierre firm, with Nexity as promoter and developer and with BETC as tenant. The conversion project is currently underway, to the designs of the architect Frédéric Jung. In 2016, the first 1,500 square metres of ground floor commercial premises should be made available. The offices in the floors above will enjoy interior patios with landscaped roof gardens above. The top floor will comprise a large exhibition space open to the public.

- The SERNAM hall at Pantin

This reinforced concrete hall, built between 1947 and 1949 to the designs of the engineer Bernard Laffaille and the architect Paul Peirani, measures 324 metres by 108 metres, a total surface of 35,000 square metres divided into three naves. The Saint-Gobain group has chosen this building for the creation of an immense commercial centre devoted to buildings materials.

Also present in the suburb of Pantin, Hermès and Chanel are enlarging their workshops. Thaddaeus Ropac, a world-renowned Austrian specialist in contemporary art, has set up shop in a former boiler works dating from the beginning of the twentieth century (Buttazzoni and associates, architects), and which has attracted 40,000 visitors since its opening in 2012. The industrial heritage of this Paris suburb, with a difficult reputation, is gradually being taken over by prestigious businesses.

### **Demolitions and threats of demolition**

Several emblematic disappearances are to be deplored. The 'giant mill' of the Dollfus Mieg Company at Mulhouse, built in 1812, was demolished in 2014, a heritage scandal (see G.



Dufresne, From Disaster to reconversion: Dollfus-Mieg and Company (DMC) at Mulhouse (Haut-Rhin), France, *TICCIH Bulletin* n° 68-2).

- The Fontainebleau market hall (Seine-et-Marne), built between 1939 and 1941 by the engineer Nicolas Esquillan, was celebrated for the elegant thinness of its roof structure, the delicate design of its Saint-Gobain glass blocks and its mushroom shaped curves. Despite the opposition of several leading architectural figures, this market hall was demolished in September 2014.

- The headquarters building of the Sanofi-Adventis firm at Reuil-Malmaison (Hauts-de-Seine) was built in 1968 for Sandoz and has been abandoned since 2010.

- Although the threats of imminent demolition of the Famar factory at Orléans (Loiret) seem to have been removed, at least for the moment, thanks to an international petition, the fate of this building remains uncertain. Situated on the left bank of the Loire, this pharmaceutical factory built in concrete and glass, and extremely modern for its time, was designed at the beginning of the 1950s by the Swiss architect Jean Tschumi for the Sandoz firm.

- At Boulogne-Billancourt, one of the last surviving workshop buildings constructed on the site of the world-famous Renault site, the so-called '57-Métal' building, designed by the architect Claude Vasconi at the beginning of the 1980s, is under threat today. Considered by some as a masterpiece of industrial architecture, the idea that it might be the last industrial vestige of the Renault site seems paradoxical to many.

### New site museums

- The Milles camp, near Aix-en-Provence (Bouches-du-Rhône). In 1939, a detention camp, used for exiled artists of German origin, was created inside this former brick and tile factory near Aix-en-Provence. The camp was subsequently used for Jews arrested and deported from Marseille. In September 2012, this major site of internment and deportation, still intact after the end of the war, was opened as a museum, designed by the Atelier Novembre architectural team. It is an important historical museum, focusing on education and culture, but without neglecting the site's industrial past ([www.campdesmilles.org](http://www.campdesmilles.org))



©Fondation du Camp des Milles - Mémoire et Education.

- The Bohin pin and needle working museum at Saint-Sulpice-sur-Risle (Orne), a factory museum in the countryside.



The Bohin pin and needle working museum © J.M. Mandon

Bohin is France's last manufacturer of pins and knitting needles and is a rare example of a 'heritage factory' which has managed to survive, still using the machines designed by the creators of the factory at the end of the nineteenth century. The products of the factory are of high quality and are exported throughout the world. The originality of this site is that it is a working factory that has been opened to visitors after the complete renovation of the buildings and the creation of an exceptional museographical itinerary (G. Dufresne, *The Bohin pin and needle working museum*, *TICCIH Bulletin*, n° 67). Visitors can follow the different stages in the production of pins and needles with the help of extremely innovative museum devices. In real life, they can also see the production of pins and needles, talk with the factory's employees and also learn about the region's industrial history ([www.lamanufacturebohin.fr](http://www.lamanufacturebohin.fr))

- The Musée cévenol at Saint-Jean-du-Gard (Gard). This project has been in the planning stages for over fifteen years but, today, is at last becoming reality. With the support of various local authorities (Grand Alès, Saint-Jean-du-Gard municipality), the project conceived by the Vurpas agency from Lyon has just begun to be implemented. The former 'Maison Rouge' silk throwing factory has been entirely restored. Its surrounding park has been restored to its 1850 state. In all, the museum will comprise 2,500 square metres devoted to the history of the Cévennes silk producing industry and to the social history.





Musée Cévenol : prospective drawing : VURPAS ARCHITECTES

- The Morlaix tobacco manufactory (Finistère).

This factory, built in the 1730s, will shortly accommodate a branch of the Rennes 'Espaces des Sciences', a centre of scientific, technical and industrial culture.



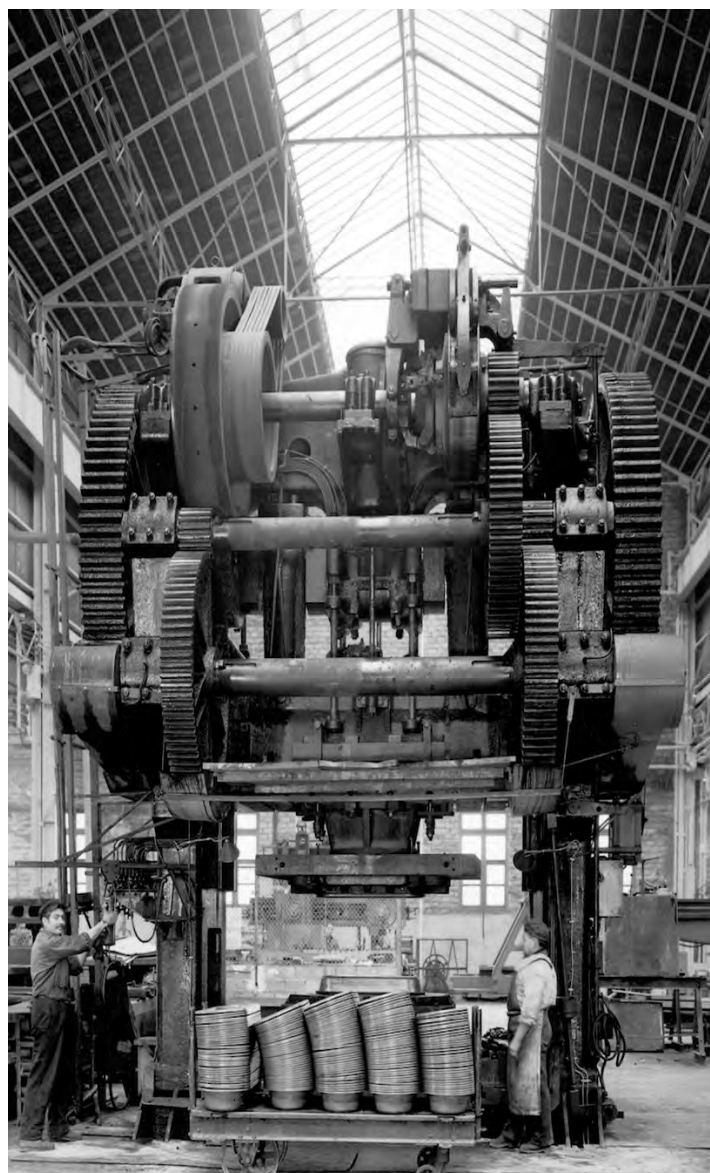
The Morlaix tobacco manufactory (Finistère). © Louis André

This new space will participate in the overall regeneration of this remarkable eighteenth-century state manufactory. The historical and heritage interest of the site are the leading values behind this ambitious project. The future CCSTI aims to 'share the pleasures of science and discovery, and offer answers to the question that ordinary people ask about scientific issues'. The centre is due to open in 2019 and will occupy 2,800 square metres inside the former tobacco manufactory, comprising three sequences: an exploratory space



where visitors will be able to carry out their own scientific experiments, an architectural workshop where the operation of the manufactory during the eighteenth, nineteenth and twentieth centuries will be explained and an 'innovation' gallery focused on the latest scientific issues and scientific enterprises.

- A machine conservatory is in preparation at Dommartin-le-Franc (Haute-Marne) in a former foundry close to the Metallurgic Park opened in 2011. The Association pour la sauvegarde et la promotion du patrimoine métallurgique haut-marnais (ASPM) at the origins of this initiative, has just acquired an enormous Ronot press, of 2,000 tonnes power, purchased from a Saint-Dizier business and due to be transferred to this planned conservatory.



Ronot press (1931), the last example in France

- The Puits Couriot Mining Museum and Park at Saint-Étienne (Loire)  
After seven years' work, the mining museum and park now has a new, one-thousand square-metre exhibition space, officially opened in December 2014. This space allows for the presentation of several themes, such as the figure of the miner, six centuries of mining

in the Saint-Étienne basin, and the history of the Couriot pit itself. This development gives the museum a new dimension and contributes to its mission of associating the history of the mine with its territory. [www.musee-mine.saint-etienne.fr](http://www.musee-mine.saint-etienne.fr)



© Florian Kleinfenn / Ville de Saint-Etienne.

### **Some educational and training programmes**

Université Paris 1 Panthéon-Sorbonne

A master's degree course is offered in 'history of sciences, history of techniques' at the Université Paris 1 (MH2ST). The MH2ST offers three branches: research, professional training (initial and continuous training) and international training (master Erasmus Mundus TPTI)

Université de Haute-Alsace (Mulhouse)

Master's degree course in 'Management and interpretation of the heritage' and a course in archive management (MECADO) with a specific component on industrial archaeology, understanding and interpreting industrial landscapes. Master 2 'history of economies and industrial societies in Europe' (HESIE), course on 'From business to the heritage'.

FORCOPAR project (FORMATION Continue à distance au PATrimoine industriel et à ses Reconversions). This is an e-learning project in the realm of industrial heritage, set up in

the context of the Leonard da Vinci European programme for Transfer and Innovation. The project consortium brings together several countries including Belgium, Italy, Portugal, France and Romania.

Université d'Artois at Arras

Master's degree course in heritage understanding and interpretation. The course, of sixteen weeks' duration in all, involves a twelve-week work experience.

Université de Rennes, licence 3, course on the industrial heritage as an option in the art history degree.

ENSA Normandie (Architectural school of Normandy), Rouen/Darnétal (Haute-Normandie)

Specialised master's degree course in building rehabilitation (Diagnostic et Réhabilitation des architectures du quotidien). Theoretical and thematical and course of initiation to industrial archaeology.

ENSA Paris-Belleville (Architectural school of Paris-Belleville) DSA (Diplôme supérieur d'architecture), course on architecture and heritage, including the industrial heritage.

Ecole du Louvre (Paris)

Course on the technical and industrial heritage as an option in the the school's general diploma, Preparation for the competitive exam for heritage curators (speciality scientific, technical and natural heritage).

### Conferences and study days

- "Les 'manus' après les tabacs, 30 ans de reconversions de lieux industriels" Tobacco manufactories after tobacco, thirty years of converting industrial buildings, international conference at Nantes, 13 to 15 November 2013.
- « De la friche au patrimoine : reconvertir le bâti industriel », From brownfield sites to heritage, converting industrial buildings, study day organised by Patrimoine Rhônalpin, 27 January 2014.
- « La fonte d'art en France et dans le monde », Cast-iron art work, international conference at Saint-Dizier (Haute-Marne) 25-26 September 2014. Proceedings of the conference to be published in 2015.

### Significant publications since 2012

ACTES DU COLLOQUE, *Patrimoine industriel des petites villes, 19 et 20 octobre 2012*, Les Amis du Vieux-Guéigny, 2013, 216 p.

ALEXANDRE, Alain, CROGUENNEC, Michel, *Histoire d'usines, 180 ans de vie industrielle dans l'agglomération rouennaise*, Editions L'Echo des vagues, Rouen, 2013, 304 p.

BEL, Dominique, *L'épopée industrielle de l'ocre, Vaucluse et pays d'Apt, du XVIIIe siècle à aujourd'hui*, ASPPIV, cahier n°56/57, 2013, 176 p.

BELHOSTE, Jean-François, SMITH, Paul, photographies de Pierre-Olivier Deschamps, *Architectures et paysages industriels, l'invention d'un patrimoine*, La Martinière, 2012, 271 p.

CALISTE, Lise, *Patrimoine industriel de l'Hérault*, col. Images du patrimoine n°287, Editions Lieux-dits, 2014, 112 p.



CREMNITZER, Jean- Bernard, (sous la dir.), *Trans-Form, l'enseignement du projet d'architecture de reconversion/transformation/réhabilitation au sein de l'ENSA Normandie*, Publication Collection Les cahiers de l'ENSA Normandie, n°6 – Editions Point de vues, Rouen, 2014.

DOREL-FERRÉ, Gracia, dir., *Patrimoine textiles de par le monde, en Champagne-Ardenne et ailleurs*, cahier de l'APIC n°9, CRDP de Champagne-Ardenne, 2013, 192 p.

DUPONT, Stéphanie, *Patrimoine industriel du Calvados, Caen et son arrondissement*, Images du patrimoine, n°27 3, Editions Lieux-Dits, 2013, 112 p.

FAVEREAUX, Raphaël, *Le pays de Monbéliard et son patrimoine industriel*, col. Images du patrimoine n°286, Editions Lieux-dits, 2014, 128 p.

LAURENT, Agnès, éditeur, *L'épopée du Gaz de Lacq*, diffusion Editions Cairn, 2013, 192 p.

LE ROUX, Thomas, *Les paris de l'industrie 1750-1920: Paris au risque de l'industrie*, Créaphis, 2013, 155 p.

LECHERBONNIER, Yannick, *Patrimoine industriel du Calvados, Pays d'Auge*, Images du patrimoine, n°272, Editions Lieux-Dits, 2013, 112 p.

PIERROT, Nicolas, *Champagne-sur-Seine. Et l'usine créa la ville...*, Parcours du patrimoine n°370, Région Île-de-France, 2012, 88 p.

RÉAL, Emmanuelle, *Reconversions. L'architecture industrielle réinventée*, Images du patrimoine n° 289, région Haute-Normandie, 2013, 304 p.

# Germany

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**Alexander Kierdorf and Norbert Tempel**

## **Introduction**

As we published the last National Report for the Freiberg International TICCIIH Conference in autumn 2009, this report covers six years which have seen a lot of change in personnel, and much promotion, organization and restoration activity, both on an official and a voluntary level. On the one hand, Industrial Heritage has become much more popular and respected in the public and cultural life, on the other hand the human resources are getting smaller, whereas infrastructure modernization, the so-called energy shift to renewable energies and energy saving, mayor economic and population moves, all lead to an increasing pressure on industrial grounds and monuments. The sudden end of black coal mining in the Saar region in 2012 and the planned closing of the last mine on the Ruhr in 2018 will mean the end of a whole economic era and ask for the selection and protection of monuments up to this moment. In other industries, increasing modernization cycles also demand that the moment of inventorisation and protection is coming earlier than ever before.

## **Organisation**

The identification, legal protection and scientific research on industrial monuments is mainly done by specialists on the level of the federal states (Bundeslaender); their number is 17, including the state-cities Berlin, Hamburg and Bremen and two institutions in Northrhine-Westphalia. Regular meetings and a frequent exchange of e-mails of the Arbeitsgruppe Industriedenkmalpflege (working group on Industrial Heritage) support coordination and exchange of knowledge. Some TICCIIH members take part in the exchange as guests. Its head has moved from Axel Foehl to Mathias Baxmann and recently on to Michael Hascher. Several “men of the first hour” have retired or sadly died, and a younger generation followed. Unfortunately, their capacity was often reduced and had to be shared with other fields.



Demolition of the Rheinfelden Hydropower Station, 2011. © C. Bedeschinski

### **Industrial monuments and world heritage**

Much interest and work has been focused on the field of black coal mining, mentioned above. In the Saar region, a complete inventory was set up, and a foundation had been created to manage the conversion of old mining sites including their historic constructions. Reden pit was a mayor project, and even became the seat of the state conservation and regional history institutions. But the foundation was liquidized in 2014, and all major monuments still lack restoration and reuse.

A major loss was the early hydropower station at Rheinfelden (1898), which became obsolete and had to make way for an ecological compensation model. An initiative of local enthusiasts together with TICCIIH led to a first coordinated protest together with ICOMOS Germany and the working group on Industrial Heritage mentioned above.

In eastern Germany, more and more industrial monuments after decades of emptiness and decay have been pulled down, mostly with public money. Some private owners make use of the water power, but do not care for the historic buildings. If monuments are restored, they often have to shine in their “former glory”, missing all the traces of time and work. In the former GDR area, there often is not enough economic power and also creativity to find new uses for many buildings, whereas in the west, real estate companies are now specializing in the restoration and management even of complex historic industrial sites.





Carlswerk, Cologne – exhibition in former production hall, 2012. © Alexander Kierdorf

The obvious lack of industrial heritage on the world heritage list encouraged many activities to propose Industrial heritage sites and landscapes. The Harz region in 2010 was successful in enlarging the Rammelsberg/Goslar site by the Oberharzer Wasserwirtschaft (Upper Harz Water Management System), the most important historic structure of dams, reservoirs, ponds and ditches in the world. The Iron Ore Mountain region (Erzgebirge) is developing and preparing its candidature by scientific conferences, a unique regional cooperation network and will hopefully get on stage in 2016. In the Ruhr area, a proposal to add the “Industrial Landscape of the Ruhr” is coordinated by the Foundation for Industrial Heritage and Historiography based at Dortmund, and made a first effort to be placed on the German list of candidates in 2015. Other proposals include the flying bridge of Osten as part of an international series of similar structures and a water supply and energy systems bridging centuries in Augsburg. Local attempts to put the railway bridge of Muengsten on the German tentative list failed, but might be successful as part of a European large steel bridges project. In 2015, Hamburg will try to get the World Heritage label for its Warehouse city/Office quarter (Speicherstadt/Kontorhausviertel) application. At Berlin, the hope to make the “Electropolis”, a network of sites presenting the history, technology and architecture of electricity, was stopped by the refusal of private owners for the time being.



The Rammelsberg World Heritage Site, Goslar. © N. Tempel

### **Industrial cultural landscapes within the world heritage context**

Industrial Heritage in landscape perspective has been the subject of major conferences in Saxonia as well as in the Ruhr region, aiming at defining the relation between the levels of landscape definition, its visual and structural representation. An important aspect was also the impact on the future development of the regions in an economical, ecological and social perspective. In the Saxonian iron ore region, economic interests concerning future mining and development of industry are major aspects. In the Ruhr region, questions of regional identity and metropolis qualities are discussed.

The term “cultural landscape” as an expression of local identity is coming more and more to the forefront in a large number of regional and urban planning processes: not least because the European landscape Convention that came into force in 2004 put the focus on cultural landscape as a planning object. This was the first global agreement on protecting and – primarily – developing and consciously planning the landscape. Before long, UNESCO had recognised the conservation value of landscapes in an “Agreement on Protecting the World’s Cultural and Natural Heritage” (World Heritage Convention 1972); and a World Heritage list of cultural and natural landscapes was introduced for the first time in 1992.

In recent years discussions on cultural landscapes have moved from outdated concepts of ideal, idyllic cultural landscapes to more pragmatic contemporary definitions. Alongside quasi-natural cultural landscapes there are a number of different types of urban and industrial landscapes that have hitherto not been clearly demarcated. To date there have been no binding criteria – especially with reference to industrial cultural landscapes – to enable us to do so.

In October 2013 international experts met up at a workshop given in the Technical University of Freiberg Mining Academy to discuss industrial and mining landscapes in the context of UNESCO World Heritage. Using a variety of different cases they discussed how to deal with this special type of cultural asset within UNESCO’s Protection and Conservation Agreement.



The 2nd Industrial Landscape Conference (Dortmund, February 26 – 27th 2015) aimed to sharpen the concept of Industrial Landscape by outlining a definition and naming the constituent parts of this particular type of landscape. Methodological and conceptual approaches were presented and discussed using practical examples from Europe and analyses of the Ruhrgebiet landscape-conferences. Both conferences were co-organized by TICCIH Germany and ICOMOS Germany.



The Henrichenburg Ship Lift, one component of a future World Heritage nomination. © B. Zech

Apart from the regular annual conferences of the conservation bodies, technical, economic and art historians, several special meetings were dedicated to the Industrial Heritage, most of them organized in cooperation with TICCIH Germany. On the Rhine, TICCIH member Prof. Walter Buschmann together with Aachen Technical University (RWTH) organized a series of conferences at Essen, Köln, Aachen and Wuppertal (with Krefeld yet to come in 2016), bringing together local specialists, conservation and local administration people. Another major event was in 2012 the conference “Industriekultur 2020” at Dortmund dedicated to the history and future of industrial culture and archaeology in Northrhine Westphalia. The 3rd Conference “Denkmal 3D” about laser scanning and documentation of industrial heritage took place in the Westphalian museum of Industry in Dortmund in October 16th to 18th 2013, organized in cooperation with TICCIH Germany.





Demonstration run of a 1902 air compressor in the Westphalian Museum of Industry, Zollern II/IV Mine, Dortmund. © N.Tempel

### Scientific and thematic associations

Following the Freiberg International TICCIIH Conference 2009, it was found that the Georg-Agricola-Gesellschaft (GAG), existing since 1926 - for a long time in close connection to the Deutsches Museum at Munich -, might be the basis for a common organization of the Industrial Heritage and TICCIIH friends and members. As a major step into this direction, TICCIIH Board Member Prof. Helmuth Albrecht took over the presidency of the GAG, and leading committee members agreed with a programmatic renewal and opening of the GAG to modern topics of Industrial Heritage and Archaeology.

In 2013, at Berlin a scientific body on construction history, the “Gesellschaft für Bautechnikgeschichte” was formed (president: Prof. Werner Lorenz, Cottbus), with many ties to industrial archaeology. There is a permanently growing need in the building and restoration practice for knowledge and research on questions of construction and building materials. Unfortunately, many technical and industrial monuments are still being heavily damaged or even lost because of lack of historic knowledge and the application of inadequate rules and methods in the evaluation and restoration of monuments. The German Mining Museum, Bochum, together with cooperation partners, is also collecting testing and restoration knowledge to set up appropriate rules and methods, the so called “Action plan for the conservation of Industrial Heritage”. It will become accessible on the internet end of 2015.

The series of “BigStuff” conferences about conservation issues of large technology objects in museum collections and large industrial structures is organized by an international informal committee with a considerable German participation. In 2015 it will take place in September, 3rd and 4th 2015 at the Centre Historique Minier in Lewarde in tight connection with the XVI. International TICCIIH conference in Lille.

The members of TICCIIH in Germany, forming their own informal National Committee, have regularly met twice a year, often at conferences, like the annual GAG meeting. They cooperated in several events and regular meetings, for example with ICOMOS Germany,

where a joint Industrial Heritage group was formed in order to help with the evaluating and monitoring of Technical and Industrial World Heritage and to enforce strong statements in case of endangered industrial heritage of national importance.

The number of regional and local organisations and periodical activities grew substantially; many regions now organize Industrial Heritage Days, like Northern Hesse, Hamburg region, the Rhine-Main and Rhine-Neckar regions, Berlin, Leipzig and Chemnitz. Meanwhile initiatives in France, the Netherlands, Poland and Ukraine are following the example set by the very successful “Extra Shift - Night of Industrial Culture”. In the Ruhr this very popular event, presenting performing arts in industrial locations connected by a shuttle system, has taken place in June or July every year since 2001, attracting some 80.000 people. The internet gives the chance to prepare and offer information easily and well-connected, mirrored in local routes and explanation systems; examples are the “Industriepfad Gerresheim” at Duesseldorf and the “Via Industrialis” at Cologne.



The Fagus Factory in Alfeld – on the World Heritage List since 2011. © R. Klenner

### ***Industriekultur magazine***

Since 1995, a growing number of institutions and initiatives as well as amateur experts are cooperating in publishing the quarterly “Industriekultur” magazine, covering the Industrial Heritage scene in Germany and Europe, starting point for reporting on successfully preserved and managed industrial monuments and sites as well as heritage in danger. TICCIH and the Swiss SGTI are among the cooperation partners. Over a period of 20 years, 70 issues with more than 3.500 pages have been published, every issue starting with a special main topic – such like bridges, collieries, textile mills, iron and steel industry, coke and gas, rubbish and scrap, waterways and shipping, railway structures, industrial world heritage, women at work, oil production or hydropower stations. This is followed by sections with short contributions, regional news, book reviews, conference announcements etc. In every issue the European Route of Industrial heritage [ERIH], a touristic network, is providing four pages with information about connected sites and routes. Having since long been accompanied by an online index register on its website [www.industrie-kultur.de](http://www.industrie-kultur.de), now all issues are also available as an electronic archive on DVD. Starting this year, the print edition is accompanied by an electronic version of the journal.

Every year a special issue is dedicated to the industrial heritage of one specific country or region, most articles written by residents – mainly friends from the TICCIIH community. Until today we cover nearly all neighbouring countries of Germany (France, Belgium, Netherlands, Poland, Czech Republic, Austria, and Switzerland, Denmark is soon to come) as well as Italy, Spain, Ireland, Scotland, Japan, and Russia. The latest issue 2.2015 - a special about northern France - will be presented at the TICCIIH Conference.

## **Selected publications**

### Conference Publications

Albrecht, Helmuth; Alexander Kierdorf; Norbert Tempel (eds)  
Industrial heritage - ecology & economy: selected papers / XIV. International TICCIIH Congress 2009 in Freiberg, Germany (Industriearchaeologie, vol. 10)  
Chemnitz 2011

Buschmann, Walter (ed.)  
Zwischen Rhein-Ruhr und Maar. Pionierland der Industrialisierung – Werkstatt der Industriekultur.  
Essen (Klartext) 2013

Helmuth Albrecht; Friederike Hansell (eds)  
Industrial and Mining Landscapes within World Heritage Context International workshop TU Bergakademie Freiberg; Germany, October 25<sup>th</sup>, 2013 (Industriearchaeologie, vol. 15)103  
Chemnitz 2014

Federal State NRW, Industrial Museums of Rhineland and Westphalia et al (eds)  
Industriekultur 2020: Positionen und Visionen für Nordrhein-Westfalen  
Essen (Klartext) 2014

### Monographs

Albrecht, Helmuth; Saechsische Industriemuseum; IWTG/TU Bergakademie Freiberg (eds)  
SHIFT-X: compendium on effective industrial heritage management structures and options for their interregional transfer (Industriearchaeologie, vol. 14)  
Chemnitz 2014

Bardua, Sven (author), Hamburgische Ingenieurkammer-Bau, Museum der Arbeit (eds)  
Brückenmetropole Hamburg, Baukunst – Technik – Geschichte bis 1945  
Hamburg/Munich (Doelling & Galitz) 2009

Bardua, Sven (author), Hamburgische Ingenieurkammer-Bau, Museum der Arbeit (eds)  
Unter Elbe, Alster und Stadt – die Geschichte des Tunnelbaus in Hamburg  
Hamburg/Munich (Doelling & Galitz) 2011

Bittner, Regina; Wilfried Hackenbroich  
Architektur aus der Schuhbox. Batas internationale Fabrikstaedte (Bauhaus Taschenbuch 2) Dessau 2012

Dame, Thorsten  
Elektropolis Berlin: Die Energie der Großstadt. Bauprogramme und Aushandlungsprozesse zur öffentlichen Elektrizitätsversorgung in Berlin  
Berlin (Gebr. Mann) 2011

Dame, Thorsten (author), Landesdenkmalamt Berlin (ed.)



Elektropolis Berlin. Architektur- und Denkmalführer  
Petersberg (Imhof) 2014

Farrenkopf, Michael  
Mythos Kohle. Der Ruhrbergbau in historischen Fotografien aus dem Bergbauarchiv  
Bochum  
Münster (Aschendorff) 2013

Farrenkopf, Michael, Michael Ganzelewski, Stefan Przigoda, Inga Schnepel, Rainer Slotta  
(Eds.)  
Glück auf! Ruhrgebiet - Der Steinkohlenbergbau nach 1945  
Katalog der Ausstellung des Deutschen Bergbau-Museums Bochum vom 6. Dezember  
2009 bis 2. Mai 2010  
Bochum 2009

Feldkamp, Jörg; Industriemuseum Chemnitz (eds)  
Industriekultur in Sachsen: neue Wege im 21. Jahrhundert (Industriearchäologie, vol 9)  
Chemnitz 2010

Ganser, Karl (author), Regio Augsburg Tourismus GmbH (ed.)  
Industriekultur in Augsburg: Pioniere und Fabrikschlösser  
Augsburg (context) 2010

Gruetter, Heinrich Theodor  
Mythos Krupp. Ein Mythos wird besichtigt.  
Essen (Klartext) 2012

Hassler, Uta (ed.); Alexander Kierdorf, Hubert K. Hilsdorff et al (authors)  
Was der Architekt vom Stahlbeton wissen sollte: ein Leitfaden fuer Denkmalpfleger und  
Architekten  
Zurich (gta) 2010

Haus der Bayerischen Geschichte (ed.)  
Industriekultur in Bayern  
Regensburg (Pustet) 2013

Stadt Augsburg (ed.), Martin Kluger (author)  
Historische Wasserwirtschaft und Wasserkunst in Augsburg: Kanallandschaft,  
Wassertuerme, Brunnenkunst und Wasserkraft  
Augsburg (context) 2012

Kluger, Martin  
Wasserbau und Wasserkraft, Trinkwasser und Brunnenkunst in Augsburg: Die historische  
Augsburger Wasserwirtschaft und ihre Denkmäler im europaweiten Vergleich  
Augsburg (context) 2013

Oevermann, Heike  
Ueber den Umgang mit dem industriellen Erbe: Eine diskursanalytische Untersuchung  
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2. Die Goeltzschthalbruecke (Peter Beyer, Jürgen Stritzke, 2009, <sup>2</sup>2011)

3. Der Fernsehturm Stuttgart (Hans-Peter Andrae, Annette Boegle, Jan Knippers, Joerg Schlaich, 2009, <sup>3</sup>2012)

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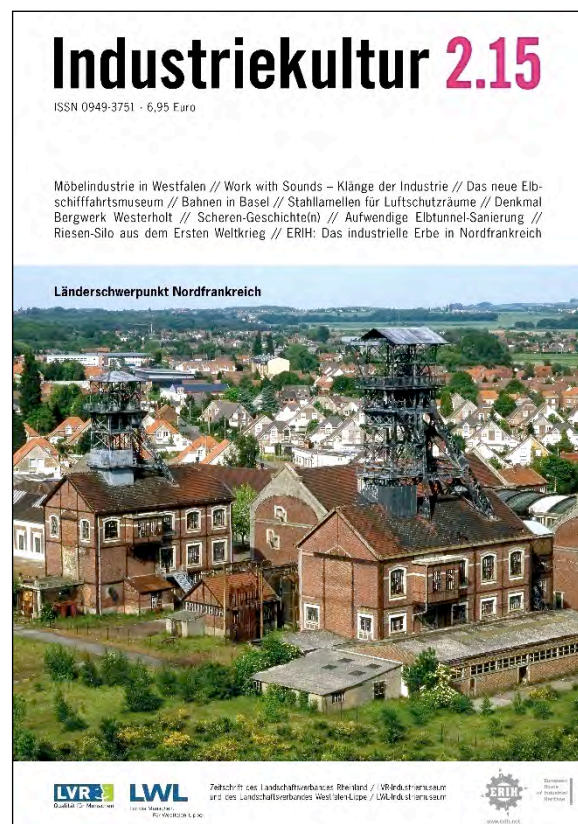
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10. Der Flughafen Tempelhof (Thomas Blau, 2011, <sup>2</sup>2015)
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### Györgyi Németh

The period between 2012 and 2015 has, in general, been beneficial for industrial heritage in Hungary. This actually could be stated for an even longer interval that began in 2009, the year when our last national report on industrial heritage was published. Considering the latest developments, we can declare that the state of affairs for the industrial heritage has been slightly but definitely improving in specific areas. Extensive regeneration projects have been initiated and finished mostly with success in Budapest and in major cities alike. Public interest has been steadily growing especially in younger generations, and proposed by non-profit organisations, excellent programmes have been accomplished. Training programmes have been also launched on university level at various institutions to supply cultural heritage organisations and businesses with industrial heritage experts, missing from their staff. In other areas, such as identifying national strategic priorities and preparing a comprehensive and systematic survey, substantial improvements would be still needed. Due to the wealth of developments listed above, this report will not be able to cover the full account of events in the past years but it does aim to give an overview, presenting the latest trends in industrial heritage preservation in Hungary.

### Public policies

The lack of a long-term national strategy concerning the conservation of the industrial heritage has been a fundamental issue since the change of the political system in 1990. However, a conference series entitled Heritage for the Future – Future for the Heritage, organised by the Hungarian National Committee of ICOMOS in 2013 and 2014, may prove to be a turning point in this respect. Initiated and financially supported by the National Cultural Fund of Hungary, each conference aimed to analyse the current state of the national cultural heritage from various aspects, providing proposals for policy developments with the active participation of a wide range of audience. The conference focusing on industrial heritage matters was prepared by TICCIH Hungary, functioning also as the industrial heritage committee of ICOMOS Hungary. In order to raise public awareness to the values of the cultural heritage, the conferences were organised in a variety of cities throughout the country. Hosted in Miskolc, formerly the centre of the greatest heavy industrial region of Hungary, the industrial heritage conference highlighted the numerous values of industrial remains in the regeneration of the decades-long declining area.

In the absence of a clear national strategy, it is not surprising that there is still no real sustaining force behind industrial heritage in Hungary. This has been aggravated by the repeated institutional reorganisation of the National Office of the Cultural Heritage since 2012 with the added disadvantage of the lack of a specifically assigned staff on industrial heritage matters. Hopefully, the recent re-establishment and enlargement of the organisation renamed as Forster Gyula National Centre for Monument Protection and Property Management will generate the necessary favorable developments in the near future.

## **Inventory programs**

Although systematic surveys have never been initiated on the complete industrial heritage of Hungary, the inventory of industrial monuments protected by law has been regularly updated at the Forster Centre. Luckily, the regional inventory program started by a cultural foundation in Veszprém and Fejér counties focuses not only on protected monuments but also on all valuable historical buildings, including industrial ones. The amazing collection of archival documents and photos recently donated to the Budapest University of Technology and Economics will substantially contribute to the locally planned inventory of factory buildings from the second half of the 20th century. The records refer to the activities of a formerly leading architecture firm, the Industrial Buildings Consulting Co. (IPARTERV), which designed numerous outstanding industrial establishments during the Soviet era in Hungary.

## **Statutory protection**

Compared to the previous period, a growing number of technical and industrial sites have received statutory protection between 2009 and 2015. Sadly, this trend has been recently interrupted with only nine buildings protected between 2013 and 2015 from the total number of eighty-four for the entire time period. Moreover, two sites have received only temporary protection operative for only one year, while some ten industrial sites already on the monument list have been deprived of statutory protection mostly due to an extremely high level of deterioration.

## **Conversion – rehabilitation**

There can be no doubt that the most significant achievement in industrial heritage conservation has been the regeneration of the Zsolnay ceramics factory site in Pécs, a major city in southern Hungary. The renowned factory was established in the second half of the 19th century by Vilmos Zsolnay, the inventor of porcelain faience and multi-coloured eosin technique, both of them award-winning at Paris World Fairs, as well as that of pyrogranite, the unique building material of Hungarian art nouveau. In the authentically preserved and refurbished buildings of the factory site, comprising the villas and the mausoleum of the owners beside production facilities, a wide variety of cultural events have been implemented. Exhibits on the history of the Zsolnay family and the factory, the display of Zsolnay artefacts, as well as playful scientific experiments and puppet performances for adults and kids are just a few from among the most enticing. Regrettably, the Zsolnay Cultural Quarter project was not finished in time to host the 2010 programmes of Pécs designated as European Capital of Culture in conjunction with Essen and Istanbul for that year. Despite this failure, the regenerated site successfully contributes to the cultural life of the city at present while providing amazing public spaces for the local community in a restored environment.



The regenerated site of pyrogranite production with halls, kilns and smokestacks at the *Zsolnay Cultural Quarter* in Pécs.

Similarly, the conversion of the Lágymányos tobacco factory originating from the beginning of the 20th century can be also considered a great success. Located in Budapest, the impressive reinforced concrete warehouse building of the former industrial plant currently houses the Lechner Knowledge Centre, providing expertise for the central government in architectural and building issues. The institution's enormous collection of architectural plans and documents is safely and properly preserved in the fireproof and spacious storage place. On the contrary, the reconstruction of the 19th-century public warehouses on the Danube bank in Budapest has been widely criticised. Named Whale, in Hungarian Bálna, because of the design of its controversial new architectural extensions, the building complex is still searching for a well-defined function. Lacking viable plans for future use is also the main deficiency in the long-awaited rehabilitation of the fabulous water and tar towers of the Óbuda gasworks on the outskirts of Budapest. Neighbouring Graphisoft Park, a spin-off from a prominent software development company as well as the freshly opened Aquincum Campus of the International Business School, the building complex could be easily utilised for various purposes.





The *Whale* (Bálna). Reconstructed public warehouses on the bank of the Danube in Budapest. © Györgyi Németh, 2015

Fortunately, there are other examples where utilization went hand-in-hand with renovation. For instance, the recent transformation of quarries into high-end and attractive summer theatres in the vicinity of popular tourist centres like Sopron and Tokaj proved to be an excellent idea. By creating exciting new locations for a wide sphere of cultural programmes, both EU-funded regeneration projects have successfully managed to raise further the number of visitors in these regions.

Conservation proposals for the protected workshops from the 1960s, standing outside the current boundaries of the Millenáris, were also aimed to improve the assets of the rehabilitated site of the former Ganz electric works in Budapest. Due to the diversity of its public benefits attributable to the heritage-based and culture-oriented regeneration scheme, the site has a tremendous appeal for the wider public since its opening in 2001. Surprisingly, instead of the implementation of the latest architectural plans, the extraordinary industrial structures and a monumental hall were abruptly demolished during the spring of 2015.



Demolition of the monumental hall of the former Ganz electric works in Budapest. (Photo: Györgyi Németh, 2015)

### **New site museums**

Opening the reconstructed site of the 17th century gun foundry in Sárospatak in 2014 was broadly acclaimed by heritage experts as well as by the general public. Founded by György Rákóczi I, the Prince of Transylvania and member of a prominent aristocratic family in Hungary, the workshop has tremendous historical significance. Although hardly any walls and structures have been preserved above surface level due to violent historical events, the museum provides an excellent introduction into the technology of early modern gun making and related areas, presenting the archaeological remains in a global context.

Reconstructed in 2010, the replica of the last functional boat mill on the Danube in Hungary is also highly appreciated for its authentic technological features. This boat mill, in addition, is the striking evidence of the high level of community commitment in Ráckeve. Actually, reconstruction was initiated and implemented by the local community, missing the original mill moored to its river bank but fatally damaged due to winter extremities in 1967.

### **Training programs**

Surely, introducing a higher educational pilot program into the curriculum of the University of Miskolc in 2010 was fundamental in industrial heritage preservation. Further education has been offered after completion of a first degree in order to supply the declining heavy industrial region with industrial heritage professionals facilitating its regeneration. Besides this comprehensive and multidisciplinary program, individual courses have been also



launched at a number of universities throughout the country mostly within the framework of cultural heritage studies.



The impressive reinforced concrete warehouse building of the former Lágymányos tobacco factory, rehabilitated in Budapest. © Györgyi Németh, 2015

## Associations



Awarded the Grand Prix, the extensive cultural heritage program of the association named Passage, in Hungarian Átjáró, was highly appreciated by the Jury of the Europa Nostra Prize in 2014. The program entitled From a rusty city to a new Miskolc focused on the preservation, recognition and awareness-raising of Miskolc's cultural and industrial past and on the revitalization and re-presentation of its surviving built heritage. The association, including young professionals who graduated mostly from the University of Miskolc, was commended primarily for their vigour and enterprise, endeavouring to save the spirit of local identity and help it to find a new life with self-respect and confidence.

Having renewed its organisational structure and creating long-term plans, TICCIH Hungary has also initiated extremely successful programs since 2012. Aiming attention at specific industrial heritage issues currently prevailing in the whole Central and East European area, the annual conferences as well as the related study tours attract a rapidly growing number of participants, comprising heritage professionals, amateur researchers and representatives of various institutions alike.

## Conclusions

Despite significant developments in the field, we can conclude that the preservation of the industrial heritage continues to remain a great concern for industrial heritage professionals and enthusiasts in Hungary. In order to prevent further neglect, decay and demolition, public awareness should be considerably raised to the values of industrial heritage, especially from the 20th century. Co-operation and co-ordination of activities worldwide and in the home arena is instrumental to achieve this goal.

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### Massimo Preite

#### Foreword

These last three years have been damaging: between 2012 and 2015 Italy has seen an unprecedented economic and social crisis. Culture and associated activities have been the sector hardest hit by the contraction in spending programmes. The industrial heritage has seen a serious reduction in conservation interventions: initiatives already planned have been suspended, while a large number of projects in the process of being drawn up have been abandoned indefinitely. However, in contrast to what might be thought, while there is an undeniable general climate of recession, which has hit everything and everyone, it must also be recognized that not everything has come to a stop, and that some things have been brought to completion. In the view of this writer, this is shown by the survey of developments relating to the industrial heritage in Italy in the last three years (2012-2015). The paragraphs below examine these with reference to three profiles of analysis: legislation, conservation and enhancement of heritage, and initiatives aimed at spreading industrial heritage culture.

#### Legislation to protect the industrial heritage

At the general level, the situation has remained unchanged. The industrial heritage is still failing to find adequate recognition in the framework of regulations (except for a fleeting reference to “mining sites of ethno-anthropological” interest in the 2004 cultural assets code); no initiative has been taken to embark upon cataloguing the existing heritage.

Expectations as regards certain specific heritage sectors have been equally unfulfilled. Despite the fact some proposals for new legislation have been put forward, no actual laws have been adopted to give more regulatory certainty to Italy's Mining Parks, whose management bodies have been temporarily extended from one year to the next, preventing them from engaging in any planning for their future activities.

By contrast, bucking the national trend, worthy of note are legislative initiatives of certain regions in central and southern Italy:

- Umbria Region Law 5/2013, envisioning support for activities to safeguard and study industrial archaeology heritage, the creation of a regional commission to conserve them, and setting in place a three-year plan to identify the strategic objectives, the criteria for prioritizing interventions, and the financial resources needed to implement it;
- Puglia Region Law 1/2015, which “encourages the conservation and promotion of the industrial archaeological heritage in the local area, recognizing its importance for the culture and for regional economic development (art. 1)” and which “includes the enhancement of the industrial archaeological heritage among the objectives and conservation and management plans, included in regional planning instruments (art. 49)”;
- a similar measure is about to be approved in Basilicata Region: it envisions a regional survey of tangible and intangible assets that can no longer be used in the manufacturing process, a three-year plan involving conservation and the use of the industrial heritage as a lever for a new economic development.



Despite the fact that these initiatives, taken at the regional level, are limited to specific local areas, it is to be hoped that they may become more general, and act as a model for similar measures in other regions.

### **The industrial heritage: extinction and conservation**

In the recent history of Italy's industrial heritage, there are contrasting developments, involving both constructive and destructive events. We have seen the demolition of structures regarded as “awkward” since they stood in the way of radical urban renewal projects, but there has also been regeneration of industrial spaces and plant which it has been possible to adapt to new functions.

### **The lost heritage**

In the last three years, Italy's industrial heritage has seen significant destruction following various different events, which make one reflect on the wide range of factors which can damage the integrity of the industrial heritage.

Natural factors, firstly. The major earthquake on May 20 2012, which shook a huge area comprising the provinces of Bologna, Ferrara, Modena, Reggio Emilia and Mantua, as well as striking the economy and monumental heritage of numerous towns and cities, also damaged important components of the industrial heritage, including the majestic “Mondine” water-raising plant (built in 1923 to plans by Natale Prampolini, below), the sugar factory of the Società Italiana Industria Zuccheri (a typical example of 1936 rationalist architecture, the restoration of which had only been completed just a few months before the quake), and the Finale Ligure former slaughter-house (1895). Of these complexes, restoration is already under way, and therefore the damage is set to be repaired.

However, a very different fate seems to lie in store for other examples of the industrial heritage, which have suffered not so much from the direct effects of the quake as from the opportunity it provided to get rid of them once and for all: the Mulino Parisio chimney-stack (a monument to Bologna's industrial heritage, whose origins date back to the 17th century), and the chimneys of other plant in the neighbouring areas, were demolished without any delay, citing the risks of instability as a result of the earthquake. Thus the natural event provided the justification to remove unwanted heritage features, without any assessment of the possibility of consolidating and salvaging them.



The Mondine Water Plant after the earthquake. © Arlotti G., 2013

Another category of destruction, in the period in question, was arson. On March 4 2013, following a fire, the *City of Science* (Città della Scienza) at Bagnoli (Naples) was destroyed (below). This name was given to a complex set of chemical works comprising an older industrial site (five long buildings with very fine wooden trusses), and two reinforced concrete and iron buildings for the production of sulphuric acid. Once abandoned, the buildings were bought in 1993 by the IDIS Foundation, which embarked upon their salvage and the conversion of the whole complex into a Science Center (opened in 2001). In April 2015 a competitive tender was advertised for its reconstruction after the fire. But there is a difference of views over the most appropriate ways to reconstruct it, and this is in danger of paralyzing work.



Città della Scienza after the fire. © M Preite

The case of Mulino Toso, at Silea (Treviso), is similar: A fire in April 2015 destroyed the interior and caused the roof to collapse. The building, erected at the end of the 1800s, and working until the 1960s thanks to hydraulic energy of one of the tributaries of the Sile, the Melma, reached its definitive form and appearance in the course of the 19th century, taking on the appearance (on a smaller scale) of the Mulino Stucky in Venice. In 2008 the new owner drew up a large-scale plan to convert the structure to turn it into a hotel complex.

One last category involves “demolition, regardless”: this involves an increasingly high incidence of destruction without any subsequent replacement building. Two examples display the senselessness of these interventions, which destroy the heritage without evident compensatory action:

- the demolition in Turin of the former *Diatto Automobili* plant (designed by Pietro Fenoglio in 1905); two years after the demolition of the industrial buildings (June 2013), the project that made provision for the construction of new luxury residential complexes, a shopping centre and car parks has not yet got under way, and will probably never do so without a revision of the objectives;
- a similar fate befell the Piedicastello cement-works (Trento): after the closure of the plant in 2005 and its demolition in July 2013, the plethora of ideas concerning reuse of the area (educational hub, technological district, cooperation citadel etc) ending without conclusion, owing to a total lack of funds and ideas.

### Industrial Heritage at risk

The scale of the industrial heritage at risk of being suppressed or very much interfered with, owing to real estate development programmes that are limitless and, at the same time, hard to quantify. In the current phase, one has to note that the economic crisis (scarce



financial liquidity, contracting investments, stagnating property market etc) ends up, paradoxically, being an unintended ally of conservation: many disused industrial complexes have fallen into neglect, such as the splendid Ansaldo cast-iron foundries at Multedo near Genoa (of which there remains an elegant services building built in late Secessionist style, and two large industrial buildings with structures based on pillars and parabolic arches made of reinforced concrete), as well as others already condemned by urban renewal programmes that have been duly approved, and which survive owing to the fact that, right now, there are no longer those margins of attractiveness which were previously able to ensure the profitability of the anticipated investments. Prestigious industrial monuments profit from this ephemeral limbo, and they are prolonging their existence despite the fact that there are development plans already ready, but which are not being implemented, since the conditions are unfavourable. The stagnating national economy is the sole reason for the fact that there still remain a number of Pier Luigi Nervi factories, over whose conservation there now loom no few uncertainties:

- the Manifattura Tabacchi (Tobacco Factory) in Florence (1936-1940), which is still in its original state, but whose integrity is now threatened by a project which involves the demolition of two internal plants, and their replacement by two new 12-storey tower blocks, which would wreak havoc with the local skyline;
- on 9 February 2013 the Burgo paper mill in Mantua (below) ceased operations. It was built between 1961 and 1964; the building “represents a singular work that became an icon of the resolution of a complex functional problem: the creation of single, 250-meter long space characterised by a 160-meter long uninterrupted façade, for the placement of the paper producing equipment” (Cristiana Chiorino). Major uncertainty surrounds the potential fate of this extraordinary complex;



The Burgo paper mill in Mantua. © M Preite

- the former Magazzino Sir (warehouse) at the Ravenna docks, built in 1956 along the lines of the reinforced concrete parabolic structures designed by Nervi for large

industrial warehouses; while initial demolition projects were later mitigated by “bold” solutions, such as the plan to only conserve the support centerings, eliminating the outer shell, the difficulty of achieving a minimal level of agreement (among the different stakeholders) over the future of the structure exposes it to a wide range of threats.

Another factor of risk is connected with the evolution of manufacturing processes. The most visible case is that of the Carrara quarry (Apuane), where marble extraction has been going on non-stop ever since antiquity (one third of the 85 quarries date to the Roman period). During the 20th century, there was an uncontrolled acceleration in extraction: from 100,000 tons of marble extracted in 1920, the figure has now risen to more than 5 million tons per year, with serious dangers to the environment. Of all this marble that is annually dug, only one fifth is extracted in blocks and slabs for the building industry, the rest is detritus to be transformed into calcium carbonate for use mainly as a filler in cosmetics and toothpaste. The clampdown by marble firms against Tuscany Region's new landscape plan, envisaging “the closure of the quarries inside the protected area”, had the effect of softening the closure move, in the version that was finally approved (March 2015), leaving the way clear for new regulations for the assessment of the environmental impact, regulations that do not exclude the commencement of new diggings. Despite the approval of the plan, one may well doubt that the Apuane marble quarries, included in 2011 in the Geoparks network, are exempt from the risks caused by the spread of new extraction techniques which, owing to their aggressiveness, threaten the integrity of the landscape, and the whole ecosystem.

### **The salvaged heritage**

Despite the slowdown imposed by the crisis of the last few years, there are some measures to salvage the industrial heritage that it is worthwhile to point up, also for their ability to place new emphasis, in new forms, on the dilemma between conservation and transformation which has always characterized the reuse of abandoned industrial sites.

#### **The industrial heritage and new museums**

In the reassuring context of museum creation, two projects are under way aimed at conserving mining sites. The first relates to the Servette mine in the Saint Marcel municipality (Valle d'Aosta). Here there are chalcopyrite excavations dating to the 14th and 15th centuries. The areas opened up for visitor access include the tunnels, the track for transporting the ore lower down the valley, a smelting kiln, and the archaeological ruins of the service buildings. The mining site at Servette will be opened in July 2015.

The second intervention relates to the start of the first phase of work to create the Mine Museum of Cozzo Disi (Agrigento). Despite the state of advanced decay affecting many of the features, the mining site has huge potential: by salvaging the underground tunnels and surface facilities for smelting the ore (Gill furnaces, vapour smelting facility, and flotation facility), Cozzo Disi could become one of the most representative sites in Europe as regards sulphur extraction.

Another project related to museum creation is the restoration carried out by the Hydrodynamic Power Station and its opening in June 2012 as the first feature on view as part of the port of Trieste museum hub, the plans for a *Museum of Cast-Iron Arts* in Maremma (MAGMA), housed in the restored interior of the San Ferdinando Furnace (former Ilva area, Follonica) and opened in June 2013, and plans for the new Shipbuilding

Museum (MuCa) in the former workers' hotel at Monfalcone, which is due to open at the end of 2015.

We cannot omit to mention the case of a museum which has come into being not from a salvaging (rescue) operation, but from a previous operation involving the total levelling of a former industrial area, the former Michelin factory at Trento. The occupied area covered an area of around 113,000 sq. m, of which around 68,000 sq. m. was occupied by a large-scale building with shed roofing, and a building with beams and pillars of reinforced concrete. Completely demolished between 2002 and 2005, today it has been replaced by Renzo Piano's project - "Le Albere" - by a new urban district (300 homes, offices, public park etc), and, perhaps, bearing witness to the previous manufacturing history, a new Science Museum (MUSE), all opened in July 2013

### **Industrial heritage and creative activities**

No less important are cases involving the conversion of disused industrial containers not necessarily involving the creation of a museum, or in which visitor access and display do not constitute the prime purpose of the intervention. This category includes some interventions in which reuse is aimed at the development of activities for the production of new culture, in other words activities which stem from the creativity and talent of individuals and/or firms that have strong innovation skills:

- in Turin, the Mirafiori Design Center (below) was opened in 2012; the project, by Isolarchitetti, is the first piece in the plan to transform the former Fiat Mirafiori Factory. It involves the abandoned spaces of the former Dai building, so as to create a new Centre of Design in it, to bring together didactic activities by the Turin Polytechnic, laboratories, and experiments connected with the world of production;



Mirafiori Design Center in Turin. © M Preite



- the intervention to breathe new life into the areas of the former Ceramica Vaccari (Vaccari Pottery, below) in Ponzano Magra (La Spezia), a complex of buildings dating to the early 1900s (of which the calibration building and the storage buildings remain today) was undertaken with the aim of creating a cultural production centre. To this end the Town Council held a festival, *NOVA Cantieri Creativi: spazi mutanti, spazi mutati*, on March, 2014. This was a workshop on the creative regeneration experiences in Europe and in Italy;



The Vaccari Pottery in Ponzano Magra (La Spezia). © M Preite

- the old film studios by Dino De Laurentiis, built in the 1960s at Castel Romano (Rome), have been turned into a theme park – *Cinecittà World*. It was opened in July 2014, the dominant element of the whole facility is cinema, with 20 attractions and sets designed by Oscar Dante Ferretti, the three-times Oscar winner;
- the ZAC (*Zisa Arti Contemporanee, Zisa Contemporary Arts, below*) in Palermo was opened on December 16, 2012 inside a completely renovated hangar which had previously been used to make seaplanes, inside Zisa's *Cantieri Culturali*, a metropolitan cultural hub which was built on an industrial area comprising 23 industrial buildings belonging to the Ducrot furniture workshops.



Zisa Contemporary Arts in Palermo. © M Preite

### Industrial heritage and fashion

Worthy of special mention is the salvaging of industrial spaces by leading fashion designers. This phenomenon began in Milan, which saw the opening, a few months ago, of the *Armani/Silos* in the abandoned former Nestlé factory in Via Borgognone, designed by Tadao Ando (below), and the *Prada Foundation* (below) in a former distillery (designed by Rem Koolhaas), while work is under way to build the new premises of the *Pinault Group* on the premises of the former Caproni aircraft hangars, in Via Mecenate (to plans by Piuarch). The construction of the center involves salvaging an area of around 30,000 sq. mt, almost entirely consisting of brick-built industrial buildings, and renovating the hangar that is to become a multi-purpose site where fashion shows will also be held. The fact that such high-profile projects are given to leading architects (archi-stars) inevitably means that projects must be drawn up and geared towards reinterpreting the original functional, distribution, and stylistic characteristics of the salvaged industrial features.



Armani Silos in Milan. © M Preite





Prada Foundation, Milan. © Bas Princen. Courtesy Fondazione Prada

Sometimes this reinterpretation can go as far as replacing the former industrial premises, as is happening in the project currently in progress to build the new Headquarters of Ermenegildo Zegna.



Headquarters of Ermenegildo Zegna in Milan.

In this instance, Antonio Citterio and Patricia Viel and Partners and Studio Beretta, appointed to convert the former Riva Calzoni plant (the name of the 1926 steel-works which, up until a few decades ago, used to make hydraulic turbines), replaced the existing industrial building. It was impossible to conserve its dense structural fabric. A completely new volume was created, which, while reproducing the shed-roof profile, nevertheless represents a completely new reinterpretation of the organization of the interior layout.

### **Industrial heritage and technological innovation**

It also happens that the salvaged industrial heritage can take on a new manufacturing vocation. This is the case with two tobacco factories, one in Bologna and one in Rovereto (Trento), which are both due to become incubators for the development of innovative technologies:

- for the Borgo Sacco (Rovereto, TR) tobacco factory, the masterplan approved in 2009, called *Progetto Manifattura - Green Innovation Factory*, envisaged the salvaging of the complex (by means of a project that respected the architectural character of the building) and its conversion into an industrial innovation centre in the sectors of eco-sustainable construction, renewable energies, technologies for the environment, and the management of natural resources. The project offers firms a productive platform, composed of physical spaces, infrastructure and specialist services. The building work is under way, and, in April 2014, the first operational spaces were opened, around 7,000 sq m, allocated to around 50 companies;

- the plans to convert the Manifattura di Bologna are also in continuity with the building's previous purpose, manufacturing. This anticipates the creation of a regional technological hub for innovation of the system of firms in which 12 research laboratories will operate (belonging to the University, ENEA, and other bodies) in the sectors of materials mechanics, biotechnology, energy and the environment.

What emerges ever more clearly from this review of conversion experiences is an evolution (probably a lasting one) of the values which, in previous periods, inspired the development of the industrial heritage. Social memory, the authenticity of places, historical testimony, and factory spaces as a document of the organization of industrial work, are all values which tend to retreat, and to be replaced, by motives that justify the conservation and reuse of the industrial heritage on the basis of new values, such as energy saving, increasing the life-cycle of products, and the desirability of recycling construction features as opposed to their complete replacement.

The new paradigm of *Reduce, Reuse, Recycle*, aimed at reducing the amount of refuse, with the eventual goal of achieving “zero waste”, also covers the reuse of disused industrial structures, since their salvaging significantly helps to reduce the consumption of fresh raw materials, contain energy usage, and therefore considerably lower the pollution of the environment. What is disturbing is that, via recycling, while a new life-cycle is given to a feature that has come to the end of its previous “mission”, there is also a new balance in the system of values at the foundation of industrial archaeology, which reduces the original identity of the feature to a secondary element in a new patchwork of meanings in which the signs of memory appear increasingly marginal, and changed into something radically different.

## Activities and initiatives

### Conferences

Summarising the many and varied initiatives promoted around the issues of the industrial heritage means necessarily examining the work of the bodies that deal with it. The large number of associations, institutions, scientific bodies etc that carry out research, and raise awareness over the issue of industrial archaeology, means that we can only mention the main ones.

The *Italian Association for the Industrial Archaeological Heritage* (AIPAI) has had to partially scale down its usual level of activity, owing to the difficulties of the last few years. Nevertheless, it has continued to engage in debating specific sectors of the industrial heritage to be conserved, as shown by the following selection of workshops and conferences directly organized by the AIPAI:

- *Conversion of the industrial heritage: The case of Monferrato Casalese in the Italian and European context*, Casale Monferrato, June 2013;
- National conference on *Concrete Landscapes*, Monselice, June 2014
- The international conference (with E-Faith, Ibam), 2015 European Year of the Industrial and Technical Heritage: *Studies, prospects and proposals to conserve the Industrial Archaeological Heritage of Basilicata and Puglia*, Tito Scalo (Matera), April 2015



The *Department of Historical and Geographical Science and Antiquity* (DiSSGeA) at Padua University, which for more than 10 years has conducted the Master's course in Conserving, managing and enhancing the industrial heritage, has organized two important events of international scope:

- the international conference on: *Industrial heritage: experiences, processes and group networks between Italy, Europe and Latin America*, Padua, 12 April 2013
- International Conference on: *World Exhibitions in Europe. Players, publics, cultural heritage between metropolis and colonies 1851-1939*, November 2014

## Cultural Foundations

Foundations are another important category of bodies.

### Luigi Micheletti Foundation

The Micheletti Foundation is a research centre specialised in 20th-century history. It has been leading the debate on industrial archaeology in Italy. It has also played a key role in the setting up of *Musil - Museum of Industry and Work*, which consists of a museum system including the *Museum of Hydroelectricity* in Cedegolo (Camonica Valley, Brescia), the *Museum of Industry and Work* in Rodengo Saiano (Brescia), and the *Museum of Iron* in San Bartolomeo (Brescia). The Luigi Micheletti Foundation, together with EMA – the European Museum Academy – held the ceremony, for the first time in Italy, to award the Luigi Micheletti Award (the most prestigious European award dedicated to science, industry and contemporary history museums, now in its 20th year), with a conference on *Creative Museums, Smart Citizens. How Creativity Becomes Innovation*, Brescia, May 2015

### Istituto per la Storia dell'Età Contemporanea (ISEC)

This foundation held an important international workshop on: *Deindustrialization and Urban Transformation in Europe: a Comparative Perspective*, at Sesto San Giovanni, in March 2015

### Dalmine Foundation

The Dalmine Foundation fosters study, research, training and education in the subject areas of business history and business culture, the history of technology and industrial archaeology. All the areas of activity are designed to build on the documentary assets held at the Foundation's Historical Archive. In May 2014 the Dalmine Foundation held an important workshop on models of industrial residential sites, entitled: *Industrial clients and architecture, archives for a history of company towns*.

There was equally intense cultural promotion activity on the issues of the industrial heritage carried out by other bodies, such as:

- *Centro per la Cultura di Impresa* (Milano), a non profit-making private-sector association founded in October 1991, to protect and enhance the documentary heritage of its members. The Centre holds the archives of some of the most important Italian firms, either in the form of donations or for safe keeping;
- *Museimpresa* is the Italian Association of Business Museums and Archives. It was set up in Milan in 2001 at the initiative of Assolombarda and Confindustria. *Museimpresa*'s members are museums and archives of large, medium-sized and small businesses in Italy which, on the strength of their history, have decided to invest in the promotion and development of their industrial heritage. *Museimpresa* offers its members inclusion in a select network of businesses which are an

expression of Italy's creativity, and participation in the calendar of initiatives in the context of Business Culture Week.

- *Centro Italiano Cultura del Carbone* (CICC) at the main mine at Serbariu (Carbonia, Sardinia) organized, among its various other activities, an important international conference on *Mining law in coal-age Europe*, December 2013.

## Publications

On 14 March, Terni saw the award ceremony of the Papuli award, advertised in 2013 by Terni City Council, in collaboration with AIPAI. This gave an award to a work, published for the first time in the previous two years, dealing with subjects related to the conservation, development and management of the industrial heritage. The 1st prize was awarded jointly to Giuseppe Guanci, *Guida all'archeologia industriale della Toscana* (Campi di Bisenzio, NTE, 2012) and to Antonio Monte, *Salento l'arte del produrre. Artigiani, fabbriche e capitani d'impresa tra Otto e Novecento* (Lecce, Edizioni Grifo, 2012).

Also worthy of mention are the following recent publications:

- Trisciuglio Marco, Barosio Michela, Ramello Manuel, *Progetto culturale e memoria dei luoghi - Cultural Design and Sites' Memory*, Celid, Torino, 2014
- Preite Massimo (ed.), *Towards a European Heritage of Industry*, edizioni Effigi, Arcidosso (GR), 2014
- Cavallari Paolo, Currà Edoardo (a cura di), *Architetture industriali dismesse a Rieti, conoscenza e recupero dei siti produttivi*, EdicomEdizioni, Monfalcone (Gorizia), 2014
- Ramello Manuel (ed.), *La riconversione del patrimonio industriale Il caso del territorio casalese nella prospettiva italiana ed europea*, Alinea Editrice, Firenze 2013
- De Majo Silvio, Vitale Augusto, *Alle radici di Città della Scienza. La fabbrica chimica di Bagnoli 1854-1990*, Marsilio, Venezia, 2014

## Industrial heritage and photography

Photography has always been one of the means used to investigate the industrial heritage. In recent years its role has been respected more and more among an increasingly numerous public interested in photographic exhibitions. Among those of most significance, worthy of mention are:

- The photographic exhibition (curated by Angelo Desole), entitled *The landscapes of industry*, held in Terni, in February 2013;
- *Noble Explosion*, the exhibition of photos by Robert Pettena. This consisted in a wide-ranging overview of SIPE Nobel sites, highlighting the compositional value of the architecture of industrial plant, and their controversial legacy on Italian soil, Modena, Civic Gallery, December 2014 (Catalogue: Robert PETTENa, *Noble Explosion*, Silvana editoriale, Modena, 2014);
- The exhibition organized by the Ansaldo Foundation in Genoa in November 2013, entitled *Scatti d'industria. 160 anni di immagini della Fototeca Ansaldo*. This documents the technological transformations in Italian industry by a selection of 400,000 period industrial photographs, held in what is the biggest and richest concentration of economic and industry archives.

Finally, we must mention the exhibitions organized by the Manifattura di Arti, Sperimentazione, e Tecnologia (MAST) Foundation in Bologna. This research institute

pursues the development of creativity and enterprise culture among younger generations. Exhibitions in recent months include:

- April 2015, *Emil Otto Hoppé: The Secrets Revealed*. This is the world premiere of 200 pictures taken in industrial contexts in Germany, Britain, the United States, India, Australia, New Zealand and other countries
- December 2014: *David Lynch: The Factory Photographs*. This showed photos taken by the famous film-maker between 1980 and 2000 in factories in Berlin, Poland, Britain, New York City, New Jersey and Los Angeles.
- July 2013, *Human Capital in Industry*, a selection of more than 200 images belonging to the MAST Foundation's collection. The images presented human work in mines, large-scale metal-working factories, and mechanical and textile factories.
- 2013: *Focus Adriano Olivetti*, a show dedicated to exploring the famous businessman from Ivrea in terms of his life and ideas.



# Japan

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## Akira Oita

Prof. of Atomi University, National Representative of Japan

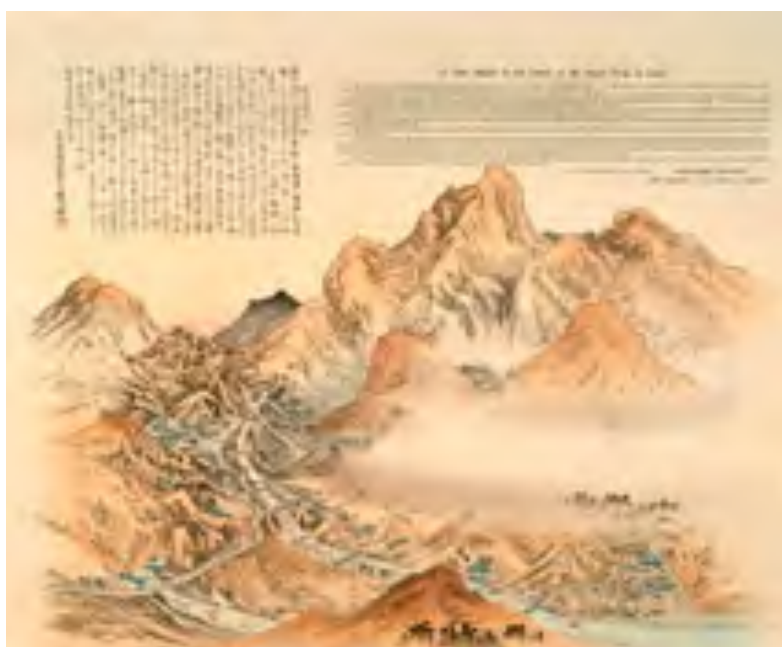
### Regional revitalization policy of the Abe cabinet (Dec. 2012 ~);

Most regions through tourism, a few through industrial tourism

Japan Industrial Archaeology Society (JIAS, est. in 1977) holds annually two meetings, the general assembly in May in Tokyo and the national meeting in autumn somewhere in the provinces. National meetings in the 1980s / 1990s, however, with 60~100 people attending including some local people, have been recognized widely, but they played a certain role to give publicity on industrial heritage to the local community. Things, laws and ordinances concerned with cultural assets in Japan have changed greatly in the 1990s / 2000s.

In 2015 the national meeting of JIAS is scheduled to be held on October 24 and 25 in Kashiwazaki-city in Niigata Pref., where they made their money from shipping, cotton crape, the oil industry, railways and the machine industry – there are a series of industrial heritage left from the 18<sup>th</sup> century to the end of the Showa era (1980's).

And since Iwami silver mine and its cultural landscape was recorded on the UNESCO World Cultural Heritage List in 2007 as the first World Industrial Heritage of Japan, local communities and municipal authorities tend to count industrial heritage as a leader for tourism.



Besshi Copper Mines in 1890. The House of Sumitomo developed a copper smelting technology called “Nanban-buki (Western Refining)” to extract silver from crude copper. The Besshi Copper mines continued operations from 1691 for 283 years, laying the groundwork for successes of Sumitomo’s business.



Shiraiwa Sand Guard Dam This facility was established in 1939 protecting the Toyama Plain from flood damage. In 2009 it was designated as the National “Important Cultural Properties” of Japan.



The triple floodgate of Hinoe-gawa (the river Hinoe was constructed in 1904. The Kojima-Bay reclaimed land make up to 11000ha from 1720's (in the middle of the Edo era) to 1963, (when reclamation works finished). © A. OITA / 16. Oct. 2014

In 2013 the meeting was held in Toyama-city in Toyama-Pref. and the excursion to the Tateyama caldera (now a dormant volcano) and its sand guard dam(s), and in 2014 it took place in Okayama-city in Okayama-Pref. and the visit to the Kojima-Bay reclaimed land.



The first full-scale raw silk factory, established in 1872, introducing machine-reeling technology from France.



In the meantime the Tomioka Silk Mill and Related Sites was registered on the UNESCO List as the second World Industrial Heritage of Japan. This year's annual UNESCO World Heritage Committee held in Bonn saw the inscription of the ambitious Japanese nomination of the [Industrial Sites of the Meiji Period](#). It is of global significance as evidence for the first successful intercontinental transfer of industrialisation from Europe to Asia, spread over 23 sites set in eight areas. The earlier mid-nineteenth-century sites demonstrate how copying from textbooks failed but a later melding of Western artisan knowledge with indigenous techniques laid the foundation of the Japanese industrialisation in the early twentieth century. The concentration on iron-smelting, shipbuilding and coalmining complements the earlier inscription of the Tomioka Silk Mill, representing the textile industry. The Japanese have committed to interpreting all aspects of the history of the inscribed sites.

### Statutory protection

You can see all kinds of Japanese Cultural Properties on [Cultural Heritage Online](#) by the Agency for Cultural Affairs, which goes into details of [Policy of Cultural Affairs](#) in 2014.

Japan was struck by a massive Great East Japan Earthquake on March 11 2011. Recovery projects in every direction including industrial heritage are now in process. The report "*Progress Report of Great East Japan Earthquake Recovery. Present State of Affected Cultural Heritage*. 5 November, 2014 **Japan ICOMOS National Committee**" was distributed among the members at the 18<sup>th</sup> ICOMOS General Assembly in Florence (Nov. 2014).

### Museums

[Japanese Association of Museums](#) (JAM) was founded in 1928 and incorporated in 1940. In March 2014 there were approximately 4,000 museums, one-fourth of which are members of JAM, (including private and/or small-scale museums, there are over 8,500 museums) with various specification from history, art, science and so on.

The Tokyo National Museum and Toppan Printing (Co.) opened the [TNM & TOPPAN MUSEUM THEATER](#), where you can see a virtual reality technology production based on the cultural property to be jointly produced and screened since October 2007. And from January 2013 using the latest VR technology with a giant (300 inches) screen, the Theater's [navigator-guided programs](#) offer close encounters with prized cultural properties. In the near future we hope this technology could be applied to Industrial Heritage Sites.

In July 2013, Japan Railway West (Co.) announced the Modern Transportation Museum in Osaka to be closed on 6 April 2014 and the Umekoji SL Museum in Kyoto also to be closed on 30 August 2015. Both museums of JR West have a formal partnership with the [National Railway Museum York / UK](#) since 2000. Exhibits of the former museum will be transferred to the latter, rebuilt and renewal of which newly named "the Kyoto Railway Museum" will reopen in spring 2016.

### Publications

JIAS published two books and one booklet, and CSHI (Chubu Society for the Industrial Heritage, member of TICCIH as an organ) issued the publication of the 20<sup>th</sup> anniversary.

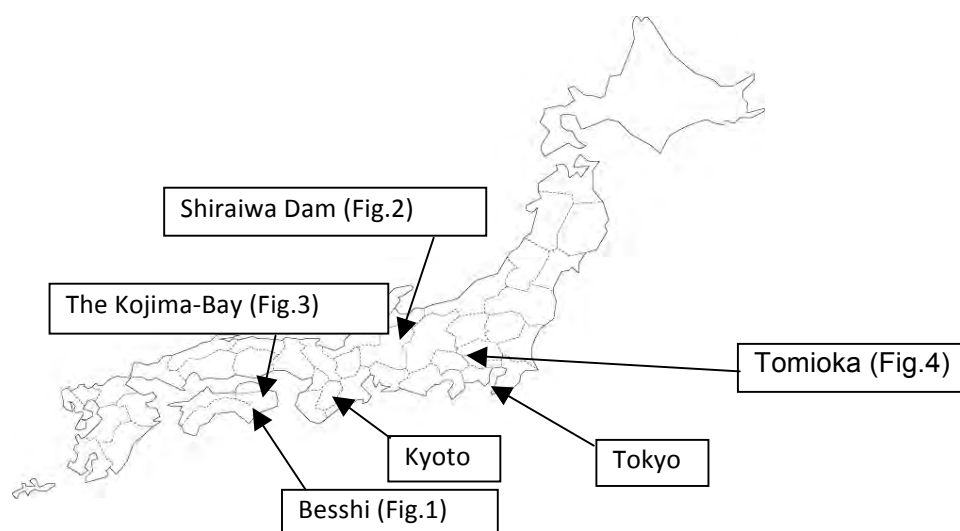
- (1) "Nihon no Kindai wo hiraita Sangyo-isan. Suisen Sangyo-isan 1985~2010 / Industrial heritage sites JIAS recommended 1985-2010", Tadashi Ohashi & Kanji Tamagawa ed., JIAS Tokyo, 2011 pp.207. ISBN978-4-9905869-1-1[Japanese]; From 1985 JIAS has



appreciated industrial heritage sites, these of which were not at this time selected as national / prefectural / municipal 'cultural property'. At the annual meeting each time a couple of sites or objects were made public and celebrated, and this book contains Industrial heritage sites JIAS recommended. So it summed up to 82 until 2010.

- (2)"Sangyo-isian Kenkyu no Genzai / TICCIH Taiwan 2012 Collected Japanese Papers", JIAS & TICCIH Japan Committee (Akira Oita) ed., JIAS Tokyo, 2014 pp.95. ISBN978-4-9905869-1-2; 10 papers, which were read at the 13<sup>th</sup> TICCIH plenary Congress in Taiwan. [Japanese full papers / English title and abstract accepted by the executive committee in Taiwan 2012]
- (3)" The Tateyama caldera. SABO Shisetsu no Igi to Rekishiteki-Kachi (The significance and evaluation of the facility (SABO Dam) in the history of disaster prevention)", A record of Toyama symposium October 13 2013 (Kiichi Yoshida ed.), JIAS Tokyo, 2014 pp.43; Various facilities and systems have been established to provide protection from flood damage. Sediment and erosion control facilities, such as Shiraiwa Sand Guard Dam (Fig. 2: above), play an important role in protecting then Toyama Plain from debris flows. ([RIVERS IN JAPAN 1998](#): [English]).
- (4)"Chubu ni okeru Sangyo-isian Kenkyu no Ayumi (The Chubu Society for the Industrial Heritage, the 20<sup>th</sup> Anniversary Memorial Edition)", CSH editorial Committee ed. CSH Nagoya, 2014 pp.181+iii [Japanese, only Contents: English]. The Chubu district consists of Aichi, Gifu, Shizuoka, Mie and the southern part of Nagano Prefectures.

A sketch map of the sites



2015.04.15 A.OITA

# Mexico

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## Belem Oviedo Gámez

TICCIH Board Member, TICCIH Mexico Honorary Life President, and Iván Hernández Ibar, TICCIH México President

### Changing public policies

Mexico is a country that is still lacking a legislation that includes Industrial Heritage protection; therefore most works aiming to valorize it as a historical-cultural heritage have been conducted at civil society level: retired workers, property owners, professionals and scholar groups.

Property speculation, lack of public policies, lack of awareness regarding industrial sites as a valuable heritage and their reuse, without destroying them, have contributed to losing several important examples. Recently, in the City of Puebla, one of the most important textile centers of the country during the 19<sup>th</sup> century, the factories known as *El Mayorazgo* and *Molino de En Medio* have been demolished. While this report is being written, the flour mill *Parayan* is being destroyed in the city of Morelia, Michoacán; this building belonged to a flour mill complex that was constructed by the beginning of the 20<sup>th</sup> century in the industrial area of the city.

### Industrial heritage inventory programs progress

In the north part of the country, the *Atlas del Patrimonio Cultural del Estado de Chihuahua (Cultural Heritage Atlas of the State of Chihuahua)* was published by the border state of Chihuahua in 2012. It included an *industrial heritage cataloguing and rescue* project. All industrial buildings from the end of the 19<sup>th</sup> century and beginning of the 20<sup>th</sup> century were registered. They are linked to the following activities: mining, railway infrastructure, warehouses, power generators, which were industries established in this state.

An almost complete industrial heritage registry for the state was achieved through this effort, constructing an industrial site database as well; in such a way a second stage can be carried out to complete the catalog.

The project was conducted, from the trenches of education, in a short period of time. Results were aimed at site analysis and diagnosis; students generated proposals with very general intervention guidelines, but that can be achieved, thanks to the simplicity of these actions.

In the central part of the country, the Historical Archive and Museum of Mining, Civil Association (AHMM) started working on the book *Catálogo del Patrimonio Industrial Minero del antiguo distrito de Pachuca y Real del Monte (Mining Industrial Heritage of the old Pachuca and Real del Monte District)* this year. This book also includes the following municipalities: Mineral de La Reforma, Mineral de El Chico, Omitlán, Huasca and Epazoyucán, all of them located in the state of Hidalgo.

The Autonomous University of Puebla has supported a research project that will allow to conduct, during the coming years the *Catálogo de Paisajes del Patrimonio Industrial de Puebla (Industrial Heritage Landscape Catalog of Puebla)*.

The National Mexican Railway Museum, through the Department of Historic and Artistic

Monuments, continues working on the *Inventario y estudio del patrimonio edificado de los ferrocarriles mexicanos* (Mexican railway buildings inventory and study) especially concerning train stations.

Apoyo al Desarrollo de Archivos y Bibliotecas de México, Asociación Civil (Archives and Libraries Development Support of Mexico, Civil Association) (ADABI) has continued providing consultancy and material and economical resources in order to conduct the *inventarios y catalogación de archivos industriales* (industrial archives inventory and cataloguing).

TICCIH México organized a seminar to discuss diverse methodologies to catalog Mexican industrial heritage.



Dolores Mine, Real del Monte, Hgo. © Marco A. Hernández Badillo

### **Main projects for conversion or rehabilitation**

In the state of Hidalgo, the AHMM continues working on the research, valorization, rescue, reuse and awareness of mining industrial heritage. In October, 2014 this institution started cleaning the Dolores Mine in Real del Monte and, after January 2015, it is developing the site rehabilitation project with a view to use it to open a *Site Museum and Crafts and Design School-Workshop*.

Rescuing the archives located in this mine has been an important step. After treating them to ensure the conservation of the information contained, they were transported to the archives concentration of AHMM.

### **Industrial heritage training programs (at university as well as other levels)**

In 2013, TICCIH México organized the *IV International Seminar and VII Latin American Symposium on Conservation of the Industrial Heritage*, in the city of San Luis Potosí, with the collaboration of the Autonomous University of San Luis Potosí. Students received scholarships to attend the symposium and several master lecturers provided a class at archeology and engineering schools of the university. During the academic event 80

lectures and conferences were presented about industrial heritage in Argentina, Brazil, Belgium, Chile, Colombia, Cuba, Spain, United States, France, Guatemala, Hungary, Japan, Mexico, Portugal, El Salvador and Taiwan.

Eleven states represented Mexico: Aguascalientes, Hidalgo, Jalisco, Nuevo León, Michoacán, Oaxaca, Puebla, San Luis Potosí, Veracruz, Yucatán, Zacatecas and the Federal District.



The book *Patrimonio Industrial y Desarrollo Regional. Rescate, valorización, reutilización y participación social (Industrial Heritage and Regional Development, Valorization, Reuse, and Social Participation)* coordinated by Belem Oviedo Gámez and Gracia Dorell Ferré is the result of this event.

In 2014, TICCIIH México collaborated in the *Primera Jornada de Paisajes Patrimoniales: Investigación y Gestión en el siglo XXI (First Conference on Heritage Landscapes: Research and Management in the 21<sup>st</sup> Century)*, organized by the Cultural Heritage Landscape Research and Management of the Autonomous University of Puebla. 105 lecturers from Mexico, Spain, Peru, Colombia, Venezuela, and Argentina participated. In October of this year, the second conference will be held with the topic “Memory, Territory and Sustainability in Latin America”.

As part of the young researchers’ conference organized by the Gunma Prefecture, in Japan, Iván Hernández Ibar participated with a lecture about the 3D archeological registry in La Dificultad Mine in Real del Monte, state of Hidalgo.

In November 2014, TICCIIH México, in coordination with the University of Guadalajara, organized the Research Seminar called: *“Más allá del Tequila: otras expresiones del patrimonio industrial jalisciense” (Beyond Tequila: Other Expressions of Industrial Heritage in Jalisco)* with the participation of members of both institutions. Topics focused on industrial heritage in western Mexico and the Central High Plateau.



In addition to the efforts of TICCIIH México members, the National School of Anthropology and History in the capital of the country, and the Architecture and Design School of Latin America and the Caribbean "Isthmus Norte" have organized conferences and lectures about industrial heritage.

### Major publications since 2012

BARBA RODRÍGUEZ, Marlene. - *Evolución tipológico - arquitectónica de los talleres del ferrocarril de Aguascalientes: aproximaciones al espacio a partir de la memoria obrera*. Tesis de doctorado. Universidad Autónoma de Aguascalientes. Aguascalientes, 2013. 437 [+12] p.

CASTELLANOS Arenas, Mariano.- *El Patrimonio Cultural Territorial. Paisaje, Historia y Gestión*. Benemérita Universidad Autónoma de Puebla. Educación y Cultura, Asesoría y Promoción, S. C., Apoyo al Desarrollo de Archivos y Bibliotecas de México, A. C. y CAPAC Puebla, 2014. pp. 356

DORELL-Ferré Gracia y OVIEDO Gámez, Belem.- *Patrimonio Industrial y Desarrollo Regional. Rescate, valorización, reutilización y participación social*. México, Archivo Histórico y Museo de Minería, A.C. y TICCIIH México, 2015, 670p. ISBN: 978-607-95034-6-8 y 978-607-96744-1-0

HERNÁNDEZ Badillo, Marco A. y OVIEDO Gámez B. "El Archivo Histórico y Museo de Minería, A.C. y el Patrimonio Industrial Minero de Pachuca y Real del Monte" en Rocío Ruiz (Coord. Gral.).- *Pachuca: plata, viento y voluntad. Vetas de su historia*. Coahuila, Grupo Milenio y Gobierno del Estado de Hidalgo., 2012 pp. 225-240. ISBN obra completa: 978-607-464-096-0, Tomo II 978-607-464-098-4

IWADARE M. y OVIEDO Gámez, B. (Coord. Ed.).- *Legado Cultural Minero y de las Ciencias de la Tierra. México*, TICCIIH México, 2015, ISBN: 978-607-96744-0-3 (e-book)

MONROY, Aracely y OVIEDO Gámez B. (Coord.) *Colección de Catálogos Documentales del Archivo Histórico de la Compañía de Minas de Real del Monte y Pachuca: Fondo Compañías Filiales y/o Subsidiarias 1842-1987* 474p.  
*Sección Beneficio y Comercialización de Metales 1904-1974. Fondo Norteamericano* 378p.  
*Sección Dirección General, Fondo Norteamericano* (2ª. Edición) 434p. ISBN: 968-7972-01-7  
*Colección Diagnósticos Médicos, Sección Médico, Fondo Norteamericano*. 252p.  
Subserie Memorias de Raya 1910-1940, Fondo Norteamericano. 59p.  
Coahuila, AHMM, A.C., 2012, 414 p. Tiraje de cada uno: 500 ejemplares en papel y 300 en disco compacto.

MUÑOZ GÓMEZ, María Elizabeth.- *La vivienda obrera de la fábrica de papel Loreto. Patrimonio industrial de la ciudad de México en peligro de extinción*. INAH, Escuela Nacional de Conservación, Restauración y Museografía. México, 2014. p. 30-46

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# Portugal

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**José Manuel Lopes Cordeiro**

National Representative

## **Changing public policies towards the industrial heritage**

The most significant developments that occurred in Portugal in the field of industrial heritage for the 2012-2014 period took place in three main areas: the classification of industrial sites, the creation of industrial museums and the development of industrial tourism.

Several industrial sites have been listed, some of them quite important, and new industrial museums have emerged, mainly by the initiative of municipalities, but there is still no nationwide policy for the conservation of the industrial heritage. This absence aggravates the protection especially of machinery, artefacts and historical documentation, which are systematically being destroyed.

The use of industrial heritage for tourism purposes has experienced the most significant advances during this period. The “Industrial Heritage Routes at São João da Madeira”, a small town 30 km south of Porto, continue to tread a path of success and, after three years, the project is already self-sufficient, having recorded in the last year 60,210 visitors and a net income of around 9,000 euros. Of all the industrial sites of this itinerary the pencil factory “Viarco” – the only one in the Iberian Peninsula – continues to attract visitors’ preferences.



“OLIVA Tower” of the metallurgical factory OLIVA, now the Welcome Center of the “Industrial Heritage Routes at São João da Madeira”. © Carolina Castañeda López, 2014

The “[Shades of Marble Route](#)”, a project of Alentejo Tourism (the regional entity of tourism), and lead by the tourism entertainment firm “Spira”, encompasses the territories of the municipalities of Alandroal, Borba, Estremoz, Sousel and Vila Viçosa, and aims to present Alentejo’s industrial heritage through the rich marble assets of the so-called Estremoz Anticline. The promotion of this important industrial activity and the exposure of the territory that hosts it are its main objectives. To this end, different circuits were created, transporting visitors on a journey to the “strange world” of the Alentejo marble. In this region there is another project on the same topic, the “Marble Route”, but it only includes the councils of Borba, Estremoz and Vila Viçosa. This Route, a project lead by CHECAP, is divided into three pathways, allowing visits to the marble industry and its industrial heritage, and also aims to promote the study and protection of this heritage, helping the sustainable development of the region.

Regarding the organization of industrial heritage exhibitions, the exhibition on the cutlery industry inaugurated in 2013 in Guimarães, and organized by the Commercial and Industrial Association of Guimarães, deserves special mention. The exhibition aimed to highlight the economic and social significance of the cutlery industry in Guimarães, not only in the past but also in the present, collecting materials and memories that will integrate a future Cutlery Museum, and draw up a first catalogue of “cutlery brands of Guimarães”. The exhibition was supported by more than 100 institutions, cutlery companies and citizens of Guimarães, who have provided pieces of cutlery and documentation. About 2,800 pieces were recorded, and more than 400 documents, over 600 different brands of cutlery and over 20 estate donations were received for the future museum. The exhibition also included a luxurious catalogue, and featured a complementary program of initiatives.

The Portuguese Society for Industrial Heritage (APPI-TICCIH Portugal), together with Portuguese Catholic University, organised in Porto in 2014 the very successful 2nd International Congress on Industrial Heritage, whose main subject was “Heritage, Museums and Industrial Tourism: an opportunity for the 21st century”. The Congress counted around 200 participants and the Proceedings will be published in a near future.

### **Progress in industrial heritage inventory programmes**

During the period under assessment, there was no great progress with regard to the inventory of industrial heritage. There is still no general inventory of Portuguese industrial heritage and the situation is getting worse every day due to the continuing threats of destruction, which has already resulted in the disappearance of important sites that have never been studied or even surveyed.

There are, however, positive initiatives, such as the Documentation Centre of São Domingos Mines, in Alentejo, which is developing an archival project for the collection of documents of the Mason & Barry Ltd (the British company that was the mine’s concessionaire from 1858 until 1965). According to Professor Richard W Hoyle, “the scale of operations at the São Domingos Mines was immense. Between 1859 and 1891 it yielded 7.3 million tons of mineral ore. By 1864 the mine employed 3,000 men and the firm had built an 18-kilometre narrow gauge railway to link the mine to the nearest river port (Pomarão) and thus to the coast”. The project of the Documentation Centre began in November 2013 and is expected to be completed in 2015. Its main objectives are not only the preservation of documents produced by Mason & Barry but also to make available this collection, facilitating access to local community and researchers.



## Recent statutory protection

In the area of legal protection of the heritage, there have been some improvements regarding the listing of several industrial heritage sites, described here in summary form, according to the text of their classification decrees.

In Lisbon, the following were listed: *A Nacional* Flour Mill, set on a large manufacturing complex built from 1843 and strategically located near several port and railway structures. The old nucleus of the plant consists of several buildings, among which stand out those built by the firm Vieillard & Touzet, and also the building built to house the Austro-Hungarian system, in the late nineteenth century. The *Bairro Estrela d'Ouro* (a housing estate composed of workers' dwellings and the chalet of the factory owner), built between 1907 and 1909, has small houses disposed in bands and connected by streets and courtyards, integrating galleries and outdoor iron staircases. Noteworthy are also the polychrome tile panels ("azulejos") allusive to the factory owner and the name of this group of houses (*Bairro Estrela d'Ouro*, which means "Gold Star Dwellings"). As outlined, the set also includes the chalet of the owner of the factory, with chapel and indoor garden, and the Cine Royal building, the first sound cinema in Portugal.

In Porto, the Arrábida Bridge, an arch bridge over the Douro river between Porto and Vila Nova de Gaia designed by the Portuguese engineer Edgar Cardoso, was listed as a national monument. Built between 1957 and 1963, at the time of its inauguration it had the largest reinforced concrete arch in the world. It is considered a masterpiece of bridge engineering, therefore recognized internationally.

In Braga, the Bom Jesus water-powered funicular, the first funicular built in the Iberian Peninsula and the oldest in the world still operating using the original water counterbalancing system, was listed as a monument of public interest. Inaugurated in 1882, the project was designed by Nikolaus Riggerbach and its construction supervised by Raul Mesnier de Ponsard, a Portuguese engineer of French descent. Its success was such that in the same year Mesnier was invited to design and install a set of funiculars and lifts in Lisbon, some of which are still in operation today.



Bom Jesus water-powered funicular, Braga. © J. M. Lopes Cordeiro

In Seixal, the Vale de Milhaços Powder Factory, a unique industrial complex of its kind, was listed as monument of public interest with all the original equipment still operating – boiler house, steam engine house, grinding, milling, pressing, corning, sieving, glazing, weighing and packing workshops, stove sun dyer, expense magazine, raw materials warehouse, fitting-shop, carpenters, and also the cable energy transmission system and the inner wagonette system (rail system).

In Tomar, the dam of the former Royal Textile Mill was listed as monument of public interest, being designated also its special protection zone. The Tomar Royal Textile Mill, built by the French entrepreneurs Jacome Ratton and Timothée Lecusson Verdier and inaugurated in 1789, was one of the first in Portugal to use the technological innovations provided by British industrialization, such as the water-frame. The mill no longer has the original installations which were destroyed by fire in 1883 but subsequently rebuilt. The latter still exist but are abandoned and in a state of ruin. The mill was very important in Portuguese industrialization, constituting a sample of the first generation of European and American hydraulic textile mills installed in the country. The dam now listed was built in 1789 to use the river Nabão water for the production of hydraulic power to drive the cotton spinning and carding machines.

### **Main projects of conversion or rehabilitation**





Planschisters of the *A Portuguesa* Flour Mill, Tomar. @ Sara Conceição, 2015.

The Municipality of Tomar is developing an important rehabilitation and musealisation project of a set of industrial installations in the area known by “Levada de Tomar”, in the Nabão river, a medium-sized tributary of the Tagus. The river was dammed and an artificial canal, some 250 m long (“Levada”), was constructed parallel to the river on the western side. The water supply was channelled in the twelfth century, having created an artificial industrial island, where the various industrial installations are located. Since that time a complex series of spatial and technological contexts, mills, olive-oil works, foundry and metalwork workshops, a sawmill, two water-powered flour mills and a hydroelectric power station, have settled in this area.

The Canal Museum Project (“Projecto do Museu da Levada”), led by Graça Filipe – to whom we owe the success of the Seixal Ecomuseum – started in 2011 and aims for the musealization of this set of industrial installations, the metalwork, the foundry, the turbine-driven electricity station, the two flour mills *A Nabantina* (1883) and *A Portuguesa* (1912), and a sixth area where there have been discovered, recently, olive-oil works structures.

In Porto, the Fish Warehouse and Refrigerator, designed in 1930 by architects Manuel and Januário Godinho, which introduced new fish conservation methods in the most modern refrigeration processes then available, has been reused as a hotel. Adopting a modernist architectural style that stands out, according to José Manuel Fernandes, the “articulation of cylindrical and prismatic volumes, in a free composition that is only possible by the use of reinforced concrete, used to cover a large area of industrial function”, its facilities are externally decorated with bas-reliefs in granite, depicting scenes of fishing life. The “Fish Refrigerator” or “Fish Stock Exchange”, as it’s popularly known, considered as an example of Portuguese Modernism, was recently re-used as a hotel having retained its fundamental architectural features.

The Project “SOS Azulejo” won the 1st Europa Nostra Grand Prix – Category 4 - Raising Awareness - in 2013. the first in Portugal in the area of cultural heritage. This project,

initiated and coordinated by the Polícia Judiciária (Criminal Police) Museum, was born from the urgent need to combat the serious dilapidation of Portuguese tile heritage occurring today due to theft, vandalism and neglect.

REFER, the national railway agency, won the prestigious Brunel Prize in category 1: stations buildings, for the restoration of the 22,000 tiles adorning the entrance hall of the Porto–São Bento railway station, which required a considerable investment. According to the Jury, “with some 520 m sq. of surface area, the tiles completely cover the walls of the atrium and are integrated into the architecture throughout the granite structure that frames them. Railway architecture and the historical tiles have been integrated and have thus become a powerful storyteller of the nation’s past, there for all passengers to experience in their everyday lives”.



Lousal Mine. © Grândola Municipality

The old mining village of Lousal is experiencing a number of projects that seek to enhance its industrial heritage. Among these stands out the one led by the Frédéric Velge Foundation to promote the recovery and musealization an old underground gallery of the Lousal Mine. The Lousal Association “Live Science Center” and the municipality of Grândola are developing a complementary project in order to enhance, revitalize and recover the Lousal Mining Museum and its documentary collection. Current projects are taking place, in addition to an already very significant set of interventions carried out over the years, which led to the Geoconservation Award being given to the Municipality of Grândola in 2013 by the European Association for the Conservation of the Geological Heritage. The prize recognizes the effort and work done for the rehabilitation, conservation and promotion of the mining heritage of Lousal.

The National Railway Museum Foundation won the APOM Award 2014, awarded by the Portuguese Association of Museology (APOM), for the project of Conservation and Restoration of the Presidential Train. After the restoration, the train, built in 1890 – at the time the designated royal train –, currently composed of six carriages of various times periods, is carrying out touristic and cultural “special trips”.

The Municipality of Vila Nova de Gaia announced that it will propose to UNESCO the enlargement of the area classified as World Heritage, in order to include the historic Maria Pia Railway Bridge linking Porto and Vila Nova de Gaia, a work by Théophile Seyrig built



by Eiffel et Cie in 1877, disabled since 1991, and also the area of Port wine cellars located in Vila Nova de Gaia (where Port is aged), an inimitable urban landscape in the world.

### **New site museums**

Industrial museology remains a growth area in Portugal. New industrial museums were created, mostly small such as in Murtosa (Aveiro), where the former cannery COMUR was transformed into an industrial museum with the particularity of being dedicated to eel canning.

Abandoned for nearly four decades, the former Covas hydroelectric power station in Vila Nova de Cerveira, on the right bank of the river Coura, reopened in 2013 as small museum. The opening happened precisely on the 101<sup>st</sup> anniversary of its original inauguration.

In Sesimbra, the Sampaio Flour Mill Museological Nucleus was inaugurated in 2013, an industrial unit that ceased activity in the late 90s after having labored for nearly a century.

The Paper Museum in Santa Maria da Feira inaugurated in 2014 the new permanent nucleus "From Forest to Paper", with a strong educational purpose, in order to disclose the more recent history of the paper industry in Portugal.



### **Training programmes in the field of the industrial heritage (at university or other levels)**

Several universities, as the New University of Lisbon, the University of Coimbra and the University of Minho, have courses where industrial heritage contents are taught. The Polytechnic Institute of Beja, in partnership with the Sines Tecnopolo, has also recently created a post-graduate course in industrial tourism.

### Significant publications since 2012

A considerable number of articles, directly and indirectly connected with industrial heritage, were published during the period under assessment. Regarding books, here is a selection of some of the most interesting:

ALMEIDA, Bernardo Pinto de; FERNANDES, Manuel de Matos (2013), *Entre as Margens: representações da engenharia na arte portuguesa*. Porto: Universidade do Porto.

BARBOSA, Rui C. (2013), *Minas dos Carris. Histórias Mineiras na Serra do Gerês*. S.l.: Monóculo.

CORDEIRO, José Manuel Lopes, *et. al.* (2014), *Guimarães: a tradição das cutelarias*. Guimarães: Associação Comercial e Industrial de Guimarães (2015 Award of the Portuguese Association of Museology).

CUSTÓDIO, Jorge (2013), *Minas de S. Domingos: território, história e património mineiro*. [Lisboa]: Centro de Investigação em Sociologia Económica e das Organizações: Lisboa School of Economics & Management.

GRAY, Michael, *et al.* (2013), *Caminhos do Ferro e da Prata: linhas do Douro e do Minho: fototipias de Emílio Biel 1887*. Lamego: Museu de Lamego (2014 Award of the Portuguese Association of Museology).

MARTINS, Manuel de Oliveira (2013), *Viana, Fiel Amiga do Mar. Memórias da Empresa de Pesca de Viana*. Viana do Castelo: Centro de Estudos Regionais.

MCCANTS, Anne; BEIRA, Eduardo; CORDEIRO, José M. Lopes; LOURENÇO, Paulo B. (Eds.) (2012-2014), *Railroads in Historical Context: construction, costs and consequences*. V. N. Gaia: Foz Tua – Memory of the Tua Railways and Valley Interdisciplinary Project/Universidade do Minho–Massachusetts Institute of Technology Portugal/EDP, 3 vols.

PEREIRA, Gaspar Martins (2014), *UNICER, uma Longa História*. Porto: Unicer Bebidas de Portugal, SGPS, SA.

VASCONCELOS, António (Dir.) (2014), *A Ponte Luiz I*. Porto: Edições Afrontamento.

During the period under assessment, numerous Master's and PhD dissertations were defended on many aspects of industrial heritage: rehabilitation of plants, industrial museology, industrial tourism, mines or industrial architecture.

*I would like to thank Leonor Medeiros and Graça Filipe for their assistance in preparing this Report.*

# Romania

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## Irina Iamandescu

TICCIH National Correspondent, ICOMOS Romania Secretary, President of AIR – the Romanian Association for Industrial Archaeology

In Romania we cannot really speak about a change in the public policy regarding the industrial heritage in the last decade – although legislation can be considered fair, the protection of the industrial heritage does not appear to be a priority in any national, regional or local authority strategy or budget and the economic crisis consequences that we are still facing are not encouraging a change in that attitude. The reasons for that lie rather in the lack of specialized human resources in these administrations than in the lack of financial means, especially in a period when the accessibility of Structural European Funds is encouraging heritage protection actions. However, one can notice the introduction of the topic in some urban development plans and strategies (Cluj, Sibiu, Bucharest) as well as in several mostly private projects that lead to the conversion of a few industrial sites.

At the same time it is very clear that, recently, the industrial heritage study and protection gained awareness in many segments of Romanian society, from scholars to amateur historians, from former workers to local communities associations and, eventually, potential investors, from students to professional organizations. The recent industrial tours of the city of Bucharest organized by Zeppelin Association and the Association for Industrial Archaeology (AIR) had an unexpected success and can testify to this growing awareness. This tendency is encouraging a “bottom up” as well as an emergency approach in industrial heritage in directions that should generally be the State’s concern and responsibility.

Out of a number of around 29,000 monuments and sites having statutory protection in Romania, around 750 can be considered industrial or related to industry. Their distribution in the national territory rather reflects the professional interest of the staff involved in the elaboration of the Historic Monuments List than the objective territorial distribution of industries nationwide. Several industrial heritage mapping and inventory regional initiatives tried to fill the gaps and proved their utility in documenting industrial sites, while through the official national inventory program (lead by the National Institute for Heritage, in lack of human and financial resources) no special attention was dedicated to this topic. These initiatives addressed around 25% of the national territory (the city of Bucharest and the departments of Cluj, Maramures, Sibiu, Caras Severin, Iasi, Suceava, Neamt, Botosani, Vaslui) in identifying, documenting and surveying industrial heritage sites in need of protection.

Different projects are lead by NGOs specialized in heritage protection such as The Romanian Association for Industrial Heritage and [Transylvania Trust Foundation](#) or museums such as The National Museum Complex “[Moldova](#)” in Iasi. While some of the sites gained statutory protection through these initiatives, some others were lost, their previous documentation being now even more important for evaluating the losses. One can observe that more requests for industrial buildings and site de-listings are being received by the Ministry of Culture every year than proposals for listing or projects for reusing such sites. However, the Ministry of Culture managed to resist pressure from owners and investors and imposed several industrial sites listings (sometimes also by winning actions in the courts of law). A proposal for integrating the mapping and inventory private initiatives into the national inventory system is being currently discussed with the central authorities.

The “Ion Mincu” University of Architecture and Urban Planning – UAUIM in Bucharest is mobilizing students every year for architectural surveys on industrial heritage, some of which are followed by interesting projects - for instance 40 from around 200 graduation architectural projects in Bucharest in 2014 were dedicated to industrial sites reuse, while the winners of the best projects competition in the last two years were dedicated to the conversion of two blast furnaces in Resita and Govajdia. Occasional theoretical courses are organized at UAUIM as well as in the universities of Cluj and Timisoara. All these are clearly proving that there is a latent professional response force on the architectural market in Romania, capable to (re)act if asked for assistance in industrial heritage protection initiatives. In addition, four Ph D. thesis with topics related to industrial heritage research and protection were defended in the last four years in architectural studies, while a few others are ongoing.

Also, an increasing interest coming from other professions such as history, geography, sociology and tourism is illustrated by a number of papers, articles and research projects published in various periodicals and conference reports, although a publication particularly discussing industrial heritage issues does not yet exist. However, a documented book presenting the pre-industrial and industrial heritage of Romania, with an accent on Transilvania and Banat, is being published in thematic parts by the historian Volker Wollmann since 2010 and has now reached its 4<sup>th</sup> volume. The series of international conferences on industrial heritage that were put on hold in 2008 is to be continued from 2016, reestablishing a cooperation frame for national and international professionals and experts.

In the field of education, a new European initiative for distance learning in industrial archaeology was lead by UAUIM with the assistance of *Eurocultures* (Bruxelles) and in partnership with 12 other entities from Romania, France and Italy - the FORCOPAR 2 project was dedicated to the conception of an industrial archaeology e-learning system and its scientific and methodological contents. The [distance learning system](#) will be operating from autumn 2015 and is intended to draw professionals from local administrations and regional institutions in order to increase their response capacity in industrial heritage protection issues.

Several projects initiated by NGO's in cooperation with the same universities are trying to cover some sensitive issues, also involving some of the above mentioned students.

For the listed ensemble of Anina coalmine ([photo 1.](#)), established in 1790, the Alba Verde association is trying to offer specialized assistance to the Mayor's office - the *Anina be Mine* and the *Anina Mine of Ideas* are two stages of a project dedicated to establishing a surviving scenario for the coalmine that was one of the most significant elements in the development of the historic industrial Banat area. The project is involving students and national and international experts, in the effort to provide a set of concrete intervention proposals for the industrial heritage conservation to be integrated in the local strategy and urban development plans.





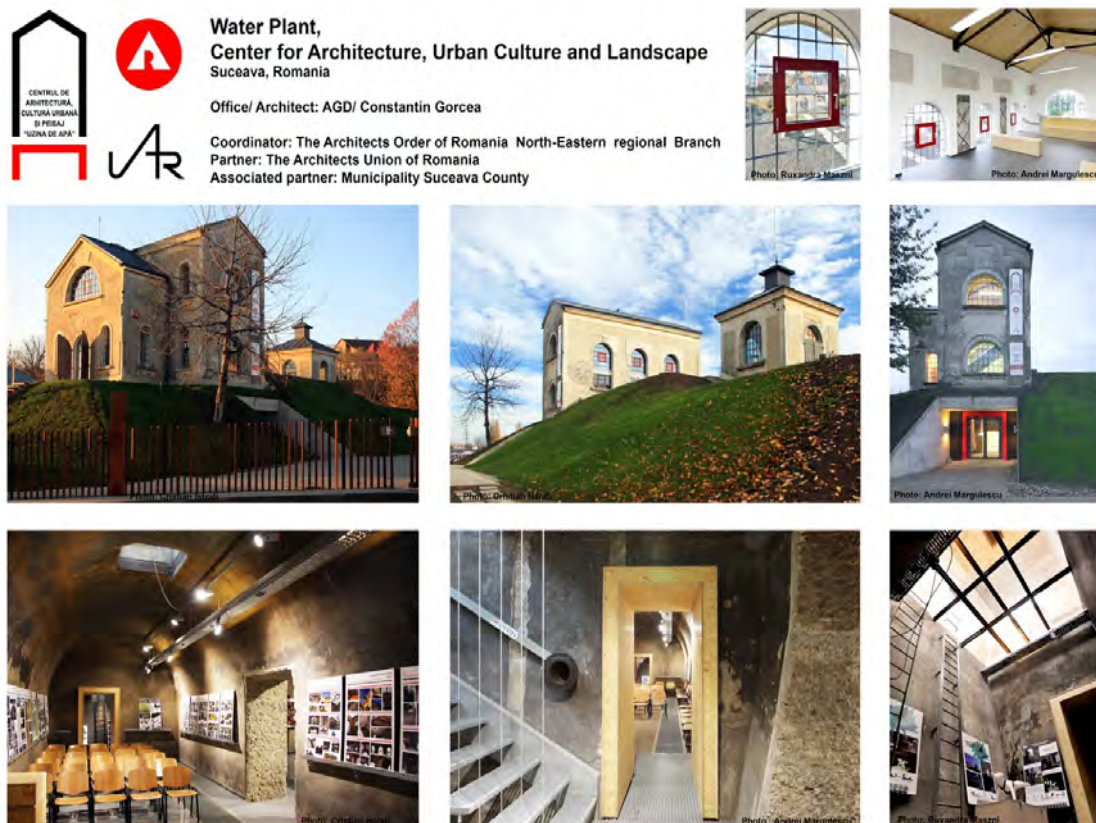
The *StartUP Petrila* project lead by the Plus/Minus association together with several other partners is arguing for the regeneration of the industrial landscape, trying to underline the need for protecting the coal mining heritage of the Jiului Valley and proposed the listing of the oldest and deepest working coalmine of Petrila, established in 1859. The project also attracted community support and several cultural events were organized in the mine historical buildings. In the meantime, the State company that is administrating the mines closure in the entire valley didn't even consider to include in its scenario the preservation of some traces of the significant industrial history of the area. Demolition of the Petrila mine started just before publication of this report.



Petrila Mine the Jiului Valley in process of being demolished.

Both projects were assisted by the Association for Industrial Archaeology (AIR) and financially supported by the Order as well as the Union of the Romanian Architects (OAR and UAR) as professional organizations that increasingly identify themselves with the industrial heritage protection cause in Romania.

OAR lead and UAR also supported one of the most interesting conversion projects in Romania – the disused Suceava Water Plant (Uzina de Apa Suceava) was transformed into a *Center for Architecture, Urban Culture and Landscape* that is growing to be a regional if not national opinion leader in the field of architecture. The project was lead by architect Constantin Gorcea who transformed the emptied (since the 60's) water plant built in 1912 into an exhibition and meeting place while preserving its industrial character. The project was nominated for several architectural awards and won the national competition for cultural heritage restoration at the National Architecture Biennale in 2014



The new Center for Architecture, Urban Culture and Landscape in the former Suceava Water Plant (Uzina de Apa Suceava)

Other industrial heritage conversion initiatives are less permanent but very interesting in providing new cultural and commercial transitory use for huge historic sites. Such an example is the project [Halele Carol](#) lead by Zeppelin Association with the support of the owner - S.C. Hesper S.A. – in the former Wolff factories, established in 1877, the only remaining historical metallurgical site of Bucharest. The project is proposing cultural events in the industrial spaces that are made safe but are not yet properly restored



(right). The site is becoming prominent on the cultural events market in Bucharest and the income obtained is used for maintaining the site and for some small restoration works or contemporary insertions in a “step by step” approach that is slowly proving its efficiency.

Another reuse concept was recently experimented with very good results in a former “socialist” textile industrial building by the [NOD makerspace](#) – the project is led by architects, designers, engineers and IT specialists and is proposing to anybody with creative ideas a working “production” space with character, safety conditions and enough light, providing also the needed assistance, materials, tools and machines for the client’s project.

The campaign to keep functional the so called Romanian Semmering railway - the Oravita-Anina mountain railway built in 1863 - has to be mentioned, as well as the efforts of NGOs or private entities to keep some of the former narrow gauge railways operating - the Turda-Abrud railway was reopened for traffic in June 2015.

Last but not least, one should mention the Rosia Montana project that was widely discussed internationally in the last decade. The Roman mining galleries as well as medieval and modern gold mining heritage and settlements are under threat of an open-cast proposed mining operation. The mining project is now on hold while public opinion in Romania as well as professional bodies are contesting it and several NGOs are trying alternatively to protect the vernacular heritage of the site. A synthesis of the situation of the site is presented in the [\*TICCIH Bulletin\* #67](#) – 1<sup>st</sup> quarter, 2015. Recently, ICOMOS, following its last resolution in Florence, November 2014, established an international working group with the task of proposing a plan and a roadmap for the elaboration of a set of principles for the sustainable development of the Rosia Montana area based upon the rehabilitation and enhancement of its cultural and natural assets. The group is open to collaborate with and receive contributions from other organizations such as Europa Nostra and TICCIH.

Recent developments in the industrial heritage field in Romania described in this brief national report prove that private and civil society initiatives could partially compensate for the temporarily lack of means, awareness or action of the responsible authorities and that such initiatives could make a difference in the industrial heritage protection on a short and even medium term, while in the mean time national strategies and politics are being properly adjusted.



# Serbia

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**Eng. Krsta Pašković**

TICCIH, Inland Waterway International IWI & Blue Links Europe expert

## Introduction

Industrial heritage is a new field of interest and research in the Republic of Serbia. Considering that in the previous 25 years in the Balkan Peninsula came to drastic changes such as the disintegration of the Yugoslav state and the formation of the new states, there was a transition period. These years were not obviously convenient to the development of study and protection of the industrial heritage.

## Integral Protection of Industrial Heritage

In April 2007, a [Protocol](#) for partner cooperation on integral protection of Industrial Heritage of historical, technological, social, architectural and scientific significance in the territory of the Republic of Serbia was signed between Ministry of Culture, Institute for the Protection of Cultural Monuments of the Republic of Serbia, thirteen regionally institutions and the Museum of Science and Technology.

This regulation made possible the integral protection of moveable and immoveable cultural property, with a unique legal act of protection. The Protocol ensured starting conditions, while with future work it could be possible to provide further activities for integral protection, promotion and popularization of Serbia's scientific and technological heritage. With its heritage in this field, Serbia intends to become a member and a partner of international organizations such as ERIH, TICCIH, E-FAITH etc.

## Industrial Heritage Conferences

The first significant conference on industrial heritage was held in 2007 in Belgrade. Organized by KULTURKLAMMER-center for cultural interactions in cooperation with Cultural Front, Europa Nostra, the Association for Rehabilitation of Cultural Heritage ARCH and the Institute for Protection of Monuments of Pancevo, with the support of the Ministry of Culture of the Republic of Serbia, City of Belgrade, the French Embassy and the Municipality of Pancevo.

The second international conference on industrial heritage was held on 14-16 May 2015, in Novi Sad, Republic of Serbia. This meeting '*Industrial Heritage in the Context of New Creative Space for Cultural and Economic Development*', took place in the Assembly of Autonomous Province of Vojvodina & NGO Suburbium, Serbia.

Participants included:

- Slaviša Grujić, Secretary for Culture and Public Information of AP Vojvodina (Serbia)
  - Prof. Dr. Franz Schausberger, Chairman of the Board of Directors, Institute of the Regions of Europe, Salzburg, (Austria )
  - Prof. Dr. Radovan Pejanović, Rector of University of Novi Sad ( Serbia)
  - Bojana Karavidić –NGO Suburbium, President (Serbia).
- Other speakers
- Dr. Gyorgyi Nemeth, Developing the first industrial course in Hungary,



- Rifat Kulenović, ARCH, Beograd (Serbia), Museums of science and technology and Industrial Heritage of Serbia
- Dr Sonja Ifko University of Ljubljana (Slovenia)
- Activities within the Council of Europe on industrial heritage : Cristian Macedonschi, City Councilor of Brasov (Romania), Miljenko Smokvina, Pro Torpedo, Rijeka (Croatia), Ioana Irina Iamandescu, Bucharest (Romania), Secretary General Adriaan Linters from European Federation of Associations of Industrial and Technical Heritage (E-Faith), John A. Rodger, MBE, ARIBA (United Kingdom). During the conference took part 115 people, 16 speakers, 6 discussants.

Its conclusion was the speakers hoped that Serbia should give more attention to conservation of industrial heritage and should develop a stronger cooperation with tourism organizations and also better cooperation between NGO organization and government institution, as Mr Krsta Pašković, our discussant, member of TICCIH, had proposed. A special proposal came from the last speaker : Svetlana Bakić, architect conservator adviser of the Provincial Institute for the Protection of Cultural Heritage Petrovaradin (Serbia): The possibilities of incorporating industrial heritage in the context of contemporary life.

One of the most interesting objects of industrial heritage in Serbia is the [Bezdan, Mali, Stapar & Bečej locks](#) (four hydrotechnical sites as important museums of industrial and cultural heritage) in Vojvodina.



[Mali Stapar lock](#)



[Senjski Rudnik](#) is a village in eastern Serbia. It is the site of the oldest preserved coal mine, established in 1853. The mine marks the beginnings of the industrial revolution in Serbia. Since 2010, there is a project, sponsored by the Council of Europe and Serbian Ministry of Culture, for the restoration and preservation of the mine complex, which will turn the entire site into an open-air museum and historical heritage site.



[Kragujevac : museum of weapons](#). Zastava Arms is the cradle of Serbian industry. By a decision rendered in 1851 the Gun Foundry was moved from Belgrade to Kragujevac and in 1853 first cannon barrels were cast.

# Spain

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**Miguel Ángel Álvarez Arece**

**President TICCIH España**

Industrial heritage deals in Spain with a highly complex process. On one hand, projects and studies highlighting industrial heritage have gotten to a high maturity level in the past 20 years. On the other hand, there is a distinct lack of social recognition in political and administrative spheres, which causes severe vulnerabilities. Events and public calls to defend historic factories, their environments and industrial heritage assets in a cultural landscape in danger of deteriorating or disappearing are common, since the active policies of both the administration and the owners are often lacking.

In order to make the massive industrial heritage in Spain known, TICCIH España made a selection of 100 representative goods in 2011. The National Plan of Industrial Heritage (PNPI) was made in 2001 and revised in 2011 by a committee of the Cultural Heritage Institute of Spain (IPCE), an agency under the culture ministry. This committee is advised and participated in by experts and fellowships in heritage preservation, such as TICCIH, whose representative is part of this committee.

## **Thinking and acting on industrial heritage**

Industrial heritage needs active policies in its protection and preservation. It is a heritage that experiences fast deterioration and is subject to disappearing. The precariousness of industrial heritage in Spain is due to diverse factors, of which the following may be highlighted:

- large number of elements to preserve
- elements subjected to continuous transformation
- functional obsolescence, implying lack of economic profitability
- elements are often placed in highly-desired urban locations
- elements typically take up large areas of single ownership, with a total lack of legal protection
- lack of sensibility towards this kind of heritage, from the administration as well as from society
- difficulty in full preservation, that is, the presence of every original piece
- diversity or absence of criteria when planning preservation or demolition

## **Protection and management**

In descending order, from most protection to least, the usual ways to know about Spain's industrial heritage goods are registries, municipal catalogues, inventories, and declarations of Goods of Cultural Interest (BIC).

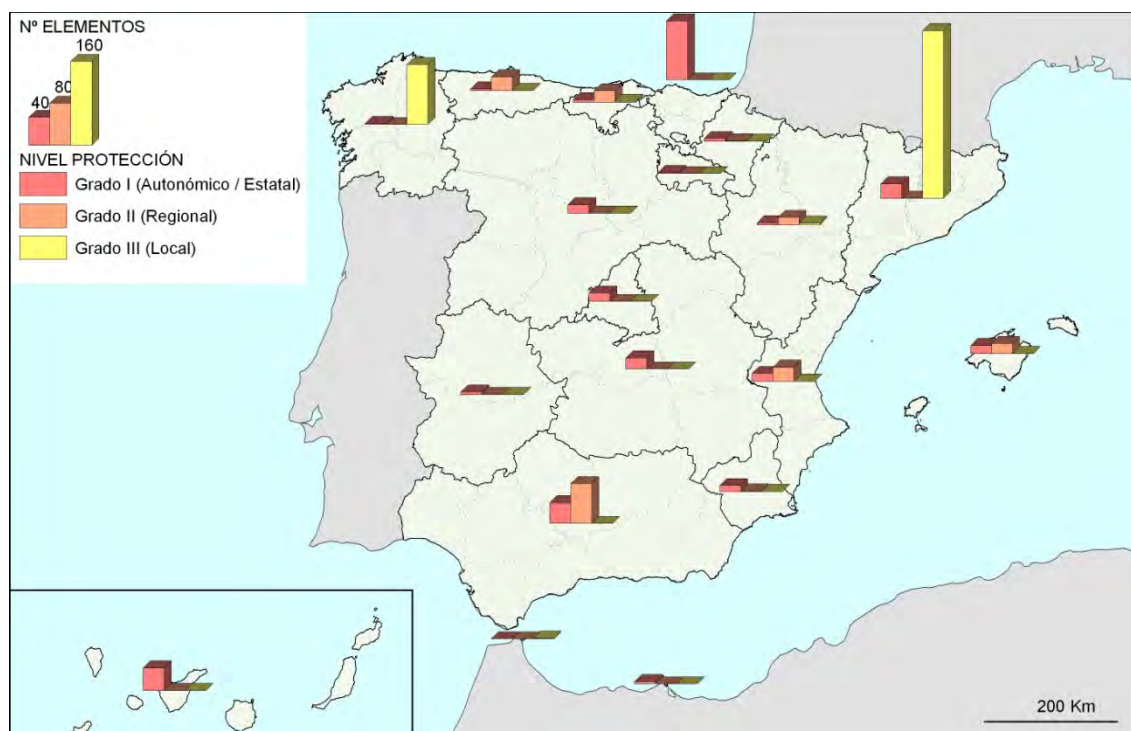
Early in 2013, priority was given by the IPCE and some public administrations to the production of an up-to-date study on the subject of the Spanish Industrial Heritage Inventory, since there is no complete view of every item in the historical industrial heritage, as well as declared and protected goods. In Spain, political and administrative responsibilities are decentralized and as a consequence there are inventories made in each of the Autonomous Communities but no general inventory at the state level.

With this goal, a research study was carried out, encouraged by the IPCE, to find out the situation of the inventories and protected industrial assets in Spain. After studying cases



and operative registries, as well protective legal measures declared and officially published, a working document was produced<sup>7</sup>.

It was noted that the number of industrial assets with any level of protection registered in Spain's Autonomous Communities in early 2013 was 1,046, of which 380 had the maximum level of legal protection, that is, they were declared as BIC.



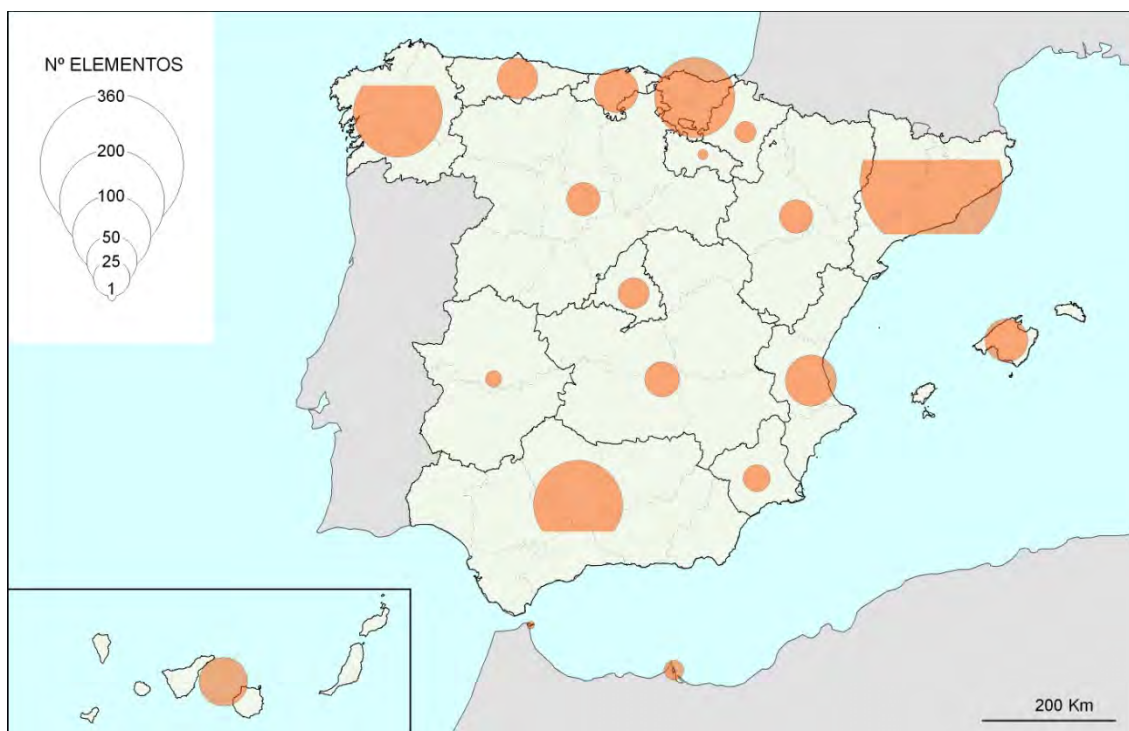
Map 1. Spanish Cultural Heritage protection levels by Autonomous Community. Source: Study on the Status of Industrial Heritage in Spain 31 Dic, 2012, part by INCUNA / CD edition IPCE 2013

According to the CNAE (National Classification of Economic Activities) around 331 belong to the food and agriculture sector, 110 to the textile sector, 51 in ironworks, metallurgy and mechanical sectors, some 106 to energy, 149 to mining and other extractive activities, 4 to the chemistry sector, 28 to leather and footwear, 20 to graphic arts, 47 to water extraction and distribution, 31 to social equipment and housing, 4 to the communications sector, 81 to transportation, 6 to cork, wood and furniture, 53 to construction, ceramics and glass, 11 to the naval sector and 94 other items distributed amongst other productive sectors.

Over 95% of these heritage goods have been declared in the past 30 years, after the promulgation of the 16/1985 law of cultural heritage, and around 683 of them have been declared since 2000, almost 60%. This demonstrates the recent sensibilities and the drive that associations in defence of Spain's industrial heritage have built, taking the lead in requesting from public administrations the protection of these historical witnesses and testimonies from our collective memory.

<sup>7</sup> The study was coordinated by Miguel Ángel Álvarez Areces, President of INCUNA and TICCIH Spain, and with a team from INCUNA where there was active collaboration from technicians and public workers from Heritage Directorates from the Autonomous Communities, Digital edition INCUNA/IPCE 2013





Map 2. Protected Spanish Cultural Heritage Assets. Source: Study on the Status of Industrial Heritage in Spain part II / CD edition IPCE 2013

A work day on Industrial Heritage Inventories is being held in Madrid in November 2015 with the goals of discussing criteria and setting up a web platform with links to the different industrial heritage registries operating right now in different regions with systems that will allow for it to be kept up to date.

### Congresses and conferences

Amongst TICCIEH's activities we can highlight the organization of the VII Congress on Industrial Heritage "Industrial Heritage under Franco's Regime 1939-1975"<sup>8</sup>, which took place in June, 2013, in Madrid. The high scientific standard and rigor in the presentations made a significant contribution to the research body of work on industrial heritage in the political and historical period between 1939 and 1975, known as "Franquismo".

<sup>8</sup> VV.AA. minutes pending publication "El patrimonio industrial bajo el franquismo 1939/1975 ", digital edition TICCIEH España ( 2015)



Opening ceremony of the VI Congress of TICCIH España (Madrid, June 2013).

TICCIH España also organized an intermediary congress on "From worker's housing to officially protected housing"<sup>9</sup>, especially dedicated to urban spaces, habitation strategies and industrial heritage regeneration from the end of the 19th century to the 1960s in June, 2014. The thematic axes in the talks were the role of social and worker's housing in the urban and environmental regeneration of modern cities.

TICCIH collaborated with the 2th International Seminar on Architectural and Industrial Heritage "Assembly Lines" in 2015 in Madrid, organized by the Aula G+IPAI of the University in Industrial Engineering of the University of Madrid. TICCIH Spain is both part and usual collaborator in the International Days of Industrial Heritage organized by the association in industrial archaeology INCUNA (Industry, Culture and Nature). This prestigious event, with speakers from Europe, America and Asia has taken place for the last seventeen years in Gijón (Asturias). Alongside is the Basque Association of Industrial Heritage and Public Works (AVPIOP), founded in 1984, one of the most active and dynamic associations in defence of industrial heritage, undertaking inventories, research studies, edition of newsletters, campaigns for the preservation of endangered heritage and information programmes in Basque society.

The Association of Friends of the Science and Technical Museum of Catalonia (AMCTAIC) organized the Congress on Industrial Archaeology in 2013 and 2014, and publishes the longest-running newsletter in industrial heritage. It also promotes the Bonaplata awards, which every year recognize the best projects on the field of industrial heritage in Catalunya.

<sup>9</sup> VV.AA. "La vivienda obrera en la ciudad industrial del siglo XX", TICCIH y Cicees edition, Gijón 2015, ISBN -ISBN 978-84-943556-2-2



La Trinidad of Seville glass factory was saved after a long campaign managed by a citizen platform with support from TICCIH.

This period has seen the reinforcement of the associative movement with the newly-founded Andalusian Federation of Industrial Heritage Associations, the "Buxa" Association in Galicia, the Valencian Industrial Heritage Association or the Spanish Society on Geological and Mining Heritage (SEPDYGM), with extensive experience and activity in the fields of geological and mining heritage in Spain and Latin America.

The Sierra Minera Foundation, part of TICCIH España's Board, keeps a constant and rigorous attention to endangered heritage in one of the most heritage-relevant Spanish regions. The Conference on Industrial Heritage and Landscape of the Sierra Minera of Cartagena and the Industrial Union was held in October 2014.



The landscape of the Mining Sierra of Cartagena and the Union is one of the most relevant ones of Spain's industrial heritage. TICCIH has supported the defence of this endangered industrial ensemble.



In Asturias, Santa Barbara's Mining Site in Turon's Valley (Mieres), has seen the recovery of the head frames and compressor room.



At Santa Barbara's Mining Site in Turon's Valley (Mieres) the headframes and compressor room have been recovered with financing of IPCE.

One of the most significant events in Spanish industrial and mining heritage has been the opening and activities of the Arnao Mine Museum, in Castrillon, an underground mine belonging to the Asturian Royal Mining Company.

The Landscape of the Salt Valley in Añana (Basque Country) is one of the 100 representatives of Spain's industrial heritage and contains a series of millennial salt springs, harnessed using peculiar technical procedures in order to get salt.

### **Endangered heritage**

Without a doubt, the Averly Foundry suffered one of the worst recent assaults to Spain's industrial heritage. Located in the Autonomous Community of Aragón, Averly is "the best testimony of Zaragoza's industrial golden age". Its founder, Antonio Averly, gave way in 1903 to a family ownership for the Foundry, which resulted in the Foundry being owned by several Averly generations, until its recent sale to a real estate company.

Despite a citizen's campaign demanding its protection, neither the closing of the facilities nor its sale to a real estate conglomerate could be avoided, which has threatened the survival of the ensemble.





The Averly Foundry is a key part of Spain's historic and industrial heritage.

TICCIH was a supporter of the defence campaign and citizen actions for the survival of the industrial ensemble. Appeal proceedings are in the courts, brought by the Public Action Association for the Defence of Aragon's Heritage (Apudepa), against the ruling of Aragon's Supreme Court approving the demolition. TICCIH has also shown preoccupation at the state of abandonment and neglect or even disappearance of goods with rich history in Spain's industrial heritage such as Motril and Salobreña's Sugar Factories, Alcoy's Mills, the Industrial Landscape of the Mining Sierra of Cartagena and the Union or the Fontao's Mines.

### **Training**

One of the most relevant recent didactic and research actions is the launch, in November 2015, of Spain's first Master in Industrial Heritage Management (MAPIND), offered by Seville's Technical College of Architecture. The main goals of the Master are to train in the research and methodologies for industrial heritage, through the continuous updating of its conceptual approaches, research topics and theoretical debates.

The publishing of blogs, digital magazines, newsletters and other media has bolstered the presence and relevance of researchers and civic society in social media and internet in the appraisal and diffusion experiences relating to Spain's industrial heritage, which has gone from forgotten to an emerging heritage capturing the attention of thousands of citizens as well as public and private institutions.

### **Museums and industrial tourism**

A research study is underway in the topic of science, technique and industry museum practices in Spain, to weigh which aspects have been highlighted and which ones need to be boosted to have an homogeneous view of industrial heritage. Another project is being developed on active historical companies, those with more than 50 years of existence, which constitute an important part of the industrial heritage. IPCE has proposed to the Autonomous Communities the creation of the first census of these companies. This initiative aims to save the technical processes that they carry out, spread the know-how of their workers, appraise the value of their products, and protect their buildings, machinery and archives.

Industrial and technical museums in Spain are well consolidated and have significant activity. Some of the best well known internationally are the Museu de la Ciència i de l'Enginyeria de Catalunya (MNACTEC), in Catalunya, the Railroad and Mining ones in Asturias, Mining in Almadén, Riotinto's Mining Park, those of Energy and Mining in Ponferrada and Sabero, the aforementioned one in Sagunto or the Metro and Railway museum in Madrid. They are an excellent showcase of what industrial heritage has to offer.

In industrial tourism several local programmes and regional routes are attractive offerings, although they are still far from being consolidated tourist attractions due to the lack of "receptive travel agencies" in Spain. The creation of an industrial tourism agency, RETI, has been perceived as a step in the right direction, mainly since it incorporates companies from traditionally industrial towns. The way forward is to keep pushing, and TICCIIH is planning on including these routes with the ERIH criteria to European programmes of industrial tourism.

### **TICCIIH España**

TICCIIH España is organized throughout Spain. Several work details have been established on diverse fields: mining, work culture, endangered heritage, food and drink, housing, chemist or energy heritage. TICCIIH has an online presence through Facebook and Twitter and has an agreement with ICOMOS in Spain since 2006, and it keeps close relationships with most heritage defence organizations in every Spanish region.

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## **Dag Avango, Jan af Geijerstam and the Board of The Swedish Industrial Heritage Association (SIM)/TICCIH Sweden**

### **Introduction**

Svenska industriminnesföreningen (SIM, The Swedish Industrial Heritage Association) is the Swedish section of TICCIH, founded in 1989 to support research, preservation and conservation efforts within the field of industrial heritage. It is a network for industrial heritage professionals and cooperates with ICOMOS Sweden, Europa Nostra Sweden, and other industrial heritage organisations in Sweden. All members of SIM are members of TICCIH. This is the sixteenth consecutive national report from Sweden the first one dated 1973, and all can be downloaded from the SIM site.

### **The character of industrial Heritage in Sweden**

SIM uses a broad definition of Industrial heritage – from material remains of industrial production units, landscapes and associated settlements, to archival sources and immaterial heritage such as memories and knowledge. The dominant industrial branches in Sweden have been mining and associated metal production, forest industry, and engineering industry. In certain parts of the country textiles have been important and most other branches are also represented in the totality of industrial heritage. Industrial heritage sites range from the very small to large-scale. Some of those, primarily small-scale sites, have some form of protection. The most critical challenges are to preserve and manage large-scale industrial heritage sites and sites in city environments, and to preserve knowledge from 20<sup>th</sup> century industries.

Sweden has, as most other western countries, experienced a de-industrialisation over the last decades. The big integrated industrial plants are today few and base industries of old are increasingly specialised with formerly in-house activities being outsourced. This latter also represents a further shift from industrial to white-collar work and information technology. Sweden also belongs to a group of countries in Europe experiencing a strong urbanisation. This puts a double strain on industrial heritage, because of pressures to re-develop industrial sites in attractive city centre localities and difficulties to find new uses for industrial sites in depopulating rural municipalities.

Since 2012, three developments have called for special attention regarding the preservation of industrial heritage. One is the global mining boom which begun in the mid 2000's and for a period of time led to a renewed interest in mineral resources in areas with mining heritage – among those the Falun copper mines world heritage site. Since 2014 the mining boom has turned into a bust, posing new challenges on how to deal with more recent abandoned mining landscapes. A second development is the continuing remediation of polluted industrial sites. While decontamination technologies that allow for the preservation of historic buildings exist, the preferred methodologies have resulted in extensive encroachment on buildings and sites. A third novelty is the implementation of the EU Water Framework Directive, opening up migration routes for fish in inland water courses as an important part. Proposed legislation in Sweden (2014) constitutes a threat to historic industrial sites that utilized creeks and rivers for hydro-power. Heritage preservation



has received little attention in the policy processes and even though the 2014 proposal has yet to be formally decided on, several historic dams have already been removed. This has also led extensive inventories of heritage along watercourses.



Industrial Heritage Site of the Year, 2012, Remfabriken. Göteborgs Remfabrik in Gothenburg was originally a weaving mill for industrial belting. It was founded in 1891 and closed down in 1977. Very few changes were made during the last 30 years before closure. All original looms, transmissions and tools are left in their places. SIM selected Göteborgs Remfabrik as the Industrial Heritage Site of the Year 2012. ©: Ida Dicksson 2012

### **Protection and management of industrial heritage**

The Heritage Conservation Act is the core legislation for preservation of historic environments in Sweden, including industrial heritage. On the national level, The Swedish National Heritage Board (Riksantikvarieämbetet) is the agency of the Swedish government responsible for heritage preservation. Industrial heritage was formerly a focus area of the board, but has received less priority since the early 2000's, nowadays dealt with under the broader umbrella of "the heritage of modern society". The heritage board does, however, support initiatives from SIM/TICCIH Sweden by funding, by endorsing the awarding of the annual prize "The Industrial Heritage site of the year" (see section below) and active participation in events organized by SIM. The board also provides earmarked funding for museums of work in Sweden.

On the regional level, the county administrative boards are responsible for day-to-day enforcement of the Heritage Conservation Act. The responsibilities of the regional boards have increased during the last decades and involves industrial heritage.

Several museums on the national level work with industrial heritage – Tekniska museet in Stockholm, Textilmuseet in Borås, Nordiska Museet, Statens Maritima Museer, Arbetets museum and Trafikverkets museer.

Several county museums deal with industrial heritage. Other important categories are ecomuseums such as Ekomuseum Bergslagen and networks such as Industrihistoria i Skåne and Industrihistoria i väst.

Archives like Centrum för näringslivshistoria, Arbetarrörelsens arkiv och bibliotek (ARAB), and Tjänstemännens och Akademikernas Arkiv (TAM) also work within the field of Industrial heritage.

Another important actor is the metal workers union IF Metal, but unfortunately other trade unions have discontinued similar efforts. There are also organisations within trade and industry supporting research efforts within their respective fields: the Royal Swedish Academy of Engineering Sciences (IVA), Jernkontorets Bergshistoriska utskott, Skogsindustriernas historiska utskott and Vattenfalls kulturvårdskommitté. Builders and architects also play an important role. Some of the biggest architectural offices have professionals with a responsibility to investigate and map former uses at sites to be redeveloped.

Working life museums are another important category of industrial heritage initiatives in Sweden. 1.468 currently exist, most of them locally based. Although a number of these sites are integrated into the realm of professional heritage management and heritage tourism, they rely heavily on voluntary work.

### **Promotion and support of Industrial Heritage**

Several activities have taken place in the years 2012-2015. October 10-12, 2012, SIM/TICCIH Sweden organised a conference on *Industrial heritage in practice and research* (Industrisamhällets kulturarv i praktik och forskning). The conference focused on current developments in the field in Sweden and its possible futures. The keynote presentations of the conference were published in the peer-reviewed journal *Bebyggelsehistorisk tidskrift* and a full conference documentation (see list of publications).

The primary instruments of SIM/TICCIH Sweden are to award the annual prize "The Industrial Heritage site of the year", to organize conferences such as the one above, and to provide information to members about research and preservation issues.

SIM has awarded "The Industrial Heritage site of the year" to outstanding industrial heritage projects in Sweden since 1995. These have ranged from small-scale heritage sites to large scale structures. SIM awards the prize to projects that prioritize the historical content in their preservation efforts, are open to the public, have a reasonable level of political and financial support and above all good novel ideas in their efforts to preserve and narrate the industrial heritage. The prize has become a valuable tool for the winning heritage projects in their efforts to raise financial and political support for their preservation efforts. SIM disseminates information through its website, and e-mail based news briefs.

Since 2013 SIM increased its membership fee to also include full individual membership in TICCIH for all members of SIM. In this way we hope to strengthen the Swedish involvement in TICCIH, focus the international character of industrial heritage and to boost the work on conservation of industrial heritage in Sweden.



Industrial Heritage Site of the Year, 2013 Lapphyttan. Lapphyttan was the site of a medieval blast furnace plant in mid Sweden, at which an extensive archaeological investigation was conducted 1978-83. The site is now reconstructed at New Lapphyttan in Norberg, a museum but foremost a site of exploration of medieval work processes. After many years of trials iron has now been made in the reconstructed blast furnace. SIM selected Lapphyttan as the Industrial Heritage Site of the Year 2013. © Kenneth Sundh

## Advocacy

Besides SIM/TICCIH Sweden there are other industrial heritage organisations on a national level in Sweden. ArbetSam (the working life museums co-operation council), established in 1998, is a member organisation for the above mentioned working life museums and based at Arbetets museum (The Museum of Work) in Norrköping. During the last years ArbetSam has focused its activities on three fields – lobbying for working life museums, building a knowledge centre for working life museums (with state funding) and providing practically oriented education for renovating and managing small scale industrial heritage sites. ArbetSam works closely together with the SIM/TICCIH Sweden and can enjoy our support if needed. SIM also co-operates closely with ICOMOS Sweden, Europa Nostra Sweden and The Swedish Association for Building Preservation.





Endangered sites, Cable way and Gas works. In two cases the TICCIH Board acted for the conservation of endangered industrial heritage sites in collaboration with SIM/TICCIH Sweden: in 2013 for The Forsby-Köping cable way (left), Industrial Heritage Site of the Year in 2003 and in 2014 for Gasholder 4 of the Hjorthagen Gasworks of Stockholm (right). The Cable way will be at least partly conserved, but the gasholder is now most likely to be demolished. © Samuel Karlsson 2002 and Jan af Geijerstam 2014

### Recent activities in Industrial Heritage

Projects within industrial heritage since 2012 can be divided into two main categories – heritage management and museum projects, and academic research projects.

Within heritage management two projects stand out, both related to the above mentioned mining boom. At the northern mining town Kiruna municipal authorities as well as regional and national heritage management bodies have engaged in an intensive work to protect heritage because of the plan to move the entire town to a new location owing to ongoing mining activities. Most of this heritage can be defined as industrial. The second project is led by the National Heritage Board and forms part of the Swedish mineral strategy. The aim of the project is to map, develop and inform about good examples on how the industrial heritage of mining can become a resource for local communities, in the wake of the mining boom. This project is scheduled to be finalized in 2015.

Within heritage management the more prominent projects for the conversion or rehabilitation of the industrial heritage have taken place at Kvarnholmen and Hjorthagen in Stockholm, Papyrus at Mölndal and at Simonsland (Textile Fashion Center), Borås.

Academia-based industrial heritage research in Sweden has been characterized by a broad international approach, both in terms of cooperation across national borders and in scientific focus. Industrial heritage research is increasingly orienting itself in the direction of the growing trans-disciplinary field of "environmental humanities" and deals with research problems of global significance such as climate change, globalization and environmental degradation. At the Division of History of Science, Technology and Environment at the Royal Institute of Technology (KTH), industrial heritage research and industrial archaeology have been major components three research programs: Assessing Arctic futures: voices, resources and governance (2012-2014), Mistra Arctic Sustainable Development program (2014-2018) and Sustainable Community Development and the Legacies of Mining in the Nordic Arctic. The first explored the role of industrial sites in the historical production of future visions for the Arctic. The two latter deal with the role of industrial heritage sites for



regional development in the northernmost part of Europe. The research is conducted in cooperation with Swedish and European universities.

At Gothenburg University, the Department of conservation is a major hub of research on industrial heritage. Examples are the projects “An industrialisation after the industrialisation. Processes of industrialisation in the west Sweden country side during the post-war period” and the PhD theses project “Becoming vitrified. Kilns, furnaces and high temperature production” (see publications). Other project are the “Fengersfors Works in development” and research in maritime heritage and maritime crafts which is being published and presented in articles and conferences.



Industrial Heritage Site of the Year, 2014 Olofsfors. Sebastian Reichlin at work in the hammer mill of the iron works of Olofsfors in northern Sweden, established in the 1760s. SIM selected Olofsfors as the Industrial Heritage Site of the Year 2014. © Jan af Geijerstam 2014

## Education and Training

Training and education of industrial heritage practitioners in Sweden normally falls within the scope of a more general focus on heritage practice. In most cases an orientation towards industrial and technological historical perspectives could be achieved during the professional career, but there are some courses and options available within higher education to promote such interests. They are available foremost at the Royal Institute of Technology in Stockholm and at the Department of Conservation, University of Gothenburg.

Since 1992, the Division of History of Science, Technology and Environment at KTH have been operating a number of courses where Industrial Heritage research has been the main

focus. In recent years however, industrial heritage typically forms a part of courses with a broader content. Examples are: Environment and Society in a Changing Arctic, Swedish Society and Environmental History as well as PhD courses.

The Department of Conservation at the University of Gothenburg has a BA/Sc Programme in Integrated Conservation of Built Environments, which includes industrial heritage and some of the graduation theses from the programme has a specific orientation towards industrial history. On master's level the department offers the course Industrial heritage – Use and reuse, focusing on different former industrial areas in Gothenburg and western Sweden.

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## Taiwan

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### Hsiao-Wei Lin

Board Member of TICCIH, National Representative of Taiwan, Assistant Professor, Chung Yuan Christian University, Taiwan

### Introduction

The TICCIH Congress 2012 held on 4-11 November in Taipei is one of the most influential international events in the conservation of cultural heritage in Taiwan. The first-ever TICCIH Congress to be held in Taiwan and Asia held great significance, and it comprised members from academia and the public and private sectors. The Bureau of Cultural heritage, other cultural affairs agencies and the British Council provided significant support. The “Taipei Declaration for Asian Industrial Heritage”, one of the major achievements, was announced by the Congress together with TICCIH, in which it is pinpointed that “We recognize that both national and transnational industrial heritage are equally important and the need of the future cooperation between Asian countries to promote the conservation of them is crucial.”

The organizing team won the Bronze Award for Meeting in 2013 Taiwan’s Mice Awards. A total of 263 delegates from 26 countries (including TICCIH President Professor Patrick Martin, Honorary President Sir Neil Cossons, and many other TICCIH colleagues) joined the conference. The broad spectrum of industrial heritage conservation and the Taipei Declaration continue their influences since then and have blossomed in several perspectives.



The organizing team of the TICCIH Congress 2012 won the Bronze Award for Meeting in 2013 Taiwan’s Mice Awards. © Hsiao-Wei Lin, 2013

## Governmental policy and legal protections

There has been no significant changes in public policies with regards to the industrial heritage. Recently the government (mainly from Bureau of Culture Heritage) has achieved some statutory protection of the industrial heritage with legal statements and also collaboration among private sectors. It encourages more private involvement to build up a friendly environment for sustainable development for industrial heritage. Taipei Railway workshop is one of the most controversial examples. It was finally designated as a National Historical Monument in March 2015 after many years' debate.



The Assembly Hall built in 1935 which is still in use in the Taipei Railway Workshop. © TICCIH 2012 Archive

**Inventory programmes** More industrial heritage sites were surveyed and will be conserved and revitalized legally soon. The progress being made by industrial heritage inventory programmes is for the industries of sugar, tea, tobacco, coal mines and Taiwan jade. As a result, a well-written book, “The System and Value of Taiwan’s Industrial Heritage- Chapters on Tobacco, Tea and Sugar” was published. Some of them continue the conversion or rehabilitation plans. For example, the Pingtung Tobacco factory is currently working on its reuse plan and serial events. In addition, several sugar factories, the Railway Story Museum, oil mine, coal mine, jade mine and coffee factories are currently working on their reuse plans. In order to support the reuse projects, there is also a training programme in the field of this industrial heritage in 2014.

**New site museums** The Nanmen Park (former Nanmen Camphor Refinery, built in 1899) started its operation in 2014 and the Taiwan Railway Headquarters Area is progressing. Both of them are part of the Taiwan Museum System. The National Taiwan Museum (NTM) has been implementing a plan to create this system which aims to build an image of the Capital Culture Zone. In 2006, the NTM started a series of plans for restoration and reuse of historical buildings and industrial buildings. For example, the Nanmen Park is operated



with exhibitions about camphor industrial history and natural resource of Taiwan on these sites.



The restored former Nanmen Camphor Refinery is now used as a restaurant. © Ming-Chun Lai, 2015

### International exposure

TICCIH Congress 2012 has enhanced Taiwan's exposure to the international industrial heritage. Together with Asian colleagues, Taiwan hosted two international forums and workshops in 2013 and 2014 in order to assist domestic practical cases to promote the conservation of industrial heritage through workshops and forums to establish a cooperation model for conservation, maintenance and regeneration in this field.

**2013 Xihu Sugar Refinery Regeneration International Workshop, 4th-6th September, 2013** International scholars from China, Japan and domestic professionals and practitioners were invited to discuss the theme of industrial cultural landscape based on Xihu Sugar Refinery or other related projects to promote the value of industrial cultural heritage. The subject of the workshop was based on the current development of Xihu Sugar Refinery. Three themes were set for group discussions: 1. "Strategies for space planning and development", 2. "Strategies for operation and management" and 3. "Strategies for education and promotion", which lay out plans and strategies for the regeneration of Xihu Sugar Refinery and how to enhance its exposure and identity. (Fig.7)

The outcome was successful and encouraging and inspired Xihu Sugar Refinery to work on providing the site as the regional environment and educational facility. In fact, due to the Environmental Education Act promulgated in 2010 and taken in active in 2011, a number of fields of natural and cultural resources have applied for a certificated probation,

Xihu Sugar Refinery is the first application of industrial heritage by the Environmental Protection Administration (EPA).

#### **2014 International Forum and Youth Workshop for Asian Route of Industrial Heritage**

Following up the consensus of the TICCIH Congress 2012 and 2013 Xihu Sugar Refinery Regeneration International Workshop, this forum was set to build up a long-term development plan for Asian Route of Industrial Heritage and promote its substantial influence on the regional conservation of industrial heritage in Asia.

The following goals were set:

- Stimulating a long-term development program for Asian Route of Industrial Heritage: Based on the previous events and cooperation among several Asian countries, correspondents from 5 countries (China, India, Japan, Malaysia and Taiwan) and delegates from Germany and Spain on 2014 International Forum and Youth Workshop for Asian Route of Industrial Heritage signed a *Memorandum of Understanding regarding A Framework for Collaboration on Joint Areas of Interest for the Asian Routes of Industrial Heritage*. This MOU shows an urgent need to develop an international cooperation platform to exchange experiences in planning, implementation and operation.
- Evoking a cooperative model among the industries, industrial museums and academic fields for regeneration of industrial and cultural heritage: Since 2003, many previously state-owned enterprises have gradually been privatized. In order to cope with this, a task was started to survey public industrial and cultural assets. However, more delicate cooperation should be carried out to assist domestic practical cases to promote the conservation of industrial heritage through a cooperation platform.
- Facilitating an illustrative exhibition of historical Taipei Winery at Huashan 1914 Cultural Creative Park (former Taipei Winery): This small-scale exhibition assists Huashan 1914 Cultural Creative Park to carry out the spirit of Taipei Declaration for maintenance, conservation and regeneration for visitors.

Hopefully, this idea of Asian Route of Industrial Heritage will continue to develop into a concrete network like the ERIH European Route of Industrial Heritage both internationally as well as domestically.





2013 Xihu Sugar Refinery Regeneration International Workshop attracted participants' age from 20-70 years old, including the employees of Taiwan Sugar Company to work together for the future development of the factory. © Hsiao-Wei Lin, 2014

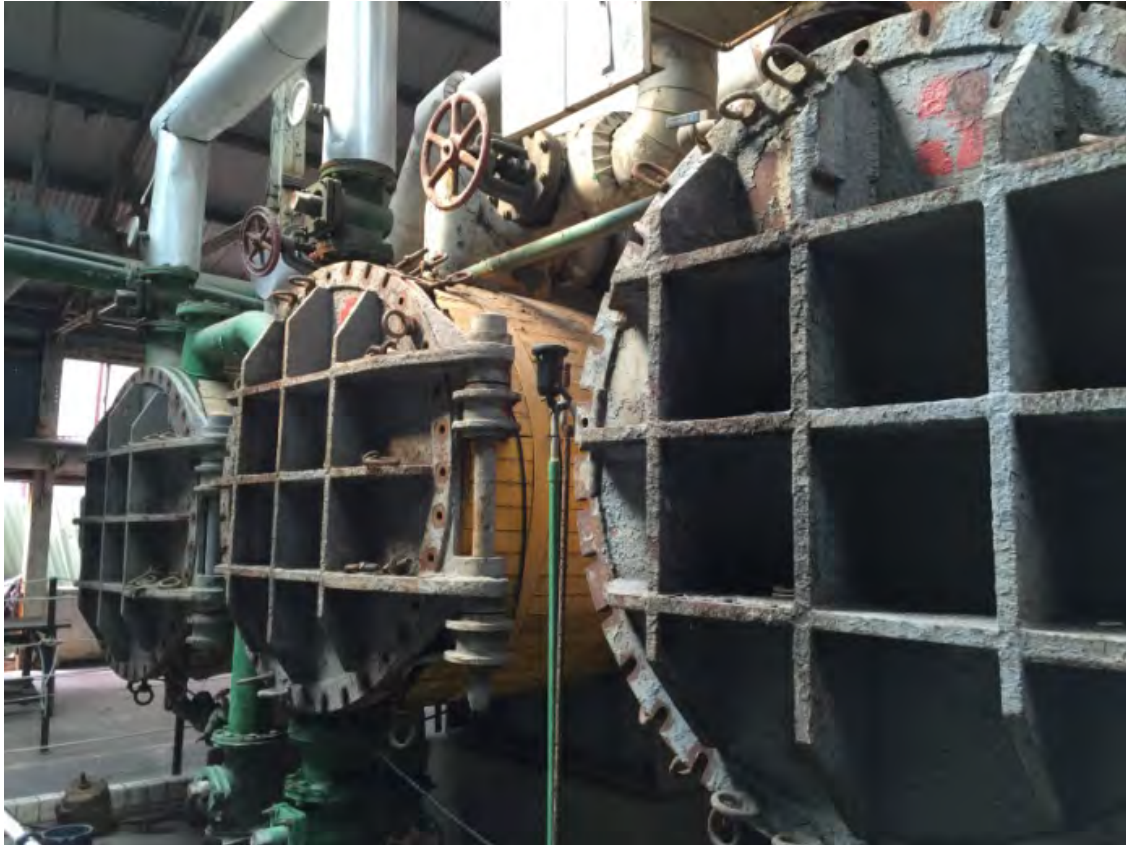
## **2014 Congress of Pacific Heritage and Tourist Rail Organisation**

Members of the Asia-Pacific Heritage and Tourist Rail Organization held its annual conference in Kaohsiung and supported Taiwan to push jointly for the Alishan Forest Railway to be designated a World Heritage site. Alishan Forest Railway was initially a logging railway that was built during the Japanese colonial era; the forest railway's management was outsourced to Hungtu Alishan International Development Co in a build-operate-transfer contract in 2008. However, a decision to allow Taiwan Railways Administration to take over the historic line's operation was made by the Executive Yuan in 2009, a year after it was damaged by Typhoon Morakot. The railway gained world recognition but also needs more attention in terms of its heritage and tourism development.

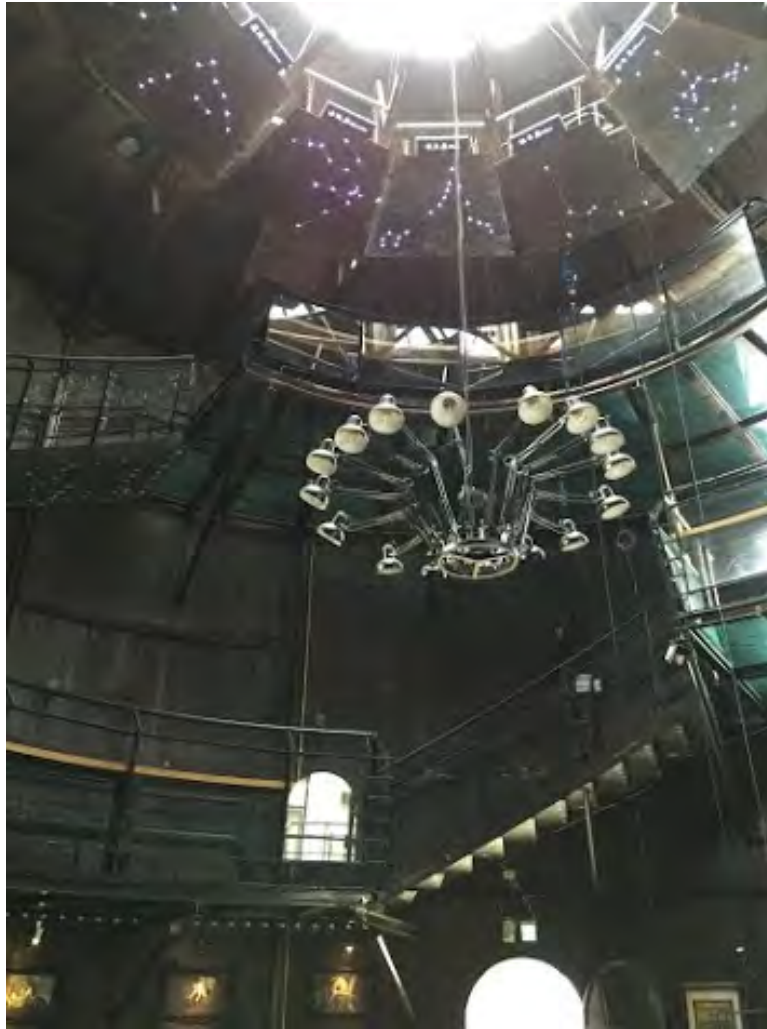
**Public consciousness and NGO achievements** Private sectors get involved with site management. Following the developments of conservation, gradually more and more private sectors have got involved with the management of the industrial heritage sites. Following the development of Huashan 1914 (formerly Taipei Destiney) and Songshan Cultural Creative Parks (formerly Songshan Tobacco Factory) in Taipei, the Hualien Cultural Creative Park (formerly Hualien Destiney) has been open on the east side of Taiwan since 2012. The economic and cultural values of these industrial sites are recognized by private sectors and the general public.

Among those reused industrial heritage sites which get their operating rights from the Government, Ten Drum Cultural Creative Park in Tainan has rented the Rende Sugar Refinery and developed a special type of reuse plan with its specialty on performance and a spatial exhibition in the sugar refinery since 2007. Its success, Ten Drum Cultural Creative Park in Ciatou (formerly Ciatou Refinery) opened in Kaohsiung in 2010 provides a new vision for the conservation and development of industrial heritage in Taiwan. Over these years, the Ten Drum Art Percussion Group established in the spring of 2000 not only

won the 55th Annual GRAMMY Awards but also set up a successful business model for the reuse projects.



Ten Drum Cultural Creative Park reuses the machinery hall of Rende Sugar Refinery for exhibition of sugar making and percussion performance. © MingChun Lai, 2015



The three molasses tanks are transformed into a unique restaurant, a children playground and a media exhibition hall. © MingChun Lai, 2015

In addition, public consciousness through the network community also plays an important role in the conservation of the Taipei Railway Workshop as well as other conservation sites.

### Future Challenges

Although more and more people are aware of the importance of the industrial heritage of modernization, the conflicts between new development and conservation of industrial heritage often remain. More works should be carried out with greater care and long term planning. Several issues are concerned:

*How can we transform the industrial heritage for regional revitalization with planning, tourism and education departments?* Currently the conservation and reuse of industrial heritage is under the supervision of the Bureau of Culture Heritage. A good tendency is that more private sectors are interested in reuse of the industrial heritage and provide diversity of programs. However, there is a danger that the recognition of the essential value of industrial heritage is properly delivered or people just use industrial heritage as a container for entertainment. The next step is to get the planning, education, and tourism development integrated together with the industrial heritage.

*How can we connect the dots nationally and internationally?* As there are more reuse projects without proper platforms to promote and exchange experience, there is a willingness to set up a network in which the individual sites can have a common platform and a strong identity. The successful cases of Catalonia (mNACTEC) network, the European Route of Industrial Heritage (ERIH) and TICCIH Latino América are good models for Asian countries to set up such network in order to strengthen the identity and uniqueness of Asian industrial heritage.

The Memorandum of Understanding regarding *A Framework for Collaboration on Joint Areas of Interest for the Asian Routes of Industrial Heritage* signed in 2014 is a good starting point. We have to continue connecting with municipalities and privately operated sites to form a national network and to establish an Asia Route of Industrial Heritage (ARIH) over Asia for the Trans countries branding for the industrial heritage.

Both the private sectors and the Bureau of Culture Heritage are looking forward to establishing a network to connect with international industrial heritage and setting an exchange platform to communicate with international organizations of industrial heritage with the special industrial heritage in Taiwan.

*How can we solve the problem regarding the integrity of industrial cultural landscape?* One particular problem regarding the industrial heritage of Taiwan is the external development pressure from economic and political demands. Thus, the conservation and reuse of these industrial sites and landscape is often fragmental and it is difficult to preserve their integrity. A platform for further coordination between different state holders and the public for open discussions should serve the next important step for the development of industrial heritage in Taiwan.



# United Kingdom

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**Mark Watson**

TICCIH GB National Representative



The United Kingdom comprises the three countries that form Great Britain - England, Wales and Scotland- plus the six counties of Northern Ireland. Most cultural, economic and planning matters are devolved to each of the home nations, yet the underlying legislation has a common source, and some institutions cross borders, like Network Rail and the UK's Heritage Lottery Fund. Scots drew back from the brink of independence in a 55%-45% referendum vote in 2014.

Some Northern Irish matters are jointly handled across its land border with Eire, like inland waterways. Industrial Heritage Association of Ireland (IHAI) is also an all-Ireland organisation, and may submit a report covering both parts of Ireland. Local authorities in Northern Ireland are having powers returned from central government that they lost during the "Troubles." Many of the conservation initiatives in Ulster are by Building Preservation Trusts such as Hearth. Other off-shore islands like Man, Bermuda and South Georgia have high autonomy. The United Kingdom, but not all of its dependencies, is a member of the European Union.

(left, Gibb's Hill Lighthouse Bermuda, built of cast-iron in 1846, repaired after hurricane damage in 2003. © Chris McGregor)

The most significant change in 2015 is that to the national public bodies responsible for built heritage, or "historic environment".

**In England**, English Heritage, set up as a government agency in 1983, absorbed its sister documentation body RCHME in 1999, but was split into two halves in 2015:

- English Heritage is now a charity that directly looks after 400 sites.
- Historic England is a government service, the public body that champions and

protects England's historic places, with statutory functions of listing, planning, grants, heritage research and advice.

**In Scotland**, the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) and Historic Scotland come together in October 2015 to create a new lead public body for the country's historic environment. The provisional name is Historic Environment Scotland -see [Historic Scotland](#) and [RCAHMS](#).<sup>10</sup>

**Wales** stays as it is. Cadw (headed by Kate Clark) is the conservation body within the Welsh Assembly government and the Royal Commission on the Ancient and Historical Monuments of Wales is the investigation body and national archive for the historic environment of Wales since 1908.<sup>11</sup>

The Association for Industrial Archaeology (AIA) speaks for the sector and promotes professional standards in the archaeology of the early modern and industrial periods. Its Action Plan (2012-14) set out ways to promote the study of industrial archaeology, to encourage improved standards of research, recording, conservation and the publication of research (*Industrial Archaeology Review*) and supports conservation of industrial heritage. Keith Falconer, who retired from English Heritage in May 2012, became chair of the Association in 2014, succeeding Mark Sissons. Annual conferences were held in Dundee (2013) and Chester (2014) and are to come in Brighton (2015) and Telford (2016).

## **Changing public policies with regard to Industrial Heritage:**

### **Protection and management, international**

UK World Heritage Sites that have a primarily industrial nature are Ironbridge Gorge, Blaenavon Industrial Landscape, Derwent Valley Mills, New Lanark, Saltaire, the Cornwall and West Devon Mining Landscape and Pontcysyllte Aqueduct and Canal. There are industrial components within the world heritage sites in the cities of Liverpool (docks and port buildings), Bath (bridges, canals, railways, engineering), the Old and New Towns of Edinburgh (bridges, railways, brewing, printing) and Georgetown, Bermuda. It was through British industry that the UK had worldwide impact, setting a model for others to follow and in due course, to better.

The UK has deliberately slowed its pace of nominations, taking stock of what is already inscribed. The UK tentative list, from which properties may be nominated to the World Heritage List, revised in 2012, also includes the Slate Industry of North Wales, Chatham Dockyard and its Defences, Jodrell Bank Observatory, the Lake District in England. Two are no longer on that list: the Great Western Railway and Manchester.

The [Forth Bridge](#), in Scotland, was nominated to UNESCO for inclusion in the world heritage list in 2014 and inscribed in 2015, the first from the UK since 2009. Ways of pedestrian access are under consideration. It could become one of four single bridges on the World Heritage List (besides aqueducts and those in landscapes), aiming for criteria: (i) outstanding creation of human genius; and (iv) significance in human history.

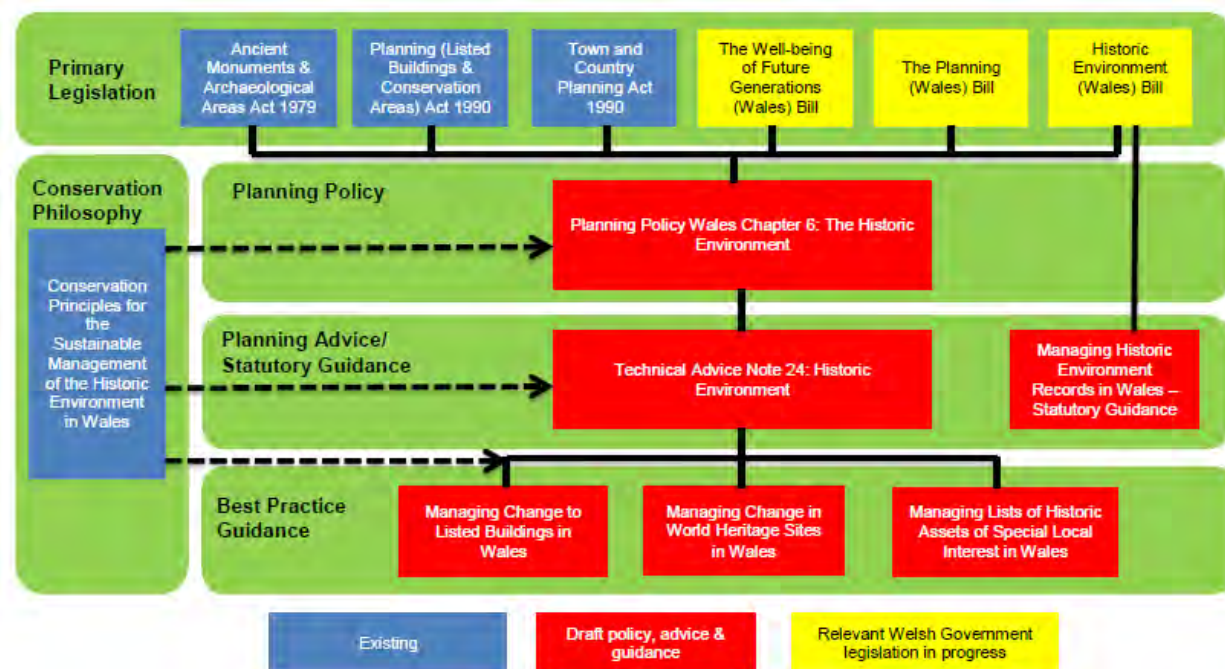
## **Strategic Activities in Industrial Heritage**

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<sup>10</sup> The historic environment record is at <http://canmore.rcahms.gov.uk>

<sup>11</sup> The historic environment records are available online at [www.coflein.gov.uk](http://www.coflein.gov.uk)

Planning guidance is periodically revised in each country, thus Wales has its conservation principles, and new legislation is proposed, fitting into this framework:



An over-arching “Our Place in Time” strategy in Scotland now has strategies linked to it such as archaeology, and an industrial heritage strategy developed by a broad range of stakeholders, to capitalise on work done by the museums sector late last century.

Sophisticated legislative protection is available to scheduled monuments (mostly buildings no longer in use) and listed buildings (expected to have a continued use), to Conservation Areas (often urban) and historic landscapes (which in Wales include industrial landscapes). These designations, tied into the UK planning system, are geared towards achieving sustainable development in ways sympathetic to heritage assets, while learning through archaeology and documentation. Industrial ‘heritage assets’ are stated to be 4% of the designated assets in England. The rate of designation has generally slowed in order to allow public participation.

The Canal & River Trust, formerly British Waterways, has 3,000 designated ‘heritage assets’. Canals and rivers in England and Wales were transferred in 2012 to the care of this new waterways charity, run through thirteen Waterways partnerships – representing 12 and one for the charity’s waterways museums and attractions (e.g. Gloucester and Ellesmere Port). The Irish canals are unaffected as not previously belonging to British Waterways. Waterways in Scotland remain in the public ownership of Canals Scotland, which has its own heritage strategy looking forward from 2013 to 2038. The Waterways Trust continues as a charity only in Scotland.

Railway viaducts and disused property such as the Eurostar terminal at Waterloo passed in 2013 to the Highways Agency Historical Railways Estate. Renamed “Highways England” in April 2015 in this respect it manages property across Britain. The Railway Heritage Trust supports conservation work on active railways managed by Network Rail, for example Llandudno, Gleneagles and Nottingham stations.

## Advocacy, Promotion and Support

Guidance arising from the “Industrial Heritage at Risk” (IHAR) theme of the audit by English Heritage in 2011-12 found that:

- 4% of listed buildings and scheduled monuments are industrial, and 3% of conservation areas were designated because of their industrial significance.
- 10.6% of industrial listed buildings are at risk, making industrial buildings over three times more likely to be at risk than the national average
- The average estimated conservation deficit (cost of repair in excess of the end value) of industrial buildings at risk is twice that of non-industrial buildings at risk.

A growing [flickr site](#) has around 5,000 images.

An industrial heritage support officer, located at Ironbridge Gorge Museum, helps the 650 English sites managed by volunteers or local authorities, giving some public access: a direct outcome of Sir Neil Cossons’ STIR campaign and “Industrial Heritage at Risk.” Development officers in the Architectural Heritage Fund help secure new uses for redundant buildings at risk.

The Heritage Lottery Fund (HLF) distributes 20% of the UK’s National Lottery that is allocated to good causes. Industrial and transport heritage meets many of its criteria - socio-economic need, reaching new audiences and achieving participation. Some beneficiaries aim to keep industry operational, through training apprentices, providing interpretation and improving premises, such as at Middleport Pottery in Stoke on Trent and Knockando Wool Mill in Moray. Engineering structures have also benefited like Middlesborough Transporter Bridge (refurbished 2013-15).

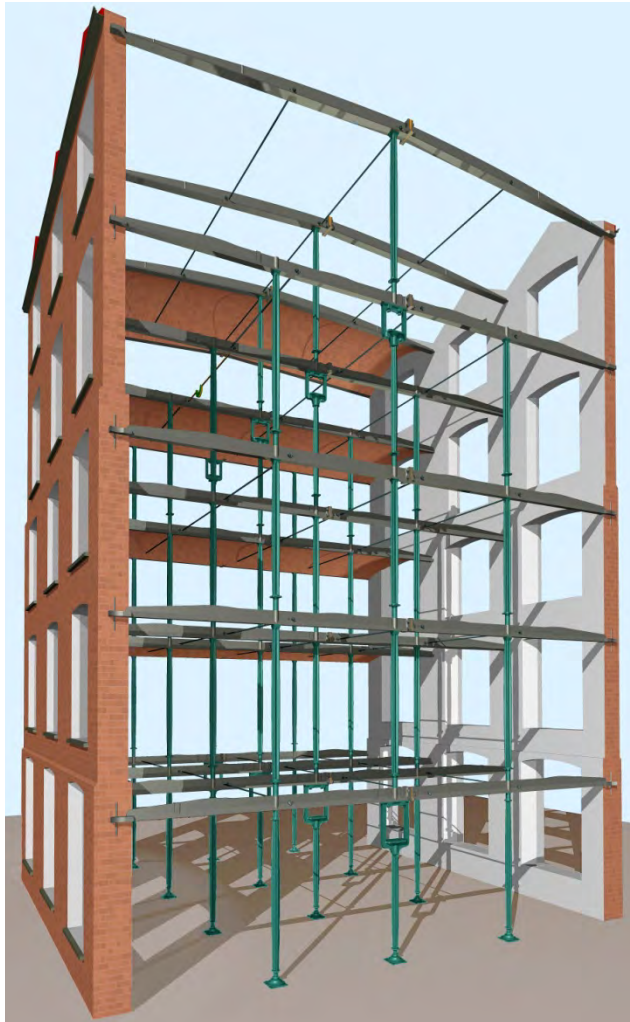
Main issues and opportunities:

- asset transfer from public bodies to the third (voluntary) sector
- financial and running costs are difficult to cover
- succession planning is needed, involving younger generations
- impact of climate change
- high scrap values make metal objects vulnerable.
- austerity is the theme under which local and national governmental spending is cut from anything optional, like libraries and museums. This threatens a lot of industrial heritage previously thought to have been “saved”.
- Value Added Tax is levied on new work to existing buildings, but not on newly-built homes, so developers are pushed to demolish more than they otherwise would at previously-developed brownfield sites. VAT relief has been removed from listed buildings, a further impediment to their adaptive re-use while the financial incentive to demolish remains in place.

### Notable conversions, rehabilitations and new site museums:

- Ditherington Mill, Shropshire, 1797, the world’s first iron framed building, was built as a flax spinning mill, later becoming a maltings until its future was in doubt as it passed through various owners. Historic England has taken direct action with its repair preparatory to adaptive re-use, and has commissioned a book on its standing archaeology.
- [Verdant Works, Dundee Heritage](#): the final phase in repair of this jute textile mill, revealing its iron skeleton and gothic roof, will be completed in 2015. Pride of place goes to a rotative sun and planet engine by Boulton and Watt installed at a bleachfield in 1802, not seen by the public since 1939.





Ditherington Mill, Mike Williams' CAD drawing of the world's first iron frame. © English Heritage



Verdant Works, showing the impression on the beams made by the now removed floorboards. 1833 with a Gothic cast iron roof of 1852. © Dundee Heritage, by Jim Burns.

- Cubitt's Warehouse, King's Cross, London, is now the Central St Martins campus of the University of the Arts, London
- Isambard Kingdom Brunel's 1843 Rotherhithe shaft in the Thames Tunnel in London is to become a performance space.
- Middleport Pottery, Stoke-on-Trent, won a 2015 Europa Nostra Conservation Award
- Coffin Works in the Birmingham Jewellery Quarter: a time capsule where machinery produces coffin furniture.
- Decommissioning of Dounreay Fast Breeder Reactor (1955-9) goes together with documentation. The first nuclear reactor is inside a welded steel sphere 45m in diameter, a landmark redolent of the age in which it was built, or arguably a late realisation of Boullée visions. It will be remembered through interpretation beside Wick airport.
- The "Capturing the Energy" Project, jointly between Scotland and Norway, aims to help the North Sea Oil industry to document its heritage. The Archive is in Aberdeen University library, the main funder being Oil and Gas UK.
- The Borders Railway reopens in 2015 from Edinburgh to Galashiels, using bridges and track bed of the Waverley Line, abandoned in the 1960s. Some roads and houses had been built on the line, and either had to be acquired or the railway diverted. It is proposed to operate steam and diesel locomotives.

- The Forth Bridges Festival focused in 2014 on the 50th anniversary of the Forth Road Bridge. A week of activities culminated in a procession and spectacular fireworks. In 2015 the Forth Bridge reached its 125th anniversary, and in 2016 the Queensferry Crossing cable-stay bridge will be completed, a festival for each one. The bridges are being digitally recorded.
- ERIH – a cultural route that links industrial heritage across Europe into more local routes. The East Pennines Industrial Route was launched in 2014, covering a landscape in Yorkshire, England, that includes Elsecar near Barnsley, Yorkshire: a coal mine pumping engine installed in 1795 is believed to be the oldest *in situ* Newcomen (atmospheric) steam engine. Repaired in 2014 its beam is now able to move again



Elsecar pumping engine near Barnsley, the piston ready to go back into the cylinder. © Industrial Heritage Consulting Ltd

- Belfast: parts of the Harland and Wolff shipyard are “*Game of Thrones*” film studios.
- Sumburgh Head Lighthouse in Shetland is now open to the public.
- Fairfield Shipyard in Govan, largest of the Glasgow shipyards, still makes ships under BAE. However the drawing offices and boardroom, 1890, were surplus to requirements and have been developed by Govan Workspace for small business use with a museum display.
- The Scottish Transport and Industry Collections Knowledge (STICK) Network is researching machine tools collections, and a collaborative project on textile history: #stickssn

### Some setbacks and challenges

We mark the passing of some of the pioneers in industrial heritage, and some recently active:

- Frank Atkinson, Director of Beamish Museum (England’s largest open air museum), 90
- Christine Ball, Archivist, Sheffield, 65
- Ken Hawley, Tools and Trades Historical Society, 87
- Sonia Rolt, Inland Waterways Association, 95
- Ted Ruddock, engineer and historian of arched bridges, 84
- Stuart Smith, Director of Ironbridge Gorge Museum and Secretary of TICCIH, 69



The future of the Kirkaldy Testing Works (a London TICCIEH 2000 Congress venue) is in doubt, as the ownership has changed despite serving as a museum for 30 years. Battersea Power Station continues to see schemes stumble since an ideas competition was held in 1985. Now a start is again promised, though whether or not the chimneys (cover of Pink Floyd's *Animals*) should be rebuilt is debated. A German MAN gasholder at Battersea, 1932, with a dry-sealed piston, was demolished in 2015.

A seminar to discuss the fate of gas holders was promoted by engineers within the gas industry in 2014 and formed the core of two issues of *Industrial Archaeology News*.



It seems that gas holders will almost all vanish from urban skylines, yet a cast-iron one was moved and reconstructed as part of the development of the area north of Kings Cross in London. © Katriina Etholén

Concern is also raised about the future for 62m high Koepe winders at Clipstone Colliery in Nottinghamshire. There is only one deep coal mine left in the UK, Hatfield. On the other hand Boulby potash mine, also in Yorkshire, is getting ever deeper at 1400m.

The UK paper industry has seen closures of about 20 mills since 2005, most recently Tullis Russell and Aylesford, leaving around 50, most of which would be considered small in world terms.

## Training programmes

Training in industrial heritage generally forms part of courses in archaeology, geography and history at school and university. Several post-graduate qualifications include industrial heritage elements.

The Ironbridge International Institute for Cultural Heritage (IIICH) relocated its teaching campus of 30 years from Ironbridge to Birmingham University, and Harriet Devlin's Historic Environment Conservation Course has transferred to Birmingham City University. A research facility continues to exist in the Long Warehouse of Ironbridge Gorge Museum.

The Institute of Historic Building Conservation (IHBC) is a multi-disciplinary professional body, with private, public, government and third sector members working in building conservation: typically architects or local authority conservation officers. The Institute maintains the highest standards of conservation practice, supports protection and enhancement of the historic environment, and promotes heritage-led regeneration and access for all.

The Chartered Institute for Archaeology (CIfA) sets standards for professional archaeologists. The archaeology sector has developed research agenda by topic (such as early railways), or region.

A broad range of people who interact with the historic environment (that is, everyone) recognises the value of industrial heritage. So the Institution of Civil Engineers (ICE) has initiatives to get historic materials included in civil engineering courses in universities. The Scottish Engineering Hall of Fame makes Rock n' Roll style awards through the Institution of Engineers & Shipbuilders in Scotland.

The Institute of Mechanical Engineers produced a policy statement recommending that:

1. The industrial heritage sector works together to share best practice. The Institution of Mechanical Engineers would be willing, as an intermediary, to facilitate connectivity between societies in general or by specialism or issue if requested.
2. National organisations act to provide advice and guidance to industrial heritage societies on how to maintain and preserve artefacts/sites and establish best-practice guidelines/ core values.
3. DCMS encourages the relevant national bodies to recognise the importance and potential value of the nation's industrial heritage.
4. The industrial knowledge of the Institution's 110,000 members is a valuable asset to assist local organisations in preserving industrial heritage for the future.

## Publications

Jonathan Clarke, *Early Structural Steel in London Buildings* (English Heritage, 2014)

Jonathan Coad, *Support for the Fleet: Architecture and Engineering of the Royal Navy's Bases 1700-1914* (English Heritage 2013)

David Gwyn, 2015, *Welsh Slate: Archaeology and History of an Industry*. Aberystwyth: RCAHMW.

Nick Haynes, *Scotland's Canals* (Historic Scotland 2015)



Institution of Mechanical Engineers, *Engineering Attractions: Visiting Britain's Best Industrial Heritage Sites* (2014)

Kathryn A. Morrison, John Minnis, *Carscapes - The Motor Car, Architecture, and Landscape in England* (Yale, 2012)

Lynn Pearson, *Built to Brew* (English Heritage, 2014)

Barrie Trinder, *Britain's Industrial Revolution 1700-1870* (Carnegie, 2013)

Peter Wakelin, *Pontcysyllte Aqueduct and Canal: World Heritage Site* (Canal and River Trust, 2015)

Mike Williams, *Textile Mills of South West England* (English Heritage 2013)

*TICCIH GB is simply the membership of TICCIH that is resident here. Several members of TICCIH belong also to AIA, the Newcomen Society (which studies technological history) and to ICOMOS.*

# United States

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## **Bode Morin**

National Representative

The United States has made steady progress in promoting, saving, and documenting industrial heritage over the last three years. However, entering into the period in the midst of economic decline and a political climate promoting smaller government with a de-emphasis on science and heritage has created challenges.

Academically, the US continues to graduate industrial archaeology and heritage students who have produced significant theses and dissertations on industrial site and heritage topics. Several of the graduates are working professionally on heritage documentation projects in the private sector, working in museum or heritage management, or have gone on to earn PhDs and are now teaching across the country. Several have published articles and books in academic journals and presses. The US added several new national historical parks in this period, funded heritage areas dedicated to industrial themes, recognized several new sites with listings on the National Register of Historic Places and new National Historical Landmark designations. While many historical sites were lost to redevelopment or neglect, several have seen renewed preservation interest and several museums and interpreted sites have seen new growth.

## **Academics**

Michigan Technological University remains the sole program dedicated to industrial heritage and archaeology in the country. Several of its former students, however, have gone on to teach and focus on industrial projects at major universities across the country while faculty in other university departments have taken on industrial, heritage, and archaeological projects.

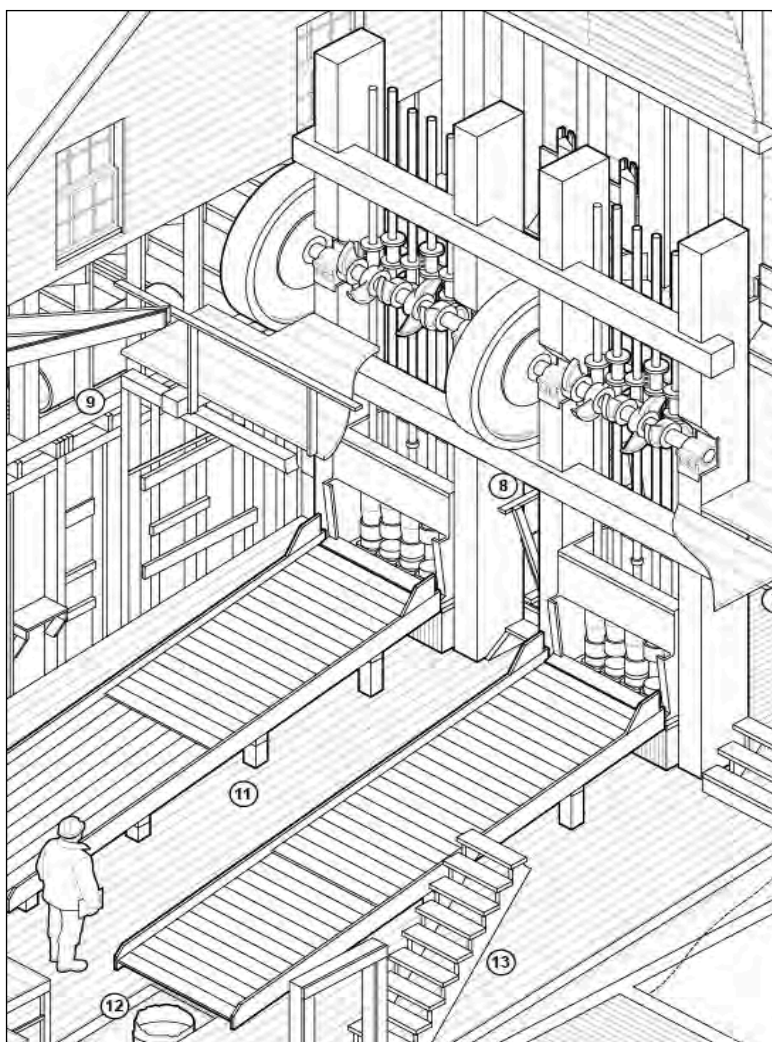
The Faculty and Students of Michigan Technological University's (MTU) Industrial Heritage and Archaeology report important milestones and projects this period. TICCIH President Patrick Martin retired from his position as Professor and Chair of the Department of Social Sciences at the conclusion of the 2014-2015 academic year. New faculty joining the program include anthropologist Lou Ann Wurst (PhD State University of New York Binghamton) and architectural and landscape historian Sarah Fayen Scarlett (PhD University Wisconsin).

MTU Fieldwork projects include ongoing studies of mining history and heritage: nineteenth-century copper mining in Keweenaw County and smelting on Isle Royale National Park, Michigan; iron mining in Minnesota and milling in Pennsylvania; gold and precious metals mining in New Mexico; and critical heritage studies of mining industries in Australia. Additional studies include investigations of palm oil production and globalization in West Africa.

In the lab, sponsored collaborative research at MTU has expanded conservation and analytical tools for industrial archaeology and heritage. Social Sciences, Material Sciences and Engineering, and Chemical Engineering are working on collaborative projects, developing Fired Clay Ceramic Rehydroxylation Dating (RHX Dating), establishing a novel

technique applying supercritical pressures to quickly consolidate and stabilize corroded iron artifacts, and assessing pXRF as a tool to characterize global ceramic commodities.

Over the past four years the University of Maryland has performed archaeology and oral histories in the anthracite coal mining region of Pennsylvania, focusing on issues of labor, immigration and gender. The work has concentrated on the domestic house lots of some of the poorest coal workers. The focus on shanty enclaves reveals the living conditions of the new immigrants that include poor diets lacking in protein and a scant material culture suggesting the poverty signatures the newcomers faced. The project also focuses on the recent immigrant experience as it incorporates high school students who are often first generation Americans.



Hi-Yu Stamps detail, Moose Creek, Fairbanks Alaska, John Hemmeter and Paul White, University of Alaska Anchorage illustrators.

At the University of Alaska Anchorage, Dr. Paul White and students from the Anthropology Department are embarking upon a multi-year project to document several historic gold mills in the "Frontier State." Remoteness and arctic conditions have aided the preservation of these vernacular structures, many of which retain equipment dating from the 1900s to 1930s. Survey teams document the buildings by hand and then develop a series of

reconstructive illustrations. Three mills have been recorded so far, with an additional mill scheduled for documentation this summer.

The US National Park Service (NPS) is the federal agency charged with maintaining, listing, documenting, and/or preserving nationally significant natural and cultural heritage. Places of high significance are operated by the NPS as national parks, national historical parks, or national monuments. Other places of significance are financially or strategically supported but not owned or operated by the NPS as National Heritage Areas. The NPS also administers the federal list, the National Register of Historic Places and the list of those sites of greater national significance elevated to National Historic Landmark, and completes recordation/documentation of other non owned or supported historic industrial sites through the Historic American Engineering Record.

New national parks and monuments with an industrial theme were created recognizing the Manhattan Project that developed the atomic bomb during WWII in Tennessee, Washington state, and New Mexico; Coltsville, a historic district affiliated with the Colt Patent Fire Arms Manufacturing Company in Connecticut; and several sites along the Blackstone River in Massachusetts and Rhode Island associated with early US industrial and textile mill development. The model town of Pullman, Illinois, created by railroad car industrialist George Pullman was also designated a national monument in this period.

National Heritage Areas are public-private development projects intended to encourage local investment and ultimately become fully self-funded. Many however have not been able to raise sufficient income to cover full operations partly owing to slack economic growth. In this period the federal government, which supports the national heritage areas with funding through the NPS for a fixed number of years, extended the funding deadline to allow many areas to continue providing public interpretation and access. The sites that received continued funding with an industrial themes include: Delaware & Lehigh National Heritage Corridor (PA), National Coal Heritage Area (WV), Rivers of Steel National Heritage Area (PA), Essex National Heritage Area (MA), Silos and Smokestacks National Heritage Area (IA), Ohio & Erie Canalway National Heritage Area (OH), Motor Cities National Heritage Area Partnership (MI), Lackawanna Heritage Valley & State Heritage Area (PA), Erie Canalway National Heritage Corridor (NY), Schuylkill River Valley National Heritage Area (PA), and John H. Chafee Blackstone River Valley National Heritage Corridor.

The federal list of significant structures and sites in the US, the National Register of Historic Places, saw 185 new industrial and bridge inclusions this period including Gas Works Park (WA), the New River Gorge Bridge (WV), the Roanoke River and Railroad Historic District (VA) and the Bronx Ferry Bridges (NY). Seven industrial/bridge listed sites exhibiting greater significance to national history were elevated to National Historic Landmark including Detroit Industrial Murals (MI), Brown Bridge (VT), the Duck Creek Aqueduct (IN), the Brookline Reservoir (MA), the California Powder Works Bridge (CA), and the St. Charles Avenue Streetcar Line (LA). The Edmond Pettis Bridge (AL) was also listed as an NHL but for its role in the US Civil Rights campaigns and not for its technological significance.

### **Industrial museums**

The most notable developments in museums are the hiring of three new executive directors. Nancy Darga was hired by the T-plex in 2013 to run the Piquette Plant in Detroit, Michigan, home to development of Henry Ford's Model T and its first 12,000 production



vehicles. Her role is to fundraise for immediate structural repairs and install permanent exhibits. The National Museum of Industrial History in Bethlehem, Pennsylvania, which has been in the development and construction phase for over 15 years, hired Amy Hollander in 2015 to complete the development and open the museum by mid 2016. The new museum, an affiliate of the Smithsonian but operated by a private non-profit organization, is being installed in the former electrical repair shops of Bethlehem Steel.



Construction of the National Museum of Industrial History underway in Bethlehem, Pennsylvania. © Bode Morin, 2015

Sloss Furnaces National Historic Landmark, a significant 20<sup>th</sup> century blast furnace site and 1970s industrial heritage project in Birmingham, Alabama also hired a new executive director, John W. Nixon, Jr. in 2014 and neared completion of its new visitor center in mid 2015.

### **Industrial site and collection preservation and development**

The Society for Industrial Archaeology has administered an Industrial Heritage Preservation Grants program to promote and preserve industrial heritage for many years. In addition to contributions from members, in 2012 the program received a significant contribution from the J. M. Kaplan fund. In 2013 awards were made to the Quincy Mine Hoist (MI) to assist with document production in support of the hoist restoration, the USCGC Lilac (NY), a steam powered lighthouse tender to support the restoration of its steam heat system, and the Lake States Railway Historical Association (WI) to archive its 600 glass plate negative collection. In 2014, the program funded a documentation program for the Chamberlin Mill (CT) and a second grant to the Lake States Railway Historical Association for continued archival support and public internet access.

The significant and sprawling 1903 Packard Plant in Detroit, Michigan, one of the world's first cast concrete factory buildings had seen several reuse plans submitted in the decades since it ceased automotive operations. While it became an iconic site for urban decay, ruin porn, and the economic plight of Detroit, the complex was bought by a South American developer in late 2013 with promises of redevelopment. With the on-going restoration, developers hope to see the first new tenants and new uses in 2017.

The Quincy Smelter, Hancock Michigan, a largely intact copper smelter that operated in the Lake Superior mining district saw significant funding this period from federal and local sources. The facility, which the local communities had asked for either restoration or demolition less than a decade ago, has now been purchased by a federal commission and is in the process of being donated to the US National Park Service for inclusion in Keweenaw National Historical Park focused on American copper production.



Quincy Smelter, part of the Quincy Mine National Historic Landmark, and soon to be incorporated into the Keweenaw National Historical Park that interprets copper and copper mining. © Scott See, 2015

Carrie Furnaces 6 and 7 maintained by the Rivers of Steel National Heritage Area in Homestead, Pennsylvania, were once part of the extensive US Steel Homestead Works. Rivers of Steel have plans to stabilize and renovate the site to allow visitors access to a series of walkways around the furnaces. Much of the steel plant and other furnaces have been demolished.

The Highline Park in NYC completed its third phase in 2014. The park, constructed on an abandoned elevated railway of the New York Central Railroad in New York City now extends for 1.45-mile-long (2.33 km) through Manhattan and includes paths, rest and reflection areas, and community spaces while maintaining the structure and many of the railroad's industrial features.

The Bethlehem Steel plant site in Bethlehem, Pennsylvania that operated from 1905 through 1995 and was one of the largest integrated steel mills in the country, completed a 1,600 foot (1 km) trestle walkway that will connect various parts of the site along an elevated path that follows the historic stock trestle aligned with five 20<sup>th</sup> century blast furnaces. Portions of the site has been converted into a mixed-use development that includes an arts center, offices, television studios, a casino, and the National Museum of Industrial History, while much of the rest of the site awaits new development.



Bethlehem Steel Complex part of the Steel Stacks redevelopment, Bethlehem Pennsylvania showing newly installed and opened elevated walkway (to the right) to allow visitors a closer view of the historic blast furnaces. © Bode Morin, 2015

## Publications

Recent trends in publication include new studies of heritage, landscape, and environment in an industrial context. Publications in this period include *Gambling on Ore* (2013) by Kent Curtis that explored the environment as actor in the development of 19<sup>th</sup> century western mining in the US; *New Natures: Joining Environmental History with Science and Technology Studies* (2013) edited by Dolly Jørgensen, Finn Arne Jørgensen, and Sara B. Pritchard exploring a variety of envirotech studies; *The Legacy of American Copper Smelting: Industrial Heritage versus Environmental Remediation* (2013) by Bode Morin that examined heritage planning amidst Superfund remediation; and *Routes of Power*, (2014) by Christopher Jones that focused on infrastructure for moving energy including canals, pipelines, and power transmission lines.

An upcoming issue of *IA*, published by the Society for Industrial Archaeology, will focus on the industrial archeology of industrial waste. The Society for Historical Archaeology published a special issue in their journal, *Historical Archaeology*, titled “The Archaeology of



Chinese Railroad Workers in North America” in 2015. The issue explores material culture in social, economic, and political contexts set during the creation of the transcontinental railroad.

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