

# Germany

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**Alexander Kierdorf and Norbert Tempel**

## **Introduction**

As we published the last National Report for the Freiberg International TICCIH 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 TICCIH 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.

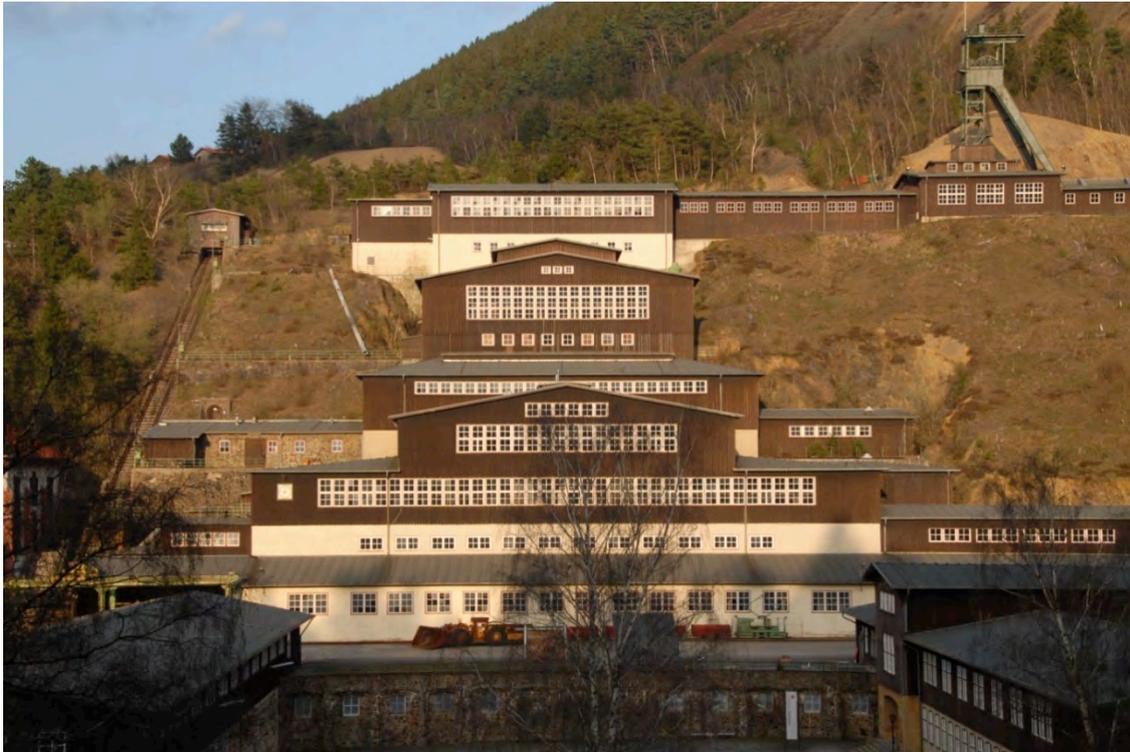
A major loss was the early hydropower station at Rheinfelden (1898), which became obsolete and had to make way for an ecological compensation model. An initiative of local enthusiasts together with TICCIH led to a first coordinated protest together with ICOMOS Germany and the working group on Industrial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

## **Selected publications**

### Conference Publications

Albrecht, Helmuth; Alexander Kierdorf; Norbert Tempel (eds)  
Industrial heritage - ecology & economy: selected papers / XIV. International TICCIH 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; Saechsisches 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  
staedtischer Transformationsprozesse am Beispiel der Zeche Zollverein  
Essen (Klartext) 2012

Prokop, Ines  
Vom Eisenbau zum Stahlbau. Tagwerke und ihre Protagonisten in Berlin 1850-1925  
Berlin (mbv) 2012

Schaedlich, Christian  
Das Eisen in der Architektur des 19. Jahrhunderts

Aachen (Geymueller) 2015

Schinker, Nils M.

Die Gartenstadt Hellerau 1909-1945: Stadtbaukunst, Kleinwohnungsbau, Sozial- und Bodenreform

Dresden (Sandstein) 2014

Sikora, Bernd (author), Guntram Kober (photo)

Industriearchitektur in Sachsen: Erhalten durch neue Nutzung. Mit einem Beitrag von Helmuth Albrecht

Leipzig (Edition Leipzig) 2010

Slotta, Delf (author), Thomas Reinhardt (photos)

Gruben und Bergbau-Landschaften im Saarland: letzte Seilfahrt - Fotografien von Fördertürmen, Bergehalden und Absinkweihern

Dillingen/Saar (Krueger) 2012

Tenfelde, Klaus; Stefan Berger, Hans-Christoph Seidel (eds.):

Geschichte des deutschen Bergbaus, vol. 2: Wolfhard Weber (ed.): Salze, Erze und Kohlen. Der Aufbruch in die Moderne im 18. und frühen 19. Jahrhundert,

Muenster (Aschendorff) 2015

Vossbeck, Thomas (Photo); Europareportage (ed.)

Struktur und Architektur/Struktura i architektura: Das postindustrielle Kulturerbe Oberschlesiens /Postindustrialne dziedzictwo kulturowe Górnego 'Slaska

Potsdam 2010

Walther, Daniela

Neue Konzepte zur oekonomischen Analyse der Industriedenkmalpflege in Deutschland (Freiberger Forschungshefte D 244)

Freiberg 2013

Werner, Ferdinand; Gerold Boennen, Ulrich Nieß

Arbeitersiedlungen - Arbeiterhäuser im Rhein-Neckar-Raum

Worms (Wernersche) 2012

Custodis, Paul-Georg

Von der Autobahnbrücke bis zur Ziegelei. Zeugnisse aus Technik und Wirtschaft in Rheinland-Pfalz

Regensburg (Schnell + Steiner) 2014

Oevermann, Heike and Harald A. Mieg

Industrial Heritage Sites in Transformation. Clash of Discourses

New York, London (Routledge) 2015

#### Series

Historische Wahrzeichen der Ingenieurbaukunst; Hg. Bundesingenieurkammer (Ed.)

Volumes:

1. Das alte Schiffshebewerk Niederfinow (Eckhard Schinkel, 2007, <sup>3</sup>2015)

2. Die Goeltzschtalbruecke (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)

4. Die Schwebefahre Osten-Hemmoor (Wolfgang Neß, Christine Onnen, Dirk J. Peters, 2009, <sup>2</sup>2012)

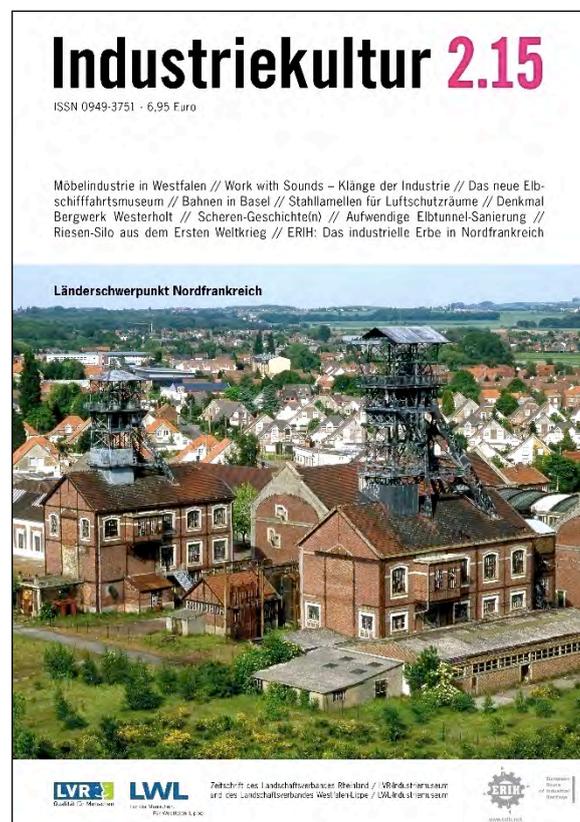
5. Die Sayner Huette (Paul-Georg Custodis, 2010)

6. Das Himbaechel-Viadukt der Hessischen Odenwaldbahn (Karl Heinrich Schwinn, Susanne Klingebiel-Scherf, 2012)
7. Der Leuchtturm Roter Sand (Wolfgang Neß, Christine Onnen, Dirk J. Peters, 2010)
8. Der alte Elbtunnel Hamburg (Sven Bardua, <sup>1+2</sup>2011)
9. Die Fleischerbruecke Nürnberg (Werner Lorenz, Christiane Kaiser, 2011)
10. Der Flughafen Tempelhof (Thomas Blau, 2011, <sup>2</sup>2015)
11. Die Koenig-Ludwig-Bruecke Kempten (Stefan M. Holzer, 2012)
12. Das Pumpwerk Alte Emscher Duisburg (Alexander Kierdorf, 2013)
13. Die Rendsburger Hochbruecke mit Schwebefähre (Erich Thiesen, 2013)
14. Die Grossmarkthalle in Leipzig (Werner Lorenz, Roland May, Jürgen Stritzke, 2014)
15. Das neue Museum in Berlin (Werner Lorenz, 2014)
16. Das Pretziener Wehr an der Elbe (Sven Bardua, 2015)
17. Der Betonfoerderturm Camphausen in Fischbach/Saar (Delf Slotta, under preparation)

Periodicals and online publications

Industriekultur - Denkmalpflege, Landschaft, Sozial-, Umwelt- und Technikgeschichte

[quarterly Journal on Industrial Heritage, Landscape, History of social movements, environment and technology], edited by the Industrial Museums of Rhineland and Westphalia and associated editors, in cooperation with ERIH, TICCIH Germany, GAG, SGTI



### **Gyorgy Nemeth**

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.

Finally, I wish to thank *Ádám Arnóth*, *Rita Csákvári*, *Richárd Darázs*, *János Dobai*, *Attila Győr*, *Veronika Gyuricza*, *Pál Lövei*, *Endre Prakfalvi*, *Gábor Winkler*, *Zsolt Visy* for their cooperation and assistance in preparing this report.

## Significant publications

ANGYAL, Tibor : *A Szabadság híd felújításának esztétikája és műemléki hitelessége* [The aesthetics and monument authenticity of the renovated Liberty Bridge]. *Műemlékvédelem*, 2011, 5, 326–342

BÓDY, Zsombor : *Der Ikarus-Bus als ungarische und sozialistische Ikone: Die symbolische Aufladung alltäglicher Objekte mit politischen Bedeutung*. *Österreichische Zeitschrift für Geschichtswissenschaften*, 2010, 21, 2, 152–172

GERMUSKA, Pál : *Vörös arzenál : Magyarország részvétele a nemzetközi hadiipari együttműködésében a KGST keretei között* [Red arsenal : Hungary participating in the international armaments industry co-operation within the framework of COMECON]. Budapest : 1956-os Intézet : Argumentum, 2010

KÁDÁR, József : *Óbudai téglagyárak* [The Óbuda brickworks]. Budapest : Új Mandátum Kiadó, 2010

LEVÁRDY, László : Budapest Déli pályaudvar – Déli Vasút "Buda" indóháza [Budapest Déli railway station – The "Buda" terminal of the Déli railways]. *Műemlékvédelem*, 2014, 4, 268–281

NAGY, Péter : „Ahol a vállalatvezetés volt az úr...” A Rimamurány–Salgótarjáni Vasmű Rt. szociális és jóléti intézményrendszere Ózdon [“Where the management was ruling...” The social welfare institution system of the Rimamurány–Salgótarján Ironworks Ltd in Ózd]. *Korall*, 2012, 13, 49, 17–36

NÉMETH, Györgyi : Le Millénáris à Budapest, la reconversion de l'ancienne usine de construction électrique Ganz. In *Situ*, 2015, 26, URL: <http://insitu.revues.org/11803>

R. NAGY, József : *Boldog téglafalak között: munkáskolóniák kulturális antropológiai vizsgálata Északkelet-Magyarországon* [Between happy brickwalls: a cultural anthropology study of workers' colonies in North-Eastern Hungary]. Miskolc : Miskolci Galéria, 2010

SCHWERTNER, Johann et als : *Arbeiterviertel und Arbeiterstädte zwischen 1750 und 1950: theory*. Maria Saal : Arbeitsgemeinschaft Alpen-Adria, 2011 [Hungarian regions are active members in the Alps-Adriatic Alliance]

SOMLYÓDY, Nóra : *A Balkán kapuja?: Pécs Európa kulturális fővárosa* [Gate to the Balkans? Pécs, the Cultural Capital of Europe]. Pozsony : Kalligram; Budapest : Pesti Kalligram, 2010

### 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 Piurarch). 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:

- Trisciungoglio 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 PETTENNA, *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

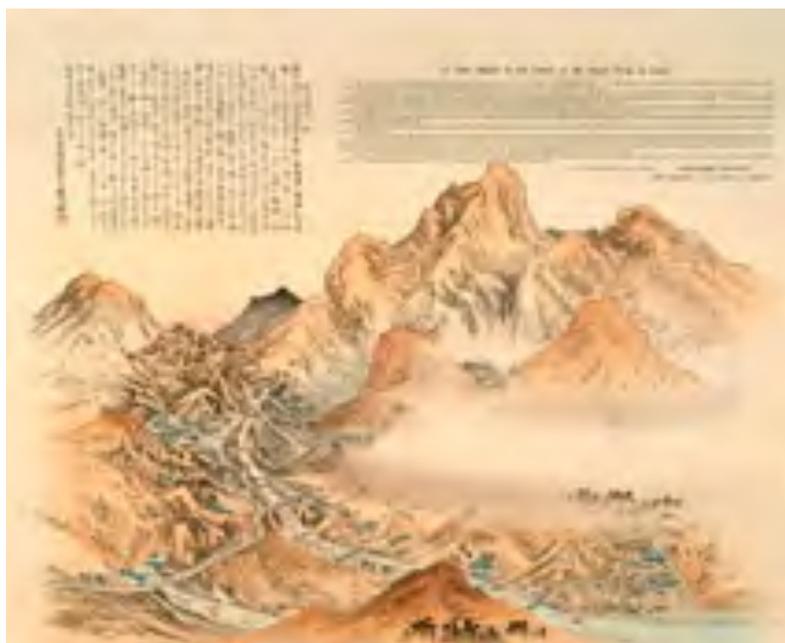
### Regional revitalization policy of the Abe cabinet (Dec. 2012 ~);

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**

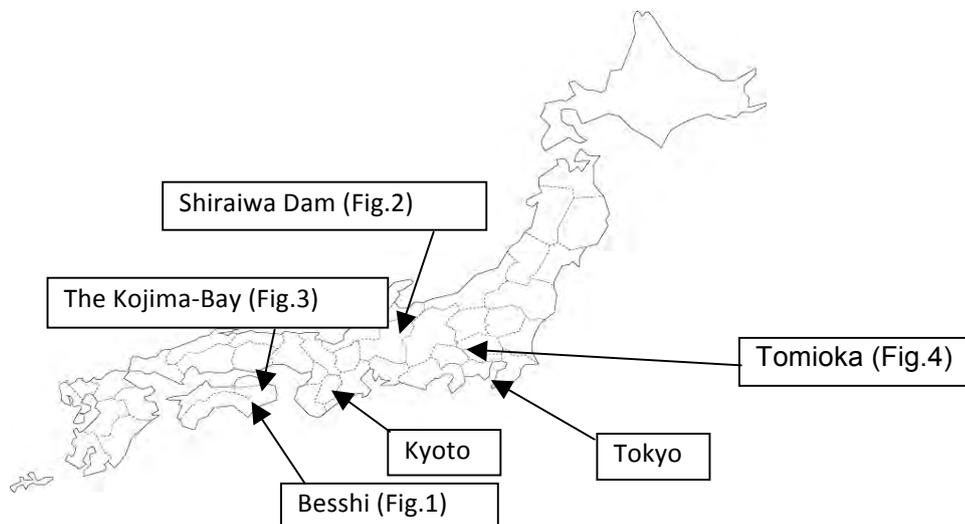
JIAS published two books and one booklet, and CSIH (Chubu Society for the Industrial Heritage, member of TICCIH as an organ) issued the publication of the 20<sup>th</sup> anniversary.

- (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-isan 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-isan Kenkyu no Ayumi (The Chubu Society for the Industrial Heritage, the 20<sup>th</sup> Anniversary Memorial Edition)", CSIH editorial Committee ed. CSIH 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, TICCIH 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, TICCIH 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 TICCIH 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 TICCIH 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*, TICCIH 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

OVIEDO Gámez, B.- *Catálogo de la Sección: Compañía Metalúrgica de Atotonilco El Chico 1842-1987. Fondo Compañías Filiales y/o Subsidiarias del Archivo Histórico de la Compañía Real del Monte y Pachuca*. Torreón, Coahuila, AHMM, A.C., 2012, 414 p. Tiraje: 500 ejemplares en papel y 300 en disco compacto.

OVIEDO Gámez, B. "Industrial archives and company records" en James Douet (Ed.). - *Industrial Heritage Re-Tooled: the TICCIH Guide to Industrial Heritage Conservation*. Lancaster: Carnegie, TICCIH, JM Kaplan Fund. 2012, pp. 70-77 ISBN 978-1.85936-218-1

OVIEDO Gámez, Belem.- *“The heritage of Mexican Mining. The case of the State of Hidalgo”*, en BERGERON, Louis y MALAULLARI Ma. Teresa (Ed.) *Patrimoine de l'industrie, ressources, pratiques, cultures/ Industrial Patrimony, resources, practices, cultures*. Paris, Francia, TICCIH e ICOMOS No. 29, 2013 pp. 60-63 ISSN: 1296-7750

RIOJAS PAZ, Sofía.- *Conservación del Patrimonio Cultural Ferrocarrilero: Proyecto de Restauración de la Estación de Ferrocarril de Cuernavaca y su contexto inmediato*. Tesis de maestría. México, 2013. pp. 258

ROMERO Rodríguez, J.- *Necaxa, patrimonio industrial de México y del mundo en Labor & Engenho*, Campinas [Brasil], v.6, n.4, p.11-20, 2012.

VILLAR Rubio, Jesús y DE ANDA Alanis, Enrique X. (Editores).- *La ciudad industrial del Siglo XX en Latinoamérica*, urbanismo y conjunto de vivienda para obreros asociados a los proyectos industriales, durante el período 1920-1960. 70. Encuentro Internacional del Comité Científico de Arquitectura del Siglo XX. San Luis Potosí, México, ICOMOS Mexicano, A.C., Facultad del Hábitat, Universidad Autónoma de San Luis Potosí. 2014, 295p. ISBN: 978-607-9343-35-4

# 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.

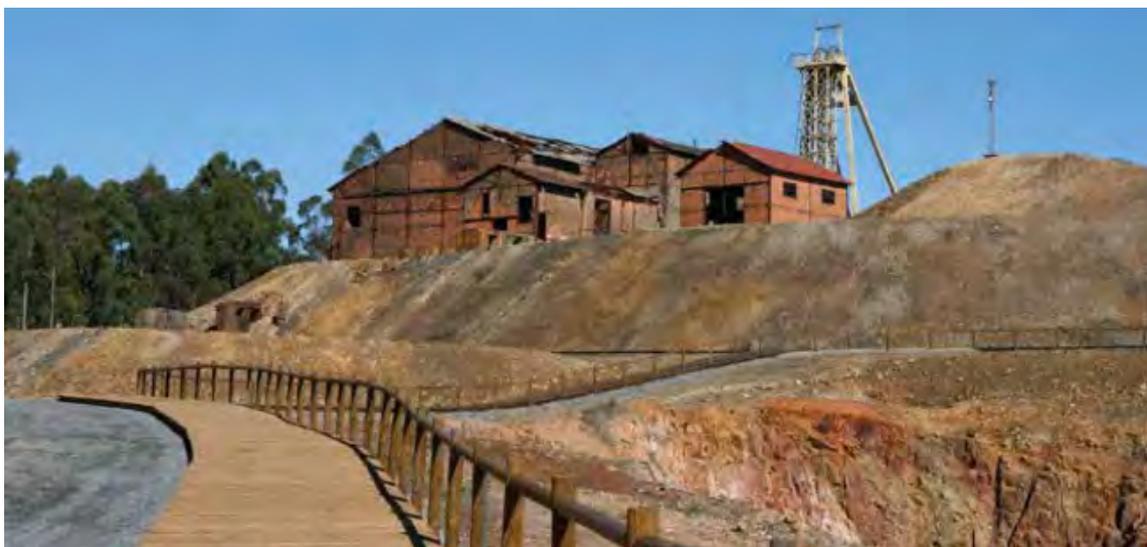
The Canal Museum Project (“Projecto do Museu da Levada”), led by Graça Filipe – to whom we owe the success of the Seixal Ecomuseum – started in 2011 and aims for the musealization of this set of industrial installations, the metalwork, the foundry, the turbine-driven electricity station, the two flour 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 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 Jiu 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 Jiu 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.

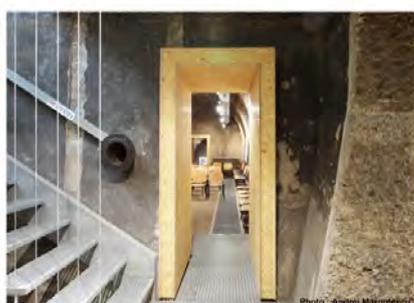
OAR lead and UAR also supported one of the most interesting conversion projects in Romania – the disused Suceava Water Plant (Uzina de Apa Suceava) was transformed into a *Center for Architecture, Urban Culture and Landscape* that is growing to be a regional if not national opinion leader in the field 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



**Water Plant,  
Center for Architecture, Urban Culture and Landscape  
Suceava, Romania**

Office/ Architect: AGD/ Constantin Gorcea

Coordinator: The Architects Order of Romania North-Eastern regional Branch  
Partner: The Architects Union of Romania  
Associated partner: Municipality Suceava County



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 Paškovič, 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 & Bećej 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.

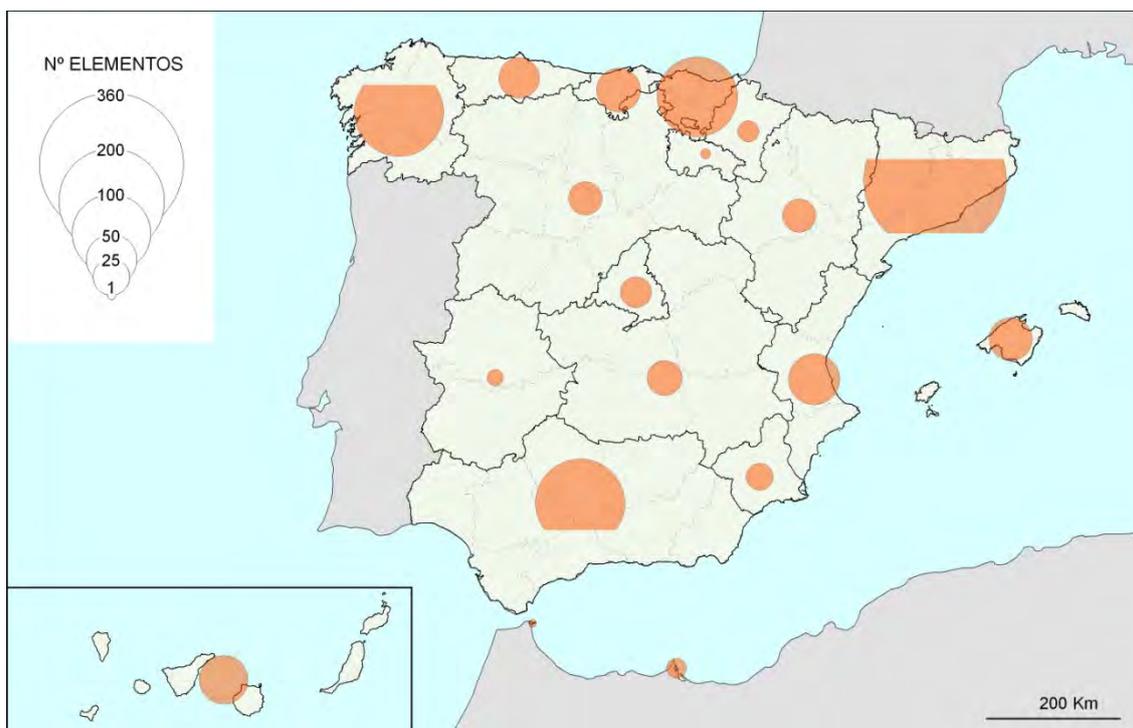


Map 1. Spanish Cultural Heritage protection levels by Autonomous Community. Source: Study on the Status of Industrial Heritage in Spain 31 Dic, 2012, part by INCUNA / CD edition IPCE 2013

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 TICCIH'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 TICCIH 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 TICCIH is planning on including these routes with the ERIH criteria to European programmes of industrial tourism.

### **TICCIH España**

TICCIH 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. TICCIH 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.

### **Publications**

Biel Ibáñez P. y Cueto Alonso G. (coord.), *100 elementos del patrimonio industrial en España*, catalog with collaborations and records from VV.AA, TICCIH edition with the collaboration of IPCE, Editorial Cicees, Gijón 2013- ISBN 978-84-937738-6-1

VV.AA., 2010, *Patrimonio Industrial y Paisaje*. Minutes from the V Congress on Industrial Heritage and Public Works Preservation in Spain, Ferrol 2009. Cicees in collaboration with TICCIH, Gijón (Asturias) ISBN 978-84936996-9-7

VV.AA. Arquitectura Industrial, revista *Ábaco* nº 70, volumen 4 / 2011, Edit. Cicees, Gijón 2011- ISSN 0213-6252

Álvarez Areces. M.A (coord.) *Los ojos de la memoria*, 16 volúmenes, INCUNA, digital and paper editions. Cicees, Gijón 2000-2015 incuna y cicees, E-Book, at: <http://www.revista-abaco.es/7-los-ojos-de-la-memoria->

VV.AA. *La vivienda obrera en la ciudad industrial del siglo XX*, TICCIH España/ Cicees edition, Gijón 2015, ISBN -ISBN 978-84-943556-2-2

# Sweden

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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 price 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.

## Publications

Amreus, L. "Industriminnen och industrisamhälle – monument och mainstreaming." *Bebyggelsehistorisk tidskrift* 65 (2013): 10-16.

Avango, D. "Arktiska framtider och resurser: det industriella kulturarvet som källa." *Bebyggelsehistorisk tidskrift* 65 (2013): 52-71.

Avango, D. "Heritage in Action: Historical Remains in Polar Conflicts." In *Science, Geopolitics, and Culture in the Polar Regions. Norden Beyond Borders*, edited by S Sörlin, 329-56. Farnham: Ashgate, 2013.

Avango, D, & L. Grönlund-Myrberg. "Falun Copper Mine – Industrial Heritage in Mining Futures." In *Industrial and Mining Landscapes within World Heritage Context*, edited by H Albrecht and F Hansell, 142-53. Freiberg: IWTG/TU Bergakademie Freiberg, 2014.

Avango, D, and L. Hacquebord. "Polar industrial Heritage Sites as Resources for Historical Research." In *Industrial and Cultural Heritage: South Georgia in Context*, edited by D Munroe, 17-32. Dundee: South Georgia Heritage Trust, 2012.

Avango, D, L. Hacquebord, and U Wråkberg. "Industrial Extraction of Arctic Natural Resources since the Sixteenth Century: Technoscience and Geo-Economics in the History of Northern Whaling and Mining." *Journal of Historical Geography* <http://dx.doi.org/10.1016/j.jhg.2014.01.001> (2014).

Bergesen, P. *Blåse kalkbruksmuseum : om stenindustrin på norra Gotland*. Klintehamn: Gotlandica, 2013.

Byggnadskultur. *Arvet efter Industrin*. Svenska Byggnadsvårdsföreningen, 2015:1.

Dahlström Rittsél, E, & A Ulfstrand. "Förvandlingen av fyra fabriksområden i Nacka." *Bebyggelsehistorisk tidskrift* 63 (2013): 8-25.

Dicksson, I. "Ta hand om det tekniska kulturarvet." *Bebyggelsehistorisk tidskrift* 65 (2013): 93-96.

Dicksson, I & Knutson Udd, L. *Asfalt – hundra år av vägshistoria*. Trafikverkets museer, 2015.

Du Rietz, P & Lindgren, A (eds), *Industridokumentation. Hur och varför?*. Stockholm, Jernkontoret, 2014.

Ekheimer, P. *Klorkartellen – En industrihistorisk balansakt*. Göteborg, Chalmers, 2013.

Fjaestad, M. "Ett kärnkraftverk återuppstår — från Snr300 till Wunderland Kalkar." *Bebyggelsehistorisk tidskrift* 63 (2012): 26-38.

Fröberg, J, *Från järnbruk till idébruk. Olofsfors AB 250 år*. Nordmaling, Olofsfors AB, 2012.

Geijerstam, Jan af (ed.) (2013). Industrisamhällets kulturarv i praktik och forskning: nuläge och framtid. Arbetets museum 11-12 oktober 2012. Stockholm: Svenska industriminnesföreningen.

Geijerstam, Jan af (2014). "Det globala industriarvet och miljöns globalitet". In Becker, K, Fogde, M & Övling, J (2014). *Det globaliserade arbetslivet*. Möklinta: Gidlund & Arbetets museum. p. 57-64

Geijerstam, Jan af, & A. Houltz. "Industriarvet i regional antikvarisk praktik. Reflexion kring en enkät till Sveriges länsstyrelser." *Bebyggelsehistorisk tidskrift* 65 (2013).

Houltz, A. "Den stora skalan: Volvo Torslandaverken och massproduktion som mål och mening i 1960-talets Sverige." *Bebyggelsehistorisk tidskrift* 68 (2014): 61-84.

Isacson, M. "Industriarvets utmaningar. Samhällsförändringar och kulturmiljövård från 1960-tal till 2010-tal." *Bebyggelsehistorisk tidskrift* 65 (2013): 17-36.

Jerkeman, P (red), *Papper och massa i Skåne, Halland, Blekinge och Gotland. Från handpappersbruk till processindustri*. Stockholm, Skogsindustrierna, 2012.

Julihn, E, Spade, B & Lagerqvist, B. *Fengersfors Bruk i utveckling. Teknik och industrihistoria. Produktion och kreativitet. Kunskap och utveckling*. Rapport 2013, på uppdrag av Föreningen för Fengersfors Bruks bevarande, med stöd från Västra Götalandsregionen och Länsstyrelsen Västra Götaland.

Klintborg Ahlklo, Å & J. Hällström. "Landskapet som industriminne." *Bebyggelsehistorisk tidskrift* 67 (2014): 8-23.

Kollberg, K & Ullhagen, B. *Alunda gjuteri. Handen, ögat & järnet*. Stockholm, Balkong, 2014.

Kunkell, P. *Västerås ångkraftverk - i vems intresse?: En studie av intresset och händelseförloppet vid ett storskaligt industriarv*. Högskolan Dalarna, Falun, 2013.

Li, X. & Chenfei M. *The adaptive reuse of the Lyckholms brewery: a proposal for a historic industrial building site*. Göteborg: Chalmers, 2013.

Landberg, H (red), *Pythagoras. Norrtälje, Sweden*. Norrtälje, Pythagoras Industrimuseum, 2013.

Mellander, B. "Har luften gått ur? Regionaliseringens konsekvenser för industrisamhällets kulturarv." *Bebyggelsehistorisk tidskrift* 65 (2013): 89-92.

Nilsson, U. "Ta tillvara genom att omvandla. Industriarvets kommersiella potential." *Bebyggelsehistorisk tidskrift* 65 (2013): 97-107.

Nyström, L, *En industrialisering efter industrialiseringen. Industrialiseringsprocesser på landsbygden i västra Sverige under efterkrigstiden*. Möklinta, Gidlunds, 2012.

Pettersson Jensen, I-M. *Norberg och järnet. Bergsmännen och den medeltida industrialiseringen*. Stockholm, Jernkontoret, 2012.

Robin, L, D. Avango, L. Keogh, N. Möllers, B. Scherer & H. Trischler. "Three Galleries of the Anthropocene." *The Anthropocene Review* 1, no. 3 (2014): 207-24.

Sillén, G. *Kvarnhjul och fabriksskorstenar. Nackas industriarv*. Nacka, Nacka kulturnämnd, 2012.

Skogsindustriernas historiska utskott. Series of reports on Swedish paper and pulp mills, 12 volumes. 2012.

Spade, B. m fl, *Åminne bruk. Människor och maskiner*. Värnamo, Föreningen Åminne Bruksmuseum, 2013.

Storm, A & K. Olsson. "The Pit: Landscape Scars as Potential Cultural Tools." *International Journal of Heritage Studies* (2012): 1-17.

Storm, A. *Post-industrial landscape scars*. New York: Palgrave MacMillan, 2014.

Tafvelin Heldner, M, E. Dahlström Rittsél & P. Lundgren. "Värdet av kärnkraftverk som kulturarv." *Bebyggelsehistorisk tidskrift* 65 (2013): 72-88.

Tafvelin Heldner, M. (red), "Ösjöfors handpappersbruk", *Daedalus* 2014. Stockholm, Tekniska museet, 2014.

# Taiwan

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## Hsiao-Wei Lin

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### 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

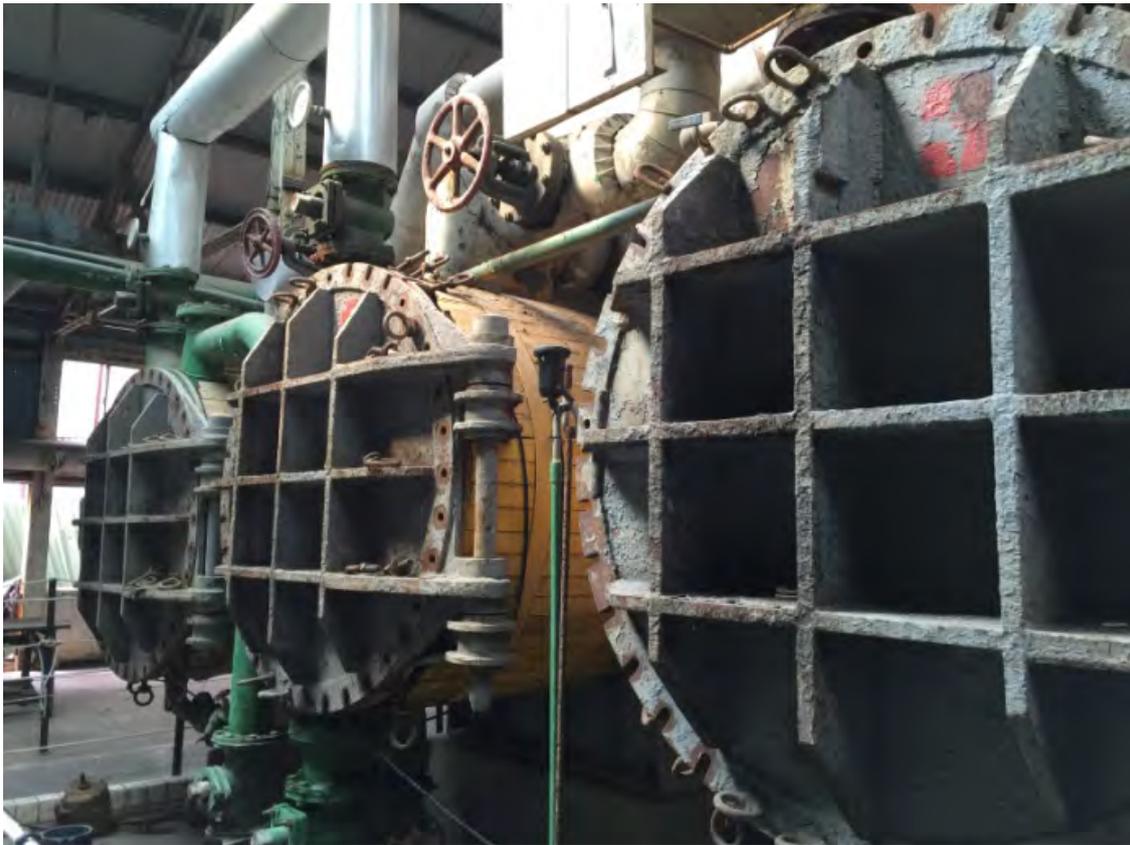
#### **2014 Congress of Pacific Heritage and Tourist Rail Organisation**

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.

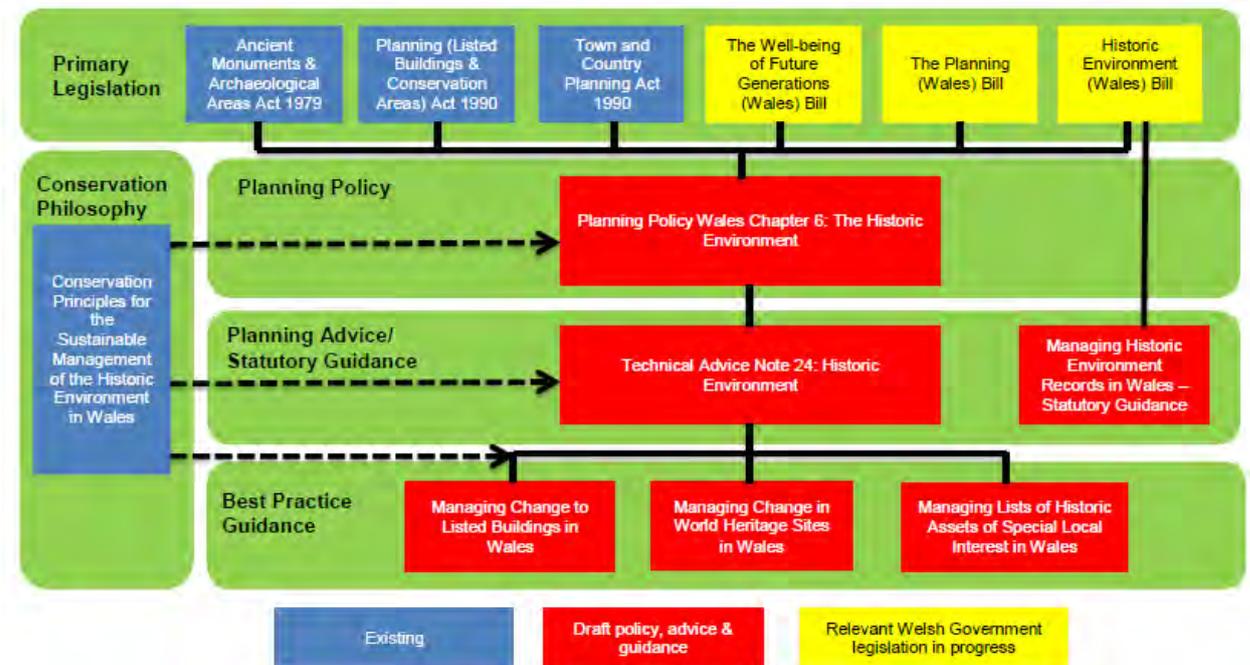
## **Strategic Activities in Industrial Heritage**

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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 TICCIH 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.

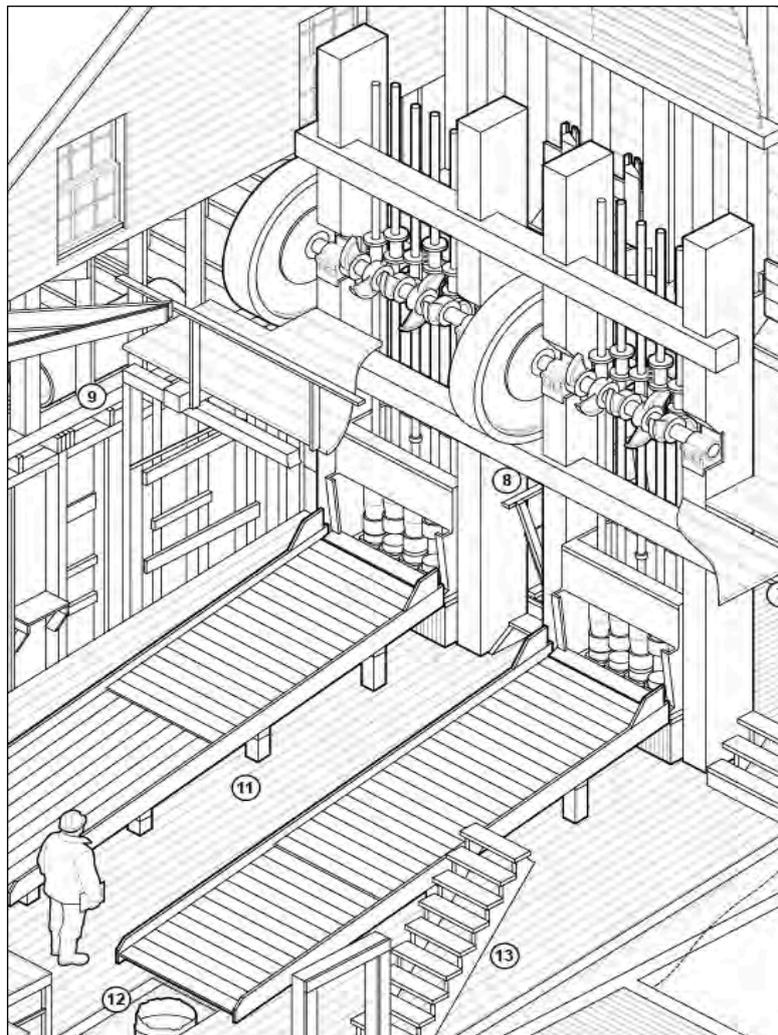
The Faculty and Students of Michigan Technological University's (MTU) Industrial Heritage and Archaeology report important milestones and projects this period. TICCIH President Patrick Martin retired from his position as Professor and Chair of the Department of Social Sciences at the conclusion of the 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.

*Acknowledgments: Dr. Tim Scarlett, Director, Graduate Program in Industrial Archaeology, Michigan Technological University; Dr. Paul Shackel, Professor and Department Chair, Department of Anthropology, University of Maryland; Dr. Scott See, Executive Director Keweenaw National Historical Park Advisory Commission; Dr. Paul White, Department of Anthropology University of Alaska Anchorage; and Dr. Fred Quivik, editor IA contributed to this report.*