In the world of the built heritage, the last few decades have seen a steady process of defining the concepts and criteria that guide interventions in those sites that we consider to be of cultural significance, and ICOMOS has ordered and codified them in an increasingly complete range of charters such as the Burra Charter on Cultural Significance or the Nara Document on Authenticity.

The same desire to define the criteria for works to historic sites has extended to our field, of the industrial heritage, and people and organisations linked with TICCIH continue to work on this. The current issue of the journal of the French industrial archaeology association CILAC, Arqueología Industrielle en France, is given over to this theme. The international project ‘Working Heritage’ two years ago aimed to develop cases of best practice in the re-use of industrial sites, and we are holding a seminar this week in Terrassa, with Sir Neil Cossons giving the keynote address, called ‘Old factories, new uses: how industrial buildings can contribute to the local economy’.

A particular reflection on the buildings of industry is needed because there is a different range of problems associated with the industrial heritage as compared with other types of historic property. These may base their value on aesthetic or historical qualities, and the most important thing that has to be cared for is their authenticity. For the industrial heritage, authenticity is also of great importance, but our criteria for interventions have to be more flexible and not be too dogmatic, allowing for the context of the particular site. The subject needs a careful reflection which I would like TICCIH to carry forward.

The conversion or re-use of industrial buildings presents conceptual problems to the practice of restoration, based as it increasingly is today on criteria of authenticity. Obviously, when a former factory is converted into a school, offices or for private housing, it is almost impossible to maintain the authenticity of the original, even if the new work is clearly distinguishable and reversible, because some or all of the old has been transformed.

The authenticity of an industrial structure may even be hard to establish. The dynamic of production and the changes wrought by technological development mean that industrial buildings have constantly evolved, been remodelled, enlarged or their spaces converted to different ends. It may be just as valid to conserve what has arrived to us as it is to try and recover something of the original that has since been lost.

So that future generations can appreciate that a particular town or region was shaped by industrialisation, different parts of its heritage have to be conserved, so that something of the complexity of the process can be appreciated. Only a few elements of these will end up as museums. The others must be re-used or, as CILAC say in their magazine, ‘reconverted’. This work is often done by organisations with little or no interest in cultural heritage. The industrial heritage can rarely be conserved as an object for contemplation. It is evidence or documentation that explains the past to the future. Nor is it the evidence for a particular person, like the house of a famous character that one may visit, even when there may be little left that is original. Industrial heritage is evidence for new forms of production which had great social and cultural impact, changing the world and resetting the foundations on which our modern society is built. This heritage has to be understood, which means it must be comprehensible. For this we must also guard the details, the small ancillary buildings and those minor elements which transmit to people who visit or use conserved sites the sensation that this was once a centre for production.

There are examples of re-used sites around the world which we look at and wonder if anyone in the future will realise that this was an industrial building. Through its meetings and conferences, and especially our Charter that Eugene Logunov and I signed in Nizhny Tagil in 2003, and whose revision Professor Marie Nisser is currently guiding, TICCIH has a clear role: encourage the understanding of the industrial heritage so that its significance can be appreciated by everyone, and not dissipated or destroyed through misunderstanding or ignorance.
TICCIH Board elections

After the election held at the General Assembly in Terrassa in September to renew the TICCIH Board resulted in a tied vote between two candidates, there has been a period of consultation to resolve the issue. As a result the new TICCIH Board consists of President: Eusebi Casanelles Secretary: Stuart B Smith Treasurer: Olga Traganou Deligianni Trustees: Prof. Helmutth Albrecht Dr. Dag Arango Prof. Gracia Dorel-Ferré Prof. Giovanni Luigi Fontona Dr. José Manuel Lopes Cordeiro Irina Lamanescu Dr. Maria Teresa Maiaurili Pontois Prof. Patrick Martin Dr. Jaime Migone Prof. Györgyi Nemeth Dr. Miles Ogletorpe Belem Ovido Garnez Dr. David Worth

Agreement between TICCIH Greece and TICCH The Greek Committee of TICCIH has become the latest national association to sign a formal agreement with TICCIH, Níkos Beltsis, the President of TICCIH Greece and Eusebi Casanelles signed the document on 22 February, 2007. TICCIH Greece was formed in 1992 as a charitable organisation governed by the Greek Law of citizens associations with a programme to study and promote the conservation of the industrial heritage of Greece (see Olga Delignianni’s article in the last TICCIH Bulletin 25), and publishes Deltio gia ti viomichaniki klironomia, the Bulletin for Industrial Heritage, every quarter.

Renew your 2007 TICCIH Membership!

If you haven’t renewed your membership and paid the 2007 fee to the Secretary, this is the last Bulletin that you will receive. Invoices were sent out to everyone with the last issue of the Bulletin (#35) but copies can be provided if needed. Details of how to make the payment are on the TICCIH website.

TICCIH conference

A full list of all the congresses and conferences organised by or with TICCIH since 1973 is now on the TICCIH website, in the section called Documentation Centre. The list includes links to the relevant publications, some of which can still be obtained from the conference organisers. Copies of (almost) all the national reports and conference proceedings are in the TICCIH documentation centre of the library of the Museu de la Ciència i de la Tècnica de Catalunya in Terrassa, Spain.

Nizhny Tagil Tagli review project

The project to review the TICCIH charter for industrial heritage, signed in and named after the Urals steel town of Nizhny Tagil (see the article on conserving ironworks in this issue), has been boosted by English Heritage’s offer to coordinate the task through their Industrial Heritage Panel subcommittee. Made up of experts from different perspectives, it provides advice in England on the conservation issues relating to industrial sites and monuments. Sir Neil Cossons, honorary TICCIH president and chair of EH agreed with TICCIH’s suggestion that the Panel review the charter and Keith Falconer, Head of Industrial Archaeology is setting up a working party. The proposal is that TICCIH will publish an illustrated version of the revised text, and is looking for partners who would be interested in collaborating in project.

The TICCIH committee in Hungary, coordinated by Prof. Györgyi Nemeth, has been the first group to submit its comments on the Charter, a document which has been used extensively there for teaching and to guide conservation work.

Migrating journals

The American SIA has announced that the first issue of its academic publication IA, Journal of the Society for Industrial Archaeology is now available on the internet. After substantial consideration, the SIA Board approved affiliation with The History Cooperative, a consortium centred at the University of Illinois Press. Volume 30, No. 2 of IA is already online and three more issues are being added to the site. Any visitor to http://www.historycooperative.org/ can access these sample issues of IA free for the next twelve months. After this initial period, only subscribers will have access.

The exact terms of electronic subscription are not settled yet, but access will certainly not involve additional cost to existing print subscribers. In the long run, some subscribers will opt for the electronic format only, and this will provide an impetus for growth among institutional subscribers like libraries. This has been the pattern among other history journals that have moved to an online format. Initially only the current issues will be online, but back issues will gradually be added to this format.

TICCIH News

TICCIH officers

President: Eusebi Casanelles Managing Director of the Centre de la Tecnica de Catalunya Rambla d'Egara 270 E-08221 Terrassa, Spain Secretary: Stuart B. Smith OBE, ‘Chygarth’, 5 Beacon Terrace Camborne, Cornwall TR15 8BU, UK Editor: James Douet, office of the President

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

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


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Using Geographic Information Systems in industrial heritage research; the example of Saint-Quentin in France

Frédéric Pillet
Chargé de l’inventaire du patrimoine industriel de l’agglomération de Saint-Quentin

The former Blériot-Sauvez distillery, St Quentin, 1901.

Using CAD to restore the Model T Design Room
Richard K. Anderson, Jr.
Cultural Resource Documentation Services

The Model T automobile was arguably the single most important road vehicle of the 20th century. Its low price and prodigious numbers (over 15,000,000) increased public demand for automobiles and paved roads, thus unleashing forces which led to the automobile-centered architecture, urban planning and transportation systems of today. From January of 1907 to September 1908 Henry Ford and a handful of employees designed the Model T in a small suite of rooms on the north end of the Ford Motor Company’s Piquette Avenue Plant in Detroit, Michigan. The first 12,000 Model Ts were
assembled here before the plant was sold in 1911, and the contents and partitions for the “Model T Design Room” were removed. In May of 2005 I began a month of research and field work at the Piquette Plant and the Benson Ford Research Center attempting to elucidate the location and shape of the Design Room as well as the locations of principal Ford offices and drafting rooms. The building was constructed in 1904 following typical American “slow-burning” mill construction of the late 19th century. Thanks to a remarkable lack of painting and structural modifications by subsequent owners, the evidence in the building itself was much stronger than what I could distil from most available records. Since the evidence was spatially arranged, the most useful tool for displaying, analyzing and synthesizing it was CAD. I gathered the evidence by traditional hand-sketch field notes, hand measurements, paper rubbings, and digital photography after spending considerable time studying the structure. I looked for scraps of materials left behind after walls were removed, gaps in finishes, nail and bolt holes in outer walls and ceilings, tool mounting holes in the floor, and paint ridges in various places. I also recorded the series of screw holes left behind by original “knob-and-tube” electrical insulators and wiring as well as the conclusive evidence for mechanical line-shafting used to power machine tools. The subtlety and size of most clues precluded the use of advanced digital recording tools such as 3D scanners.

Overhead evidence for walls superimposed over door latch-hole locations in floor. Alphanumeric labels uniquely identify structural elements.

The Piquette Plant exhibited remarkably little deterioration or settlement, consequently I was able to compare ceiling evidence for the Design Room to that in the floor with plumb bobs and strings. I plotted groups of clues in a 2D file in Bentley Systems’ MicroStation CAD software, where I superimposed evidence in the ceiling and floor in a single plan view. I used digital photographs and scans of rubbings in specific places as reference files to transfer dimensions of complex features too time-consuming to hand-measure. There was no need to address data in the sides of walls and columns in CAD (using a 3D model for example), as these were relatively few and they were easily photographed and accounted for in the verbal descriptions of my report. The layering features in CAD permitted me to minutely segregate various kinds of details. Features such as nail holes, tool holes, paint ridges, latch holes, gaps, traces of finishes, and line-shaft and counter-shaft locations were represented in different colors to further distinguish among them visually.

The CAD program permitted me to display selected layers and plot them in color for report illustrations, all from a single file. CAD’s accuracy versus traditional hand drafted drawings helped to cinch arguments for the locations of walls and other features, based on known structural details of the period. I attempted to make hand measurements to +/- 1/8 inch (3 mm) tolerances, making allowances for the irregularities introduced by brick walls and other features. CAD software was well able to accommodate this level of precision. All field measurements and CAD work was done within the English system of measurement (feet and inches), since this was the system in which the building and its components were designed and constructed. The complete industrial archeology report explains the details in the various illustrations displayed here.

The Piquette Avenue Plant is now owned by the Model T Automobile Heritage Complex, Inc. (T-PLEX) which displays and interprets this National Historic Landmark for its significant contributions to automotive history in the United States. The T-PLEX plans to use the industrial archeology report I produced to guide its restoration of the Model T Design Room and other spaces.

The complete 145-page report with 111 illustrations is for sale by the Model T Automotive Heritage Complex, Inc. For a copy of Invented Here: An Industrial Archeological Investigation of the Model T Experimental Room and Associated Spaces at Henry Ford’s Piquette Avenue Plant, send a check made out to T-PLEX for US$55.00 (which includes shipping costs within the USA) to T-PLEX, 140 Edison Avenue, Detroit, MI 48202-1559. Contact Jerald Mitchell at jmitchel@med.wayne.edu.

Probable original layout of Model T drafting room and shop, based on surviving evidence for walls and tools.
This project was undertaken to examine the potential for recording the industrial heritage in Italy using methodologies derived from the most recent English experiences in the research of industrial sites and historical landscape. It is an attempt to review a survey method that has proved quite useful for us in improving our understanding of monuments and transformations in landscape. The methodology connects the analysis and interpretation of vertical and oblique aerial photographs with the management of information through GIS. We would like to complete a study of the industrial area of Colline Metallifere between the end of 19th century and the years immediately after the end of the extractive industry period, as an example of evolution and articulation of the landscape.

The analysis was carried out in the recently completed Parco Tecnologico Archeologico Colline Metallifere Grossetane, focused on the mining and production areas of Gavorrano, Niccoletta, Boccheggiano. Our five aims were to define the spatial historical evolution of mining activity during the 20th century, study the transformations of the landscape and the models of organization and evolution of new villages established for pyrite extraction in the areas of the Monte Catini Society, examine the potential of vertical and oblique aerial photographs for recording recent monuments where there is a high percentage of woodlands, define the phases of constructing a GIS platform, and to look at the possibilities of combining different systems of analysis in landscape characterization and industrial heritage studies.

The project examined mineral extraction areas, production and residential areas and their structures; to which three levels of analysis were applied: historical cartography analysis, high-level and oblique aerial photography and field survey. For the analysis of the territory and the objects of interest that it contains, the proposed methodology was based on multi-level visualization by using the GIS platform to read diachronically the signs that had been left on the stratified landscape. GIS was first used to acquire and store data and a metric evaluation analysis was carried out on the traces of evidence. The construction of the GIS platform was a well-planned strategy as it determined the organization of the acquired data, the georeferencing of the images, the definition, the characterization and the visualization of the area and its anomalies as well as the operations of overlapping and analysis that came afterwards. In this sense, the completed GIS, with its database, cartographical elements and aerial photographs, is in itself a valuable result and at the same time constitutes the basis of further analysis.

The analysis of industrial landscapes has found that the photo interpretation is an excellent method for researching. In the preliminary phase, it allows us, to observe the entire massetana area, and subsequently it helps to define the typology and geometry of the single events analyzed. The photo interpretation process, done in the introductory phases of comparison and superimposition of available images, has allowed us to locate areas and structures and keeping an extremely low margin of error. Observing the territory from above has made possible to appreciate the periods which elapse between the various elements of the landscape and to delineate the spatial relationships between the various phenomena. The unusual point of view and size of territory allowed us to estimate the consistency and characteristics of the areas under investigation which were otherwise invisible on the ground.

The photographic interpretation permitted anomalies to be identified that could not been seen on the ground, related to the cableways system used by the Montecatini Company for the transport of pyrite to the railway station of Scarlino, where it was sent to the port of Portigioni. In the available photographs (1954) the presence of this structure is clearly visible, while in the period afterwards they are covered up as attested to by the anomalies which were found. Even if there was very little information about the sites initially, the aerial photographic methodology allowed us to locate structures and evaluate their current condition. The images enabled us to reconstruct the industrial landscape and helped to establish a chronology and to determine the ways that the surface areas were developed in the last century, and the mineral extraction plants were later dismantled. If developed further, this kind of analysis could be used as an excellent strategy for highlighting the main risks to industrial archaeological heritage sites, and then to establish norms for protecting them. The principle causes for the loss of and the degradation of heritage sites can be attributed to the abandonment of productive areas and in the reclamation programmes to which mineral and industrial areas are subjected under new government rules on environmental protection. These instruments could be used to protect heritage areas and compile lists of sites that are under imminent threat, to estimate how long a site might survive and to set future priorities for recording.

The preservation of modern large-scale 20th-century iron-making plants in Europe has developed in an amazing way. There are protected modern blast furnace works in Portugal, Spain, Italy, France, Luxembourg and the Czech Republic as well as the well-known examples in Russia, Poland and Germany. Blast furnaces as monuments of industry seem to have become a fashion, although measures for long-term protection and conservation are still in their experimental stages.

On the other hand, the protection of technical processes like steel-making, either in Bessemer-, Thomas-, Siemens-Martin, Oxygen- or electric furnaces, has not developed on the same scale. Nor have the first continuous casting machines, large-format rolling mills and the remains of other related manufacturing processes been preserved as monuments of this fast changing and rapidly vanishing industry. The smaller examples of these plants are just in the last stages of their production and economic life cycle, so the protection of at least one specific example of each type becomes an urgent matter. The scale of these works and the problems of their protection and conservation however demand a coordinated European approach.

Monuments of industrial pig-iron production
The first preservation success in the iron producing industries was the well-known Sloss furnaces in Birmingham, Alabama in the USA and at Nizhny Tagil in the Urals. The two blast furnaces with related installations in Sloss are owned by the town of Birmingham and open to the public since 1983. The similar plant in Nizhny Tagil is part of the museum of the local steel complex. Lesser-known examples of early conservation are the Higashida furnace no. 1 in Yawata in Japan, dating from 1904 and restored in 1973 to become incorporated in a ‘Memorial Park’, and the small Starachowice furnace in Poland, now in the care of the regional conservation office. A recent surprising discovery is the Parque Fundidora in Monterrey in Mexico, which uses the site of the former pig-iron and casting plant. The blast furnace no. 3 is part of this recreational park and open-air museum.

In recent years, many countries in Europe have preserved blast furnace plants as protected monuments, or plan to do so. In eastern France, one blast furnace with coopers, blowing engine and coke batteries of the Uckange plant is under protection. The two very large blast furnaces of the Belval plant in Southern Luxemburg belong now to a state-owned fund, that is to restore them as monuments of the industrial history of Luxemburg. In Sagunto in Spain a single isolated blast furnace has been renovated for a total of 1.1 million €, the last reminder of the once important Altos Hornos Mediterraneo (Mediterranean Blast Furnaces). The only blast furnace in Portugal at Seixal, near Lisbon, was blown out in 2001. Plans for its protection as part of the ECO-Museum Seixal are in discussion. Parts of the former ILVA works in Bagnoli, at the bay of Naples, will be included in a town rehabilitation scheme, and the ore and coal staithes are already used as a public promenade. There is an outstanding example in the Czech Republic at the Vitkovice integrated Iron Works in Ostrava/Moravia. The Hlubina coal mine, the coke plant and three blast furnaces are protected monuments and in course of renovation, which should be finished in about six years. Other parts of the large area will be used for new industrial development.

There are now fifteen large, modern industrial blast furnaces conserved in Germany, a nearly inflationary number. They have different sizes, but follow the standard pattern of the steel-clad furnace with refractory bricks and independent scaffolding for maintenance and charging stages. There is a certain pattern in the experience of the last twenty years of saving, conservation and re-use of blast furnace plants as monuments. After the end of production there is mostly a period time of inactivity, with neglect or in the worst case cannibalisation and vandalisation of the plants. In the second stage, after political discussions and final acceptance, raising funds and development of long-term plans, serious conservation and restoration work starts. Some examples like Yawata, Sagunto and Hattingen were professionally rebuilt in a short time as monuments and museums, pieces, mostly in an ‘as new’ look. Other examples like Sloss, Nizhny Tagil, Völklingen, Duisburg-Meiderich and Vitkovice followed a different approach. Step-by-step conservation and repair works were executed if and when necessary as produced in oxygen-blowing processes, the other third mostly in electric furnaces using scrap iron and steel. Very few puddling furnaces have survived. The re-erected one in Blits Hill Open Air Museum near Ironbridge can be used. Bessemer and Thomas converters might still survive in production in eastern Europe. The last chance to protect a complete Thomas plant in the west was missed as late as 1995 in Unterwellenborn in Eastern Germany. Some converters survive as isolated objects in museums or as open-air monuments. Siemens-Martin furnaces might still be producing in Eastern Europe, Russia, Ukraine and Rumania (Hunoodora), but their future is of course uncertain. The Brandenburg steel works near Berlin, erected after the Second World War, consisted of an impressive line of twelve large S-M Furnaces. One of these survives in the original building and forms the center of a museum.

The modern oxygen-blowing process, developed and introduced in Linz and Donawitz in Austria since 1952 (the LD-process), replaced most earlier steel production methods. Although relatively new, little remains of the pioneering installations. The hall of the first LD-plant was dismantled in the spring of 2000, only one of the 30 ton converters was transferred to the Vienna Technical Museum. One oxygen-converter is still in place in the Bagnoli plant in Italy.

Monuments of rolling mills
Information about older rolling mills is scarce but complete examples preserved in...
Monuments of raw iron production, especially blast furnaces, are spread all over Europe. Curiously neither England nor Sweden, once the most important iron-producing countries in Europe, possess industrial-size or complete blast furnace monuments. Germany has the largest number and probably now the most experience in the documentation and renovation of blast furnaces plants.

The missing elements in a complete documentation of the iron and steel industry are steel production, with its various methods, and the adjoining processes like casting and rolling of slabs, profiles and sheets. A survey of the existing plants of historical interest has yet to be carried out. Even in wealthier countries like Germany, conservation and protection of important examples is not always possible. Maxhütte could be the ideal example of the linear presentation of the whole process, beginning with raw iron production in a blast furnace followed by mixing the iron in a 1,200 ton mixer, reducing it to steel in three modified oxygen-bottom-blowing converters, pouring into a continuous caster and rolling of rails and profiles in a mill, driven by steam engines from 1911, all on a very compact, small site. But problems with the owners, political and economic difficulties may leave the protection of this site uncertain.

Exchanging experiences in the documentation, evaluation and conservation of large industrial monuments is desperately needed. After the opening of the eastern European countries, more information about their once-secretive industries must be collected and published. Any corrections and further information are always welcome!

Rolf Höhmann, Büro für Industriearchäologie, Annenstraße 26A, D-64285 Darmstadt, Germany, bfi-darmstadt@t-online.de

Publications

Scottish iron structures, Guide for practitioners 5. 2007
Technical Conservation, Research and Education Group, Historic Scotland, Tom Swailes, Edinburgh, 2006
ISBN: 1904966 12 8

A new book aims to address problems often associated with iron in buildings. Commissioned by Historic Scotland, written by an engineer for engineers and for others dealing with the conservation of iron structures, it gives advice on structural calculations, repair and strengthening methods. The history and aesthetics of iron in Scotland is discussed as well as such structural engineering matters as stiffness, strength, robustness, fire-resistance, and durability. Attention is paid to the conservation and repair of decorative or ‘architectural’ ironwork, in which Scotland has a world-wide reputation. The intention is to base assurances on the capabilities of the material on solid engineering expertise.

In 1993 a public local inquiry was held into a proposed reconstruction of Carron Bridge in Moray, in the north of Scotland. The outcome was that the proposal to erect a new steel arched bridge and fix to it the outer cast iron ribs of the original bridge of 1863 was dropped. Instead the ironwork of the existing bridge has been refurbished at less cost and now carries full traffic loadings on a narrow road frequented by whisky lorries. The positive experience at Carron Bridge contrasted with the questions placed by engineers and insurers over the use of cast iron in fireproof textile mills, warehouses and similar buildings in Scotland. This led Historic Scotland to commission a “Practitioners’ Guide” on the conservation of iron structures.

The author is Tom Swailes of UMIST (University of Manchester Institute of Science and Technology). Mark Watson and Audrey Dakin of Historic Scotland contributed parts of the text and guided the fieldwork in 1999-2000. The opportunity was taken to investigate the structures of textile mills about to be converted, of dock buildings, sugar refineries, a conservatory and the effects of some fortuitous fires. More recent repair projects, assisted by Historic Scotland and Heritage Lottery Fund, have tackled the iron structures at Perth Water Works and the Kibble Glass houses, Glasgow and a new website promotes the history of Scottish Architectural iron: www.scottishironwork.org

Few modern construction professionals are familiar with cast and wrought iron, though their mid-nineteenth century counterparts would have known the character of these materials very well. In terms of its mechanical properties, wrought iron is strong and ductile, very similar to modern mild steel. It is less uniform than steel but has advantages over it in terms of its workability at the blacksmith’s forge and resistance to corrosion. Cast iron is strong in compression but relatively brittle and weak in tension. It is not forgeable, but it can be cast into intricate shapes, resists rust and is extremely durable.

Iron is to be found in the facades and within the floors of many Scottish public and commercial buildings. Glasgow in particular has several fine iron facades with innovative iron frames and floor systems behind, contemporary with the many iron buildings in New York City. The McConnel patent iron structural system in the most famous of these, Gardner’s Warehouse, 1856, was very nearly lost when it was adapted to a pub due to engineers’ initial uncertainty as to its performance. A second opinion from conservation engineers averted its destruction.

The aim in conservation of a building is to maintain its cultural significance. Conservation actions should not distort the evidence in the fabric. This principle, applied to the conservation of ironwork, favours repair (say through cold metal stitching or resin-bonded reinforcement) rather than its replacement with new castings. Sometimes replacement of iron elements will be unavoidable – for example, of structural ironwork to ensure structural integrity or of decorative ironwork where retention and repair of the existing fabric (with clamps etc) would compromise the overall aesthetic result.

Adherence to the best practice advice given in the book should, we hope, offer confidence in dealing with these and other historic structures. Scottish iron structures is obtainable from: http://www.historic-scotland.gov.uk/index/shop/range_detail.htm?RangeID=41&MainRangeID=1
Pre-conference tour – Ostrô-da-Ebílag Canal. Post-conference tour – textile route Údíj, Zyrárdow. Contact: Dr Julian Kółodziej TICCIH Poland, ticcih@wp.pl

France
1st International Conference on the Agricultural and Food Heritage Reims, 3-5 May, 2007

Already many papers have already been proposed for this meeting, organised by APIC (Association pour le Patrimoine Industriel de Champagne-Ardennne) at the Centre Régional de Documentation Pédagogique (CRDP). It aims to set up a food industry section within TICCIH, analysing the situation at the international level and determining which are the most important sites in existence today. The inscription leaflet will be sent out in January and posted on the TICCIH webpage. Contact gracia.dorel-ferre@wanadoo.fr

III meeting of the TICCIH Textile Section Sedan and Mouzon, 31 May-2 June, 2007

The task set by the organizers is to propose a list of the 100 most important industrial textile sites in the world. It will include the presentation of the final version of TICCIH’s thematic study of textile mills. Contact: Alain Renard, 2 rue Saint Denis, 08210 – Mouzon (France), +33 3 24267448, ticcih07@gmail.com

Mexico
1st International Seminar of TICCIH Mexico: Uses for the mining industry heritage. New alternatives for a great past Pachuca, 16-19 May

Organised by TICCIH México and dealing with plans for saving and re-using the mining heritage. English and Spanish. T + F (771) 7150976 y 7151833, ahmm@prodigy.net.mx, ahmm_math@prodigy.net.mx

France and Switzerland
The International Industrial Heritage of Electricity Divonne-Les-Bains (France) and Geneva (Switzerland), June 7-9, 2007

Seminar in French and English (simultaneous translation) with visits to local heritage sites. One of the aims is to establish a TICCIH Section for electricity and energy. Contact: George Leskens, LeskensG@aol.com or the TICCIH website.

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

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

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

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

Netherlands
12th International Symposium on Molinology Putten, 2 – 10 June 2007

The programme includes invited lectures and presentations contributed by participants, excursions, mill activities, etc. It will be preceded and followed by separate short mill tours. The Netherlands has many types of working mills and a very rich mill heritage dating back to late medieval times. Conference site: www.tmsmills.info/ims2007/index.html

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

Call for papers

Following the very successful BigStuff 2004 in Australia, a sequel BigStuff 2007 will be given in the Ruhr Basin (Ruhrgebiet), a classic, highly-industrialized coal and steel region in Germany. The organizer is the German Mining Museum (Deutsches Bergbau Museum), Bochum in partnership with the Westphalian Museum of Industry (Westfälisches Industriemuseum), Dortmund. Contact: bigstuff07@bergbaumuseum.de, www.bigstuff07.net

Czech Republic
Industrial Heritage as a Force for Sustainable Development Prague, Kládno and Liberec, September 19-20, 2007

The Research Centre for Industrial Heritage in cooperation with the Czech National Committee of ICOMOS, the National Technical Museum and the Technical Monuments Committee of the Czech Chamber of Certified Engineers and the National Heritage Institute. Part of the commemoration of the 300th anniversary of the founding of the Czech Technical University in Prague. Info: Dr Benjamin Fraigner, fraigner@vc.cvut.cz

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

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

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

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

Netherlands
12th International Symposium on Molinology Putten, 2 – 10 June 2007

The programme includes invited lectures and presentations contributed by participants, excursions, mill activities, etc. It will be preceded and followed by separate short mill tours. The Netherlands has many types of working mills and a very rich mill heritage dating back to late medieval times. Conference site: www.tmsmills.info/ims2007/index.html

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

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Following the very successful BigStuff 2004 in Australia, a sequel BigStuff 2007 will be given in the Ruhr Basin (Ruhrgebiet), a classic, highly-industrialized coal and steel region in Germany. The organizer is the German Mining Museum (Deutsches Bergbau Museum), Bochum in partnership with the Westphalian Museum of Industry (Westfälisches Industriemuseum), Dortmund. Contact: bigstuff07@bergbaumuseum.de, www.bigstuff07.net

Czech Republic
Industrial Heritage as a Force for Sustainable Development Prague, Kládno and Liberec, September 19-20, 2007

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