Museums of water are generally found in old waterworks or in industrial buildings that are home to ancient, monumental steam engines. Others occupy those elderly water storage towers built at the end of the 19th century to supply the great metropolises with water. The Museo del Agua in Buenos Aires falls within this last category, though it should be noted that this is a water tower with certain peculiarities. One of these is its palatial appearance, an absolute festival of polychromatic ornament covering its exterior made of 350,000 glazed ceramic tiles, imported from Great Britain. Another uncommon characteristic is hidden beneath the architectonic envelope: a cast-iron structure of 180 columns that supports three floors and twelve reserve tanks, also made of riveted iron, with a capacity for 72,700,000 litres of water. It was conceived as a showpiece, the terracotta exterior made by the English firm of Royal Doulton, while the Belgian foundry Marcinelle et Couillet manufactured the metal interior frame, considered one of the most important industrial structures erected at the end of the 19th century outside of Europe. Built between 1887 and 1894 in the full flush of Argentina’s agricultural export development model and in a city that had embarked on a marked process of Europeanisation, today it is one of the most powerful symbols of the importance which governments of the period gave to health and hygiene. The authors of the project, and of the sanitary plan for the Radio Antiguo Buenos Aires, were the English engineers Bateman, Parsons and Bateman. In the Museo del Agua, the only one of its type in the city, you can learn about the history of the Palace itself, along with historic sanitary artefacts by various manufacturers and sources, national and imported taps and pipe work, and old furniture of the Obras Sanitarias de la Nación. The route through the Museo culminates in the heart of the building, where the iron tanks that supplied the water to the city from 1894 to 1978 can be appreciated, some of them now reused to hold the biggest archive of historical plans in the city. This museum is one of the activities of the Historical Heritage Programme, in which a team of researchers and specialists from CONICET (National Council of Scientific and Technical Research) is incorporated, and which is occupied in everything to do with the preservation of the industrial heritage of public health works, publications, conferences, meetings and other outreach programmes. It also collaborates with the Programme of the Argentine Committee for Industrial Heritage (COAPI), set up in April, 2005, and is working on different activities of the Argentine Committee of TICCIH, also recently established. It would be magnificent if all the water museums in different countries could come together and create a network, based on their shared interests and common problems, that would enable them to exchange, communicate and debate our experiences in the research, conservation and diffusion of this industrial heritage. Let this little text be an invitation to everyone in joining this initial step to set up an International Network for Museums of Water. Please contact the author at the following address: Museo del Patrimonio, Riobamba 750 - 1er. Piso, (C1025AAP) Buenos Aires, Argentina; Museo_Patrimonio@aguasargentinas.com.ar Telefax: +54-11-63191104. Jorge_Tartarini@aguasargentinas.com.ar
Board meeting in Japan. With only a small number of TICCIH Trustees able to attend the Intermediate conference in Japan, and restricted time for discussion, the meeting only managed to get through part of the Agenda prepared by Stuart Smith. The number of conferences that TICCIH is organising or sponsoring extends well into the next few years, with preparation for the thirteenth congress next September in Temi well underway – the First Announcement and Call for Papers has been put out and can be downloaded from the TICCIH web site - while the Latin-American conference in Chile in March next year already has a good number of adherents. A further regional meeting in Argentina is being planned by Dr Jorge Tartarini, author of this issue’s cover article, for 2007. Meanwhile, the Board received a proposal from Portugal to hold the 14th congress there in 2009 which was welcomed, and discussions are now underway. There are currently two vacancies for board members, caused by Eugene Logunov’s sudden death and Eric Nijhof’s decision not to continue. An election will be held as part of the General Assembly next year, but Stuart Smith would be pleased to hear from any National Representatives or Correspondents who would like to stand.

The new members who joined TICCIH over the summer are Andres Sanchez and José Luis Garcia Rubalcava from Mexico, Monica Ferrari, Prof. Magda Fernandez who teaches industrial heritage at the University of Barcelona, Lars Bergström of the Forsviks Industriminnen (www.forsvik.com), and Marlon Steiner, who is concerned with coal mining heritage.

Patrimoine de l’industrie / Industrial Patrimony

TICCIH’s scholarly journal was published last month. It acknowledges ICO-MOS’ partnership, but the work of producing this, the thirteenth edition, is borne largely by the editor and his assistant, Professor Bergeron and Maria Teresa Pontois. It is the only truly international magazine in the industrial heritage world, its global scope made clear not only by the multilingual editorial policy – six articles are presented in English, five in French and one in Spanish – but also their transcontinental range. In a first half titled ‘state of the art’ of industrial heritage in the Americas there are summaries from Mexico, Chile, Argentina and Cuba, an update on the Lachine Canal story from Canada, and Eric Deboy’s account of HAER’s beginnings, with photos of both the Greek Rewal Louisville waterworks and Rocket Row, the Apollo programme launch site at Cape Canaveral.

In the second half, Knowing World Heritage, covers methodology, through the analysis of industrial landscapes, conservation and interpretation. In the final piece the (Museo dell’industria e del Lavoro (Labour and Industry Museum) project is presented, a programme to preserve the memory of the steelworks and mechanical plants which once made Sesto San Giovanni the sixth industrial city in Italy. Individual subscription to the journal costs from 28€, there is a discount for TICCIH members, and all the information can be found on a form on the TICCIH website. Stuart B. Smith

LaArchéologie Industrielle en France

The de luxe production and fine illustrations in the flagship francophone journal reflect the support provided by the Ministry of Culture – where else? - for CILAC’s twice-yearly publication. The lead article, ‘How beauty comes to factories’, discusses the criteria used to assess industrial architecture. Notable in the first section is a paper based on a presentation to ICOHTEC in 2003 on the use of computer-aided mechanical conceptions to render different historical technological systems more understandable for museum visitors. In the second part, three examples of characteristically French historic industrial projects are discussed, the magnificent royal tobacco factory in Morlaix, erected in 1740, the equally grand Second Empire armaments works in Saint-Etienne, and the controversy over the search for a home for the national printing collection, which was founded by Richelieu in 1640. The journal is distributed free to members, who pay 16€ subscription. See www.cilac.com
Ditherington Flax Mill: a fresh life.

Keith Falconer
English Heritage

by the Royal Commission on the Historical Monuments of England, and the Ironbridge Gorge Museum Trust was commissioned by English Heritage to supplement this work with further survey and an historical evaluation. The Ironbridge report by MacLeod, Trinder and Worthington, focused almost exclusively on the textile phase of use of the site and its findings were to provide the basis of Trinder’s 1992 article. The maltings phase was virtually ignored in this first report and this omission was addressed by a separate report by Amber Patric in 1999. This latter report concluded that though the maltings phase was of some historical interest as the plant had probably been designed by Henry Stopes, a noted late-19th century malting engineer, so little of his work survived that the site was not nationally significant as a maltings. Since its closure, numerous schemes have been proposed for re-use of the site, but none have materialised. Meanwhile the buildings, some of which were Listed Grade I, slowly deteriorated and by 1999 such was the concern for their structural integrity that they were placed on English Heritage’s Buildings at Risk Register and chosen to launch the initiative in that year. Subsequent negotiations with a succession of owners and developers have also come to naught and the local authority, with English Heritage’s backing, served an Urgent Works Notice in September 2003. Emergency works were subsequently put into effect and completed in March 2004 at a cost to English Heritage of almost £200,000. In March 2005, following the developers going into receivership, English Heritage purchased the site with funding from Advantage West Midlands (the Regional Development Agency). After ninety years as a textile mill, a second ninety years as a maltings, Ditherington Flax Mill is entering a third life as mixed-use development. The sensitive redevelopment of such a significant and fragile site will be a huge challenge for English Heritage.

Editor’s note: TICCIH members of long standing may remember visiting the Flax Mill and appreciate its historical interest, even if not entirely agreeing with the enthusiastic assessment of Sir Neil Cossons, Chairman of English Heritage and Honorary Chairman of TICCIH: ‘Ditherington Flax Mill is an outstanding building of international importance and one of the most significant monuments of the Industrial Revolution. It is one of those rare structures that changed the world of construction and design. With its revolutionary iron frame it was the predecessor of the modern skyscraper.’

The intervention of the national conservation organisation English Heritage highlights a very modern argument in favour of protecting and conserving historic buildings, and one especially applied to industrial ones that may lack the aesthetic or associative values that justify preservation of other types of architectural heritage. They can be, as one of the local town representatives claimed, ‘the catalyst for further development, in an area that has been neglected and run down for many years.’ The director of E.H.’s partner in the purchase, said: ‘This is an important step towards restoring the Flax Mill to its former glory. We are confident that the redevelopment of the site will have a positive knock-on effect for the surrounding area, which provides an opportunity for future redevelopment and regeneration. Eventually, the Flax Mill should provide the focus for a vibrant gateway into the heart of the town centre.’ For a detailed history of the site see the article in www.search.revolutionaryplayers.org.uk

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Documenting Road-Building in America’s National Parks

Timothy Davis
Park Historic Structures & Cultural Landscape Program
U.S. National Park Service

This article on current monument recording in the US follows the three previous ones introduced by Eric Delony in the last TICCIH Bulletin.

The construction of tour routes in U.S. national parks is an important chapter in the history of American road-building. From the earliest days in Yellowstone and Yosemite, where crews labored with hand tools and horse-drawn equipment, to the “Golden Age” of park development in the 1930s, to recent achievements such as the Blue Ridge Parkway’s widely acclaimed Linn Cove Viaduct, national park road-builders have surmounted enormous logistical, technological, and environmental challenges to produce an internationally renowned transportation network that combines a high-degree of engineering sophistication with exemplary landscape aesthetics. Not only do millions of visitors enjoy the fruits of these labors every time they visit a national park, but this union of technological and aesthetic concerns significantly influenced road-building practices throughout the United States and was subsequently emulated in many parts of the world. Despite their subtle naturalistic aesthetics and seemingly primitive appearance, America’s national park roads and parkways are important aspects of the world’s industrial and technological heritage.

From 1988 to 2002, the U.S. National Park Service’s Historic American Engineering Record (HAER) undertook an ambitious project aimed at documenting and interpreting these extraordinary cultural resources. Formed in 1969 to create a permanent record of America’s industrial and engineering heritage, HAER has long enjoyed an international reputation for the scope and excellence of its documentation programs. Beginning with a pilot project on bridges in the parks of the nation’s capital, HAER rapidly expanded both the geographic range and conceptual breadth of the documentation program. Research teams spread across the country, surveying parks as diverse as Yosemite, Yellowstone, Zion, and Acadia. All the major national parkways were documented, along with a representative sample of commemorative military parks such as Gettysburg, Vicksburg, and Chickamauga/Chattanooga. A number of exemplary non-Park Service roads were documented as well, including the Merritt, Bronx River, and Arroyo Seco Parkways and Oregon’s Historic Columbia River Highway.

The graphic documentation produced by the HAER NPS Park Roads and Bridges Program was as diverse and comprehensive as the list of parks surveyed. While initial efforts focused on bridges and relied on traditional sections, elevations, and axonometric drawings, the survey methodology expanded to depict the broader landscape settings of park roads and interpret the process of park road-building as a complex set of practices involving aesthetic decisions, programmatic concerns, technological considerations, environmental factors, and construction techniques. Additional drawings communicated a broad range of contextual information and traced the ways in which roads and related features evolved over time.

By the time the program drew to a close, HAER had documented dozens of park road systems and hundreds of individual bridges, producing over 4,000 large-format photographs, 476 measured and interpretive drawings, and more than 10,000 pages of written history. This material is archived in the Library of Congress and many of the projects are already accessible via the library’s “Built in America” website.
HAER’s desire to make the results of the park road documentation more publicly accessible led to the production of a free brochure series, a major exhibition at the National Building Museum in Washington, D.C., and a lavishly illustrated large-format publication America’s National Park Roads and Parkways: Drawings from the Historic American Engineering Record, which was edited by program leaders Timothy Davis, Todd Croteau, and Christopher Marston and released by John Hopkins University Press in December 2004. This volume conveys a wealth of technical information and showcases a broad array of innovative techniques for documenting and interpreting industrial heritage and associated cultural landscapes.

Belgium

Flanders’ dynamic industrial and scientific heritage association: SIWE
(Steunpunt voor Industrieel en Wetenschappelijk Erfgoed)

Patrick Viaene
SIWE- President

Since the acknowledgment and financial support of the Ministry of the Flemish Community in 2001, SIWE has become during the last years an important association in the field of the industrial and scientific heritage in Flanders and Brussels. Since about 1975 the first steps were taken (in Flanders and Brussels) in this multi-disciplinary heritage field, and the movement became mature in the 1980s and 1990s. SIWE started in 1996 as a non-profit “platform”-association with 5 key objectives:
- The study, preservation, support and promotion of the industrial and scientific heritage as an important part of the Flemish cultural heritage.
- The logistic and professional support of local and regional industrial and technical heritage associations.
- The publication (since 1997) of its own review “SIWE magazine” and newsletter “SIWE Nieuwsbrief”.
- The organisation of conferences and lectures, educative activities, exhibitions and actions “in the field”, the development of visits and routes concerning industrial and scientific heritage,
- The development of an important collection of objects, machinery and documents relating to any aspect of the evolution of industrialization and technology.

The SIWE secretariat (with two officers), the documentation centre and the SIWE collection are housed in an outstanding 19th Century flourmill (Molens Van Orshoven), located in the harbour of Leuven (Louvain), a building who was recently protected as a listed monument by the Flemish government, and a rare example of industrial architecture in that city.

During the last years, SIWE has taken actions for the study and preservation of many industrial sites in Flanders, for example the coke factory in Zeebrugge, the railway workhouses of Kessel-Lo, the watermills “s Hertogenmolens” in Aarschot, the “jenever distillery Smeets in Hasselt and many others.

The number of individual and associative SIWE-members has grown firmly during the last three years. More information about SIWE-membership and our work can be found on website www.siwe.be

Our address is: Stapelhuisstraat 15, B-3000 Leuven (Belgium).
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Argentina

Managing Argentina’s industrial heritage

María Elena Méndez Pagola
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The first research and preservation efforts have been made to conserve the valuable industrial heritage of the Necocchea-Quequén area in the south-east of the Buenos Aires province of Argentina, whose heritage from the beginning of the 20th century is at risk of disappearing because of a lack of recognition of its value and inadequate investment in its maintenance.

Our industrial heritage is primarily of European origin, but in Argentina the public and private conservation agencies are unaware of the value that the local heritage has for constructing local identity. We look for support to push back these attitudes. We hope that the companies that had responsibility for building this heritage will join in ensuring its survival, part of their institutional history, and will activate mechanisms to preserve and recognise its value.

Our studies show how the industrial heritage is in decline. One flour mill of architectural importance in the port area was destroyed by fire in 2001, and demolished soon after. The brick warehouses of Puerto Quequén are still standing, erected by the French Société des Grands Travaux de Marseille from 1908, as is the H Yrigoyen transporter bridge, constructed by another French company, Chantiers et Ateliers de la Gironde, between 1927-28. The bridge is a recognised national symbol of the region that links the two towns, but which has not been maintained since it was finished. It notably survived the floods of 1989 that destroyed all the other bridges across the Río Quequén.

As a member of the recently-founded Argentine Committee for the Industrial Heritage (COAPI), I am appealing for information on the European antecedents of these structures, as well as the companies and individuals who designed and built them, and for solidarity with our efforts to conserve the heritage in a difficult time for our country.

We hope that preserving this heritage and making sure that it doesn’t disappear will help strengthen the identity and sense of roots of young argentine people, and limit their high levels of emigration.

Silos and warehouses in the port area of Necocchea-Quequén, Buenos Aires
Japan


Professor Akira Oita
SUAC / TICCIH Japan

To hold some kind of TICCIH conference has been the dearest wish of the Japanese, which inspired the first National Representative (1978-84) the late Prof. Shuji Ohashi, the second (1984-90) the late Prof. Hoshimi Uchida, and the third (1990-2000) Prof Kuniyuki Shoya. Fortunately Mr. Kotaro Tanaka, Chairman of CSIH (Chubu Society for Industrial Heritage) an ex-businessman, introduced us – Mr Shoji Ishida, Secretary General of CSIH, and me – to Mr Hiroshi Suda, J apan Tourism Association Chubu Branch Director General and J R Tokai Advisor, who has a strong influence on the regional and communal cultural policy. In the fall of 2002 in Tokyo, we all met TICCIH General Secretary Stuart Smith when he visited Japan and discussed the framework of the conference organization and we all – TICCIH, JIAS, CSIH, Aichi Prefecture, Nagoya City and Nagoya Chamber of Commerce & Industry – came to an agreement with each other. Although TICCIH Board had hoped that as many people and countries from Asia as possible would attend and be represented at the conference because it was the first time a TICCIH conference had been held in Asia, unfortunately anti-Japanese feeling and the behavior of Chinese and Korean protesters developed into an international political issue, with the consequence that very few participants attended from other Asian countries. In total, 16 nations participated, inclusive of Japan, and an audience of 648 heard the Keynote Speeches (one of two by Stuart Smith: “TICCIH and Industrial Tourism – the Way Ahead”) and the Panel Discussion (the President of TICCIH Eusebi Casanelles and a Director of JIAS Prof. Takashi Itoh were two of the five panellists). There were six sessions over the two days of the conference: A: Industrial Tourism and the role of NPO/NGO; B: Technology Transfer from the West to the East (especially Japan) and its Impact on the Industrial Heritage; C: Industrial Heritage in general; D: The Preservation of Industrial Cultural Assets and their Use as a Tourism Resource; E: Revitalizing Communities through Industrial Tourism – Case Studies in Japan; F: Industrial Tourism in the world; G: Theme mixed. At these sessions, 39 papers in all were read. And now we, TICCIH Japan Committee, JIAS and CSIH, will proceed with the publishing of the conference book, which could be finished by the end of 2005.

Four tours were given: Official Tour (1): Group-inspection to the EXPO 2005 Aichi; Official Tour (2): Industrial Heritage Tour for Chubu Region; Congress Tour by bus (organized by CSIH) for the south-east of Chubu Region; and Post-congress Tour for Kyoto.

We Japanese are satisfied that 31 TICCIH members from overseas enjoyed the conference and Japanese culture (including “Karaoke”) to their heart’s content. It was a landmark conference which will surely lead to many more in this dramatic region.

Norway

Industrial Heritage – Contemporary Challenges De-industrialisation: Approaches to Contemporary Industries Stavanger Conference 21 – 24 April 2005

Gustav Rossnes and David Brand
Ticcih Norway

Large-scale technological systems have been essential in post-1950 industrial infrastructure. The conference addressed modes of interpretation of these infrastructures as industrial heritage. It focused on the specific challenges of documentation and representation of complex structures in transformation. The Western world is frequently cited as moving in the direction of de-industrialized societies. This notion was placed under scrutiny. The issues raised will increasingly confront people working in academic and technological-industrial museums. The relevance for government bodies and businesses with stewardship over large technological infrastructures is evident. The event took place at the Norwegian Petroleum Museum, and was sponsored by the South Georgia Heritage Trust and Conoco Philips.

More than 30 professionals attended the conference from as far away as Taiwan, the Falkland Islands and Portugal. Nearer home there were delegates from Sweden and Scotland as well as many Norwegian participants. As a concretisation of the theme “Approaches to Contemporary Industries” the conference excursion went to a gas terminal and the control centre for all North Sea gas. The participants were here confronted with a type of production plant that was very alien for the majority of them. The Kårstø processing complex, north of Stavanger, plays a key role in the transport...
and processing of gas and condensate (light oil) from important areas of the Norwegian Continental Shelf. Its original purpose was to receive and treat gas from fields in the northern part of the Norwegian North Sea via the Statpipe trunk line system. This remains a major function. Gas began to arrive at the plant on 25 July 1985, and the first consignment of lean gas was dispatched to Emden in northern Germany on 15 October that year. The processing facilities at the plant separate natural gas liquids from rich gas arriving by pipeline. These NGLs are fractionated into propane, normal and iso butane, naphtha and ethane. The Kårstø complex ranks as the world’s third largest producer of liquefied petroleum gases (propane and butanes). This LPG is exported to customers worldwide.

Visitors to this vast plant cannot hear, smell or see the production. No movement exists except for a couple of maintenance workers in orange boiler suits cycling for kilometres along the pipes and rows of tanks. The heart of the complex is the control room with lots of computers and enormous plasma screens around the walls showing process diagrams and production data. The gas flows from production installations to process plants, where natural gas liquids are separated out and exported by ship. The remaining dry gas is piped on to receiving terminals in Continental Europe and the UK. Once the gas has been produced, it must be carried to market. Unlike other Norwegian export products, natural gas has its own submarine transport system. This network is operated by Gassco’s control room on Karmøy. Norway’s gas pipelines have a total length of 6,600 kilometres, equivalent to the distance from Oslo to Chicago (see: http://www.gassco.no/sw3044.asp).

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Military Industrial Heritage in Peace Time

INCUNA and TICCIH España

Professor Patrick Martin

Nearly 150 persons participated in the Seventh Conference of INCUNA, organized around the theme of ‘the study, analysis, interpretation and valuation of the historical and industrial heritage generated by war and for national defence carried out in different countries... since the end of the XVIII Century’.

Ten invited speakers presented on a variety of topics from Argentina, Uruguay, France, Spain, the United Kingdom, and the United States. There were also over 30 brief presentations, selected from over 120 titles offered; about 10% of the presenters were students, offering a fine venue for student work. Other presenters were architects, archaeologists, historians, museum professionals, government and military officials, and the range of interdisciplinary scholars we have come to expect in industrial heritage studies. Begun as something of a ‘friends’ gathering for interested individuals around Asturias, this conference has grown each year in scope and scale. In addition to the presentations, INCUNA has produced a series of high quality publications about industrial heritage topics. The papers of previous conferences are published each year, and a selection are available on the INCUNA website, www.incuna.org, where visitors are offered the intriguing possibility of giving the papers between one and five stars for quality.

The first day of the conference was devoted to presentations by members of TICCIH Spain, organized around the theme “Industrial Heritage: Places in danger”. TICCIH members from around the country reported on the situations in their regions, followed by an extensive and lively roundtable discussion. This was an interesting discussion, with some focus provided by the National Plan for Industrial Patrimony developed over the past few years. This year also saw the second edition of the ‘Patrimony and Peace’ volume (http://www.patrimonyandpeace.org), about Industrial Heritage, an extensive exhibition of excellent photographs. There also were excursions to several sites around the city of Gijon and the state of Asturias, including military defences, museums such as the marvellous Museo del Ferrocarril, and arms factories in Oviedo and Trubia. The INCUNA hosts were generous and helpful, the meeting facilities at the Cultural Institute were excellent, and the setting in Gijon was exceptional. The VIII INCUNA conference was a great success, facilitating interaction among a substantial number of international colleagues, and a spirited presentation of recent research from a variety of areas. If this conference is any measure, INCUNA will become a major venue for the dissemination of Industrial Heritage scholarship in the future.

Obituary notice

Hoshimi Uchida, 1926 – 2005

Hoshimi Uchida, aged 78, professor emeritus of the history of industrial technology at the Tokyo Keizai University, was killed in Tokyo on April 7, 2005 in a traffic accident. Hoshimi Uchida studied, just after World War II, applied chemistry (B.Sc. 1948) and economics (B.A. 1954) at the University of Tokyo. He had taught, investigated and wrote on the Tokyo Keizai faculty of business administration for 34 years when he retired in 1997. Prior to his arrival at the Tokyo Keizai University in 1963, he had worked for three years as a scientific researcher at the research office of chemical industry in the Ministry of Commerce and Industry, for ten years at the Japan Foundation for Textile Economy and for two years at the Japan Plastics Industry Research Office. His wife of 55 years, Ayako, née Suzuki, died of cancer in 2004 and so he was survived by two daughters - Eriko and Taeko - and their families. He was a visiting research fellow of the Imperial College (London), 1975-76 and a director of JIAS (Japan Industrial Archaeology Society, which was founded in 1977) till 1986. Also he was TICCIH National Representative of Japan 1984-1996, and a Board Member 1990-1992 because of the unification of East and West Germany. And the JIAS was 1987-1989 about Industrial Heritage, an extensive exhibition of excellent photographs. There also were excursions to several sites around the city of Gijon and the state of Asturias, the marvellous Museo del Ferrocarril, and arms factories in Oviedo and Trubia. The INCUNA hosts were generous and helpful, the meeting facilities at the Cultural Institute were excellent, and the setting in Gijon was exceptional. The VIII INCUNA conference was a great success, facilitating interaction among a substantial number of international colleagues, and a spirited presentation of recent research from a variety of areas. If this conference is any measure, INCUNA will become a major venue for the dissemination of Industrial Heritage scholarship in the future.
In the absence of a national association for industrial archaeology in Germany, demand for an IA magazine is met jointly by the two museum networks in the Rhineland, the Rheinischs Industrie- museum (RIM) and the Westfälisches Indus-triemuseum (WIM). In contrast to the approach in many other countries (e.g. France and TICCIH, see above) industrie-kultur combines the function of both journal and newsletter in one quarterly publication. The result is a readable and very informative magazine with high standards of production. There is a focus to each issue, either national - recently Ireland and Russia and next year Poland – or thematic. The summer edition, Zement & Beton, examines the development of iron making from ancient iron making through to iron making in Europe in the middle ages, the evolution of the charcoal blast furnace and the eventual change to mineral fuel. The chapter on the progress of coke blast furnaces between 1870 and 1950 is of particular interest, as is the development of the science of iron making, iron products and improvements in iron making from the second World War to the new millennium. There is an extensive bibliography and a fascinating summary of iron making through the ages. The only drawback is that it is heavily biased towards the USA but overall it is a volume of great interest to anyone involved in the history of iron making.

A publication of The Association for Iron and Steel Technology 3194 pages of exciting information about the history of iron making. Profusely illustrated with numerous diagrams and illustrations, this book traces the development of iron making from ancient iron making through to iron making in Europe in the middle ages, the evolution of the charcoal blast furnace and the eventual change to mineral fuel. The chapter on the progress of coke blast furnaces between 1870 and 1950 is of particular interest, as is the development of the science of iron making, iron products and improvements in iron making from the second World War to the new millennium. There is an extensive bibliography and a fascinating summary of iron making through the ages. The only drawback is that it is heavily biased towards the USA but overall it is a volume of great interest to anyone involved in the history of iron making.