Within the diversity of industrial culture, the evidence of cinematographic productions can be considered heritage, insofar as it is the result of the evidence and testimonies of production systems. In this sense, the Mexican movie industry, throughout its history, has gone through distinct periods that have shown Mexico in different contexts and social systems, through different forms of artistic and technological interpretations, as well as representations of daily life and of Mexican history.

For this reason, the material evidence of this industry should be considered as heritage, and not only the product but also the evidence surrounding the systems of production. As it is well known, new advances in film production also replace and make obsolete the machinery and the visual and artistic creation technology of previous periods.

The final products of the film industry can be considered heritage, as has been recognized recently when the Mexican movie Los Olvidados (1950) by Luis Buñuel was added to UNESCO’s list of Cultural Heritage of Humanity. This highlights not only the importance of this art form, but also its role as legacy for new generations. In this way, other genres of Mexican cinema have shown other valuable periods, with humorous, dramatic, rural, etc. movies, that are eloquent testimonies and forms of representation of life in Mexico.

If the concept of heritage is seen as the results of the remnants of a representative society, and is thus defined as cultural heritage, then the legacy of the movie industry can be observed not only in the movies themselves but also in the different forms of evidence of the way that they were created; from the landscapes, equipment and technology used, to diverse intangible testimonies.

Heritage can be considered to implicitly include the installations, the forms of production, the technology, the studios, and the sets still in existence in Mexican territory. The cultural heritage of the cinematographic industry has within its field tangible and intangible evidences, sites, furniture, buildings, as well as the documents and archives that have accumulated over its history. These aspects have been taken into account in the creation of some museums such as that in Durango, where countless national and foreign movies were made and which have become part of the identity of the site.

The Studios Churubusco, for example, have for years been the location for many movies and it has accumulated a collection that can be considered heritage due to its importance in the set of world-class Mexican movies. The different tools, machinery, and equipment used in the production of movies can be considered industrial cultural heritage insofar as they have testimonial value as documents of this form of production and creation. The day-to-day advances of this industry make these documents invaluable evidence of the history of the Seventh Art.

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Up: A glowing turbine shaft at the ThyssenKrupp forge in Terni. See the article on page 4.
Down: Art tries to compete for attention with industry at the Montemartini generating station, Rome.
Photo: David Worth

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TICCIH news

■ New Board

The final event of the 2006 congress, as the first delegates began to slip away homewards, was the TICCIH General Assembly. As it is at each congress, the main business of the Assembly is the election of the new Board, and with one third of the existing members having to stand for re-election, and the empty places left by the death of Eugene Logunov and the retirement of Rainer Wirtz and Eric Nijhof, there were eight seats to be filled.

Twenty-four national representatives were able to vote in the election, in which there were eleven candidates. The five existing Board members who sought re-election were Ole Hyldttoft, Olga Deligianni, Stuart Smith, Jose Maria Lopes Cordeiro and Belem Oviedo, and there were six new candidates – Giovanni Luigi Fontana, who organised the Terni meeting, Iona-Irina Iamandescu, the National Representative from Romania, Dag Avango from Sweden, Helmuth Albrecht, representing the organizers of the next TICCIH congress in Germany, Jaime Migone from Chile and Miljenko Smokvina from Croatia.

As a result of the election, all the existing Board members were returned, and they were joined by Iona-Irina Iamandescu, Helmuth Albrecht and Jaime Migone. There was a tie in the number of votes between Ole Hyldttoft and Dag Avango, a situation never before encountered in a TICCIH election and not anticipated in the statutes, so the Board is deciding how to resolve it. All the names and contact information for the new Board can be found on the TICCIH web page.

■ Regional responsibilities

Another reform of the way in which TICCIH operates was proposed by Professor Patrick Martin. This is to have someone who can assist in cooperation and coordination between countries in each of the continents or regions where TICCIH has representatives. The executive is discussing which members of the Board might take on these tasks.

■ Terni

The conference organisers have sent out links to two post-conference sites. The papers that have been received so far can be consulted at www.ticcihcouncil2006.net/papers.html, while the Italian press articles about the study visits or the post-congress itineraries with the Organization of these tasks.

■ Nizhny Tagil charter – the revised edition

The TICCIH charter for the industrial heritage – know as the Nizhny Tagil Charter (this is the correct spelling, and not Nizgny as it sometimes appears) – was approved (this is the correct spelling, and not Nizgny) three years ago, at the General Assembly in Russia. In that time it has become an emerging subject and official attitudes are insensitive to its significance and vulnerability. Considerable experience has been gained as a result, both from wielding the Charter as a shield to defend the industrial heritage, and also from using it as a teaching resource to communicate values and techniques that we use to study and protect that heritage.

In the light of this experience, and following a suggestion to the Board from Professor Marie Nisser, it was decided that it would be a good moment to carry out a review of the text of the Charter, to see if the original document that was drawn up during the year preceding the Moscow Congress could be strengthened. Once this process has been completed TICCIH hopes to publish the revised document, something that was never done after the Moscow congress, in an attractive and accessible format.

Everyone is welcome to contribute to this process, but especially people who have used the charter, for teaching or for conservation work, and have an idea of how it could be strengthened.

Professor Nisser will coordinate the revision through the office of the President. The current text of the charter is on the TICCIH website (there’s a large link on the home page) with versions in English, French, Spanish, Greek and Portuguese.

■ Conference agenda

The conference programme continues to grow, with at least seven international meetings associated with TICCIH already planned between now and the next TICCIH congress in 2009. Among the proposals that we have received is one for a joint meeting with ICOHTEC, our cousins in the history of technology, in Tampere, Finland in 2010. The idea of joint conferences has gained ground lately and there have been a number of such meetings, especially between industrial archaeologists and archaeologists working on similar chronological but different thematic material.

Two new announcements since the Congress which can be seen on the back page of the Bulletin and in the TICCIH web site are the intermediate conferences next year in France being organised by Dr Gracia Dorel, one for the Textile Section – the third such event, and another to launch a section dedicated to agriculture and the food-producing industry, and to what is often referred to as the agro-industrial heritage.
When I reflect on the course of the TICCIH congress in Terni I am struck by how the event’s opening in the former production hall, now used by Papigno Film Studios, suggested the themes that would resonate over the course of the meeting in the days that ensued. Not because it rained then for the first time and would again do so at the most inappropriate moments in the following days, always an unfortunate coincidence, quite unfairly so, given the evident efforts the organisers put into the event. What I am referring to is the forty participant flags raised over the podium during the opening ceremony, which were indicative of the kind of significance ascribed to the spread of the movement for industrial heritage conservation into new regions.

An advantage and certainly also the appeal of such meetings was expressed in a point made by Keith Falconer at one workshop (coincidentally, on the subject of “The Infrastructure Network”), when he said that the purpose of TICCIH is that it is able to unite experiences and offer examples from all over the world. Paradoxically, with the spread of activities across countries and continents, and through different political structures and cultures, the concept of industrial heritage is coming to be interpreted in diverse ways and influenced by diverse, at times perhaps too formal or too general interests, and it was possible to detect this thematic ambiguity from the very first evening of the congress, with the question of how to prevent the term “industrial heritage” in the organising body’s name from being too broadly defined?

The sections and numerous workshops organised by the scientific committee provided a forum for the presentation of two hundred papers. This was a remarkable number of contributions, and I tried to take in as much as physically possible from this selection, to absorb the enormous amount of information, the variety of topics, and even the difficulties and obstacles that were highlighted in some papers. For example, in the presentations based on Asian and South American experiences, and sometimes those from the former Eastern bloc, it was hard to overlook the often incompatible use of terminology and at times the almost limitless typologies or time spans selected as the topic or period intended to capture the intention of participants in the discussion.

At times it seemed as though the arguments about the meaning of the movement for the conservation of industrial heritage and about what actually falls within the compass of industrial archaeology had returned to their roots, to how it appeared in the pages of publications a couple of decades ago. Now of course the discussion encompasses much more distant and mutually remote locations and countries with varying to incomparable economic situations and political backgrounds. A critical comparison of opportunities and aims would certainly help convey a better understanding of the information being exchanged.

In the context of the thematic and geographic expansion of the contributions to the congress perhaps then the most urgent need is to precisely and clearly define the terms that predominated the discourse during the congress. In this connection what is also required is a more sensitive appreciation of sometimes the very different expectations that are coming to be associated with industrial heritage.

I mention these points as part of a general impression from the September meeting which, of course, is also based on experiences from the non-working, i.e. social, part of the congress programme. They reflect a general impression of the meeting’s atmosphere and exposure to a variety of approaches to similar situations. For example, when at the end of one day of the congress we stepped out of the bus in Narni Scalo and found ourselves in an empty factory hall, transformed for the occasion into a concert hall, with a pile of coal and a small bulldozer (or some such machine) on the podium, the manner in which the event was experienced was symbolic of the diversity at another level, as some focused on the music, others reflected on what they had heard over the course of the day’s discussions, some were amused, others intrigued, and still others distracted.

However, in my view what predominated was a sense of fascination with the space, and with the theme of a raw industrial environment, an experience that confirmed the significance of this kind of meeting.

Dr Benjamin Fragner is the National Representative for the Czech Republic, and Director of the Research Centre for Industrial Heritage, Czech Technical University.
The principal sites that were included in the days of the main congress covered active, disused and reused industrial spaces. By all accounts, and I was one of those who decided that the 2003 congress in Moscow and Nizhny Tagil was beyond my reach, the emotional peak was the visit to the Chusovoi iron works to see one of the last working Bessemer furnaces blowing. Italia 2006 did not provide any moment as memorable, but the Thyssen Krupp Special Steelworks in Terni probably came closest. ThyssenKrupp occupies several large industrial sheds on an extensive industrial estate, parts of which it shares with other companies performing similar or related processes, even though some of them are owned by competing firms. The process that we visited involved forging turbine shafts for nuclear and other electricity generating stations.

ThyssenKrupp is one of a small number of companies in this field, and rates itself as the best. The process appeared simple but we were asked to try and not take too many photographs – perhaps not a serious request, and certainly not taken seriously, and the guide asked, perhaps also jokingly, if there were anyone from China or Taiwan in our group. The steel is cast, reheated in electric furnaces, forged and turned. When we arrived, two shafts over a metre in diameter and both glowing hot, were being slowly swung along the shed and fed into the enormous forge hammers – successors to the great 12,000 ton press that adorned the conference programme. The scene would have been not unfamiliar to a nineteenth century forgemaster, allowing for the change in scale of the operation, and perhaps the few men who were in evidence, movement of the overhead crane and the force of the press being effected from an enclosed control room.

The shafts are forged to within 30 or 40 cm of their final diameter and are then carried next door to the turning shed, were a series of lathes reduced them from the relatively coarse, black mass of the forge to the gleaming polished steel of the finished article. Rotor blades are fitted by the client. What would happen if the forged metal was too narrow, and the 450,000 € shaft was wasted? “It would be a pity” commented the guide, laconically.

The issue of electricity generators was continued in visits to two power stations with contrasting destinies, the Montemartini thermal station in Rome which closed years ago and now houses part of the collection of Roman antiquities form the Capitolini Museums, and the Galleto-Monte Sant’Angelo hydroelectric station in near Terni, which is still generating electricity from the energy of the water of the Mamore Falls. The Falls were made famous by a stream of Romantic poets and painters in the 19th century. Now the water only passes over them to please tourists and they are ‘illuminated’ at night, as if they are not sufficiently spectacular for modern tastes. Most of the time the flow of water is diverted through the turbines of the neo-classical Galleto-Monte Sant’Angelo power station nearby to create the electrical energy on which the industrialisation of the area was partly founded.

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Visits during the Congress

The Editor makes a rare Bulletin appearance, next to one of the turned turbine shafts at the ThyssenKrupp works. Photo: E Riplles
compete with an adjacent privately-operated generating station. It is also in the neo-Roman style that was predominant in civil architecture in Italy before 1945, SPQR engraved over the entrance. Inside, the 20m diesel generators made by Tosi and installed in 1933 share the lofty generating hall with marble figures of the Roman imperial period. The diesels, steam turbo alternators, boiler, crane and other original details have also been conserved in an enjoyable combination of industrial and artistic monuments.

Montemartini was part of the industrialization of the Ostiense area on the left bank of the Tiber in the early 20th century, along with the Mercati Generali. The old market is closed now and most will soon disappear, but two reinforced concrete market hall, for fish and vegetables will be conserved and given a new use. The graceful molded columns and curved concrete ribs are interesting examples of the early exploration of the scope and possibilities of concrete architecture, even if they seem quant compared with the vaulted structures already being erected elsewhere in Europe by engineers like Torroja or Fressinet.

A look at the crowded rooms of the Palazzi Gazzoli and di Primavera during the congress appeared to contradict at least two of the persistent attitudes toward industrial archaeology that have been around for as long as I remember. I don’t suppose that Luigi Fontana has had time to analyse the age and gender profile of the four hundred or so delegates who came to his conference, but it would certainly be very different from the ageing and mostly male community that ours is sometimes perceived to be - as I hope the photographs in this issue also make apparent: plenty of young people, lots of women. In fact, TICCIH conferences are attended overwhelmingly by people working professionally as industrial archaeologists, actively studying, teaching and conserving the industrial heritage. Sir Neil Cossons expressed the anxiety in ‘Perspectives on Industrial Archaeology’, published for the XII TICCIH Congress in London in 2000, that industrial archaeology might follow rural and folk studies and disappear with its founders, of whom he wrote, in a typically vivid phrase, ‘…a self-defined elite failed to evolve or even reproduce itself in numbers sufficient to ensure survival of the species’. Two congresses later, and clearly that bleak warning has not come true. A recent conference keynote address published this spring spoke excitingly of a ‘third generation’ of industrial archaeologists, whose main concern was analysing the process of industrialisation, armed with a suite of tools and methodologies well adapted to their work.

Many of the young people attending and working at Terni were of course Professor Fontana’s own students, and that leads to the second contradiction, that industrial archaeology has failed to mark out its own territory in the universities. I counted at least six professors at the General Assembly who teach industrial archaeology in different universities in North America, Europe and Latin America. There is already tremendous interest in the next TICCIH congress thanks to Professor Helmuth Albrecht’s presentation of the programme he hopes to present in Freiberg in three years time. Gaps still exist in the educational provision around the world, including in Spain from where I write, even though we now have a young and vigorous TICCIH association here and more members than in any other country. But clearly there is a solid basis for the official optimism as expressed by the President, Eusebi Casanelles, at the opening ceremony in the huge Papiago film studios last month. Professor Patrick Martin’s confident prediction in the first TICCIH Bulletin after the London congress of a bright future for industrial archaeology appears to have been well-founded.
the Chinese Cai Lu, but there is also some debate over what true paper is. Made from vegetable matter and passed through a fine sieve was one definition. What it is not is ‘rice paper’, which is neither paper nor made of rice but strips shaved with a keen-edged knife from a bamboo-like plant. This process was shown in one of two videos produced by Elaine and Sydney Koretsky, a remarkable couple from Boston who run the Research Institute of Paper History & Technology. They organise periodic ‘expeditions’ to China and other Asian countries to track down and film the production of handmade paper. Their second video was a fascinating collection of pre-industrial processes including many ‘paper mills’ so simple and ephemeral as to leave no material trace when they are gone. Similarly light installations, though equipped with water wheels, pulping hammers, vats and drying areas, must have co-existed alongside the large, capital consuming mills that have survived to become the archaeological record of paper production in the west. The study of watermarks occupies a great deal of time and there are several international initiatives to scan them and build up on-line inventories. They haven’t always been so well-understood, with one presentation showing the defaced books of a Siberian sect who took the translucent images in the paper for the signs of the anti-christ.

The next IHP conference is in Sweden in 2008.

Spain

28th International Paper Historians (IHP) conference
5–8 October, 2006, Museu Molí Papерer de Capellades, Spain

Jaume Puig

Despite its name, the IHP includes a much wider spread of interests than the history of paper. Among the sixty delegates to this biennial congress were paper makers, paper conservators, art historians, museum curators as well as researchers interested in the multi-millenarian chronicle of paper. Although he has iconic status, the inventor of true paper may not really be

Industrial Patrimony

National Reports presented on the occasion of the TICCIH XIIIth Congress, No 15, 2006. English (summary of each report in French), 251 pp., 33 € for two issues.

This is certainly TICCIH’s most important contribution to the international understanding of industrial archaeology in a decade, and a will remain a hugely valuable source of information about the study and conservation of the historic industrial resource around the world for several years to come. The Editors of TICCIH’s twice-yearly journal took up the challenge of publishing the National Reports that traditionally accompany TICCIH’s congresses, and which failed to appear after the last two consecutive events in London and Moscow. Twenty-nine reports are included as an extended edition of Patrimoine de l’industrie, which was given to each of the delegates in Terni. The themes covered vary as does the depth of coverage but, in general, reports deal with changes in the legislative framework affecting industrial heritage; the condition of the local societies and their activities; recent research work; the role of industrial museums, especially in conserving sites; threats and challenges; successes and losses; recent publications and a bibliography.

So is the situation of each country unique or does a general picture become apparent? Certainly there are exceptional and often fascinating details in the reports. There has been prejudice against industrial sites in the Czech Republic because they were used by the communist party as propaganda. The heavy industry and great waterworks of Walonia are well protected because they contribute more directly to the sense of regional identity than do the light industry and textiles of neighbouring Flanders. Australia has no specific industrial heritage organisation because industry is so integral to that country’s history it is dealt with routinely. In Britain, too, there are programmes about saving old industrial sites on popular, mainstream television. But general themes also emerge. Industrial restructuring, both sectorial—coal, iron and steel—and general—most of eastern Europe—, dictate the agendas of many professionals and academics. Privatisation has a similar effect in Latin America. Economic regeneration is widely accepted as a politically acceptable basis for investing in industrial conservation. But as the
National Park Service. During the last ten
life sessions, a few raised their hands when
asked how many were engineers. Earlier
during the conference, Vittorio Marchis and
I chaired the historic bridge session. Though there have been papers on historic bridges, this is the first stand-alone bridge session in 33 years of TICCIH conferences.

Eight speakers, consisting of five engineers: Roberto Parisi and Roberto Gori, Italy; Leonardo Troyano, Madrid; Joseph Puñaro and Matt Reckard, USA; and three from other disciplines; Michael Mende, Germany, Sir Neil Cossons, English Heritage, Eric DeLony, USA, read papers ranging from the early Italian suspension bridges, conservation of Spain’s historic bridges, John Roebing’s early suspension bridges in the Upper Ruhr, efforts to list historic bridges as World Heritage in the UK, the physical rehabilitation of historic bridges in the United States, and discussion on forming an historic bridge/infrastructure/public works international special interest group. In addition to emphasizing the importance of historic bridges and their contribution to infrastructure and the historic built environment, the intention of the bridge session was to begin the process of involving engineers in industrial heritage. Engineers have much to contribute.

Industrial heritage has been with us for 40-
years. I spent the better part of my 32-year
career trying to involve engineers in the
Historic American Engineering Record (HAER), a documentation program of the National Park Service. During the last ten years, significant process was achieved. I am an architect and preservationist by training and it was not easy penetrating the engineering community despite the fact that American Society of Civil Engineers (ASCE) was one of the founding organizations of HAER. Others were the National Park Service, where the HAER program is vested, and the Library of Congress, where the collection is curated and made available to the public, www.loc.gov.

Schism is probably is too strong a word, but
engineers, architects and historians recognize that there are differences between professions. Differences between architects and engineers have existed since structures became too complicated requiring the expertise of engineers enabling them to stand up. This occurred during the latter part of the 19th century when train sheds, high rises, and other structural types required the expertise of engineers. Today, none of the professions will admit the split, but we all know it exists. We exist in a specialist world with each profession protecting its turf. But, things are improving.

An illustration of this is the success of involving engineers in a America’s national engineering heritage documentation program. Success stemmed from finding engineers who were interested in engineering heritage, introducing engineering students to that heritage, and who were willing to mentor student projects requiring the insights of engineers had one and sometimes two engineering students working with the architects, landscape architects and historians that traditionally compose HAER recording teams. This averaged 2-3 engineering students employed per summer, both foreign and domestic. Thus evolved one of the most innovative aspects of HAER documentation: to produce not only drawings, photographs and histories, but to evaluate the structural capabilities of historic structures, analyze their performance and behavior, enabling assessments of the efficiency of the design, how engineers conceptualized their designs reconciling structural theory with best practices, resulting in buildable products.

We were able to compare similar designs types such as iron bowstring, concrete arches and wood-framed covered bridges, to say something definitive about their efficiency, performance and behavior, and the skills and ingenuity of their designers.

experience of Athens’ Olympics shows, and as London’s already threatens to do, it can have a disastrous effect on the industrial heritage of the chosen area. Authenticity is a real problem for some re-use projects, an experience reported from Argentina to Sweden, where the concept of adaptive re-use if giving way to adaptive miss-use. Post-war buildings raise problems through the absence of established codes for appraising them. And sites are getting bigger all the time, partly as we move from small early industrial enterprises to later, larger ones, and partly as we extend landscape or network connections.

The conceptual variety of interpretational ideas for industrial themes is striking. The Italian report speaks of a sector in full bloom, with museums, eco-museums, site museums, community museums, parks and trails, museum networks, itineraries, documentation centres and didactic workshops all tackling the significance of industry and the remains it has left in our culture. Inventories continue to grow, and are more and more frequently available on-line. International data exchange with TICCIH colleagues should permit the more reliable exchange of comparative data in the not-distant future. Writes Miles Ogijoreho, “it should not be long before coordinated strategies aimed at protecting and recording the world’s most important industrial sites can be put in place. It should then be possible to prioritise future work, concentrating on the most important and urgent cases with confidence”.

Congratulations, then, to the editors of Patrimonie de l’industrie for an attractive tome with clearly printed photographs. Copies can be purchased by writing to Louis Bergeron, 15, rue des Filles du Calvaire, F-75003, Paris, France, or lbergeron@wanadoo.fr. The countries that are included in this volume are Argentina, Australia, Austria, Belgium, Brazil, Chile, Croatia, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Italy, Japan, Mexico, Netherlands, Norway, Peru, Poland, Portugal, Romania, South Africa, Spain, Switzerland, and the USA.

La macchina e il monumento, the machine and the monument, Gino Papuli, ICSIM N°5, ISBN 88-87298-75-5, Italian and English, 6 €.

How the great Terri steam hammer mentioned earlier in the Bulletin was dismantled, restored and re-erected is explained in Professor Papuli’s bilingual booklet, which associates the Terri hammer with other monumental pieces of machinery such as the Schneider steam hammer which occupies a roundabout in Le Creusot, France.
Though interest in engineering heritage within the engineering community has expanded—just about all the engineering professions have history and heritage groups—engineers and engineering educators interested in their engineering past are rare. Engineers are educated differently and view the world from different perspectives than architects, historians, or preservationists.

There are many reasons for this but the one most critics point to is that little in engineering education prepares students to deal with issues such as aesthetics, much less concepts of cultural landscapes, preservation, or restoring historic bridges. Most engineering educators maintain that course requirements already are overloaded just to get across the basics of sound engineering. Anything having to do with aesthetics, the evolution of the profession and related issues must be found outside the engineering curriculum and, most likely, on the student’s own time.

The world of architecture, historic preservation and industrial heritage is dominated by architects, archeologists, historians, preservationists and museum specialists just as engineering is dominated by engineers.

Clearly, based on the HAER example, there is merit if the professions cooperate. Hence, the idea of an historic bridge/infrastructure/public works special interest group. Whether the ‘marriage’ between professions is globally possible remains to be seen. In America, there are approximately 400 engineering educators, consulting engineers, historic bridge scholars and enthusiasts that informally have organized a group called the ‘bridge mafia’ and, it is growing.

The idea of expanding historic preservation, regardless of whether its architectural, industrial, technological or engineering, to include engineers from all parts of the world would enhance scholarship and help save historic bridges. Bridges are engineered structures. To understand them and preserve them requires the input of engineers. World heritage could benefit significantly form the input of engineers.

In the larger context, it would improve the world’s cultural landscape, life’s quality, and mutual understanding. This especially is needed in our troubled world.