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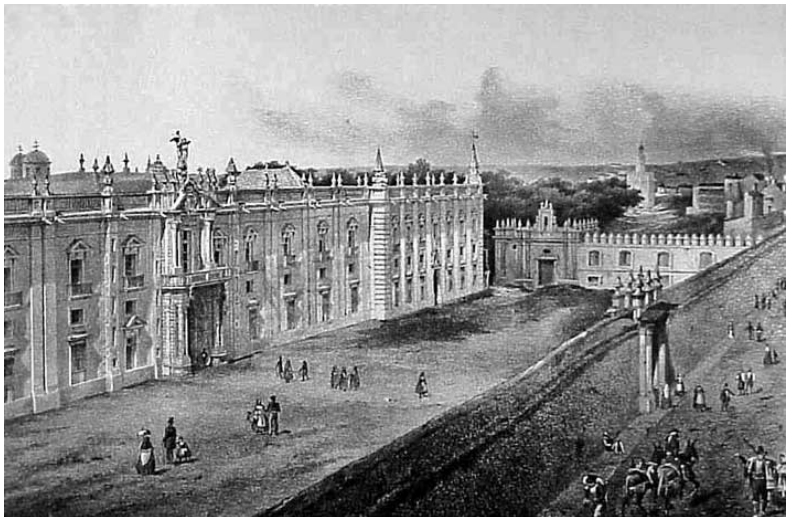
CONTENTS



After 300 years, tobacco production in Spain is down to the last factory, leaving monumental city centre buildings like Seville's Real Fábrica de Tabaccos, shown here in 1856, around the country. See the Report on page 3. Photo: Wilkipedia Commons.

OPINION

THE NIZHNY TAGIL CHARTER IN THE ECOLOGICAL AGE

Colm Murray, Architecture Officer of the Heritage Council in Ireland.

The Nizhny Tagil Charter for the Industrial Heritage recognises the 'profound', 'revolutionary' changes wrought by industrialisation since the end of the 18th century. But it proposes only positive values for this form of heritage: no thought for the rust belt of de-industrialised or post-industrial urban landscapes in Europe or America, or the Chernobyl exclusion zone, in place since the 1986 uncontrolled radioactivity release which rendered a wide area uninhabitable, or the causes of a mass killings in industrial accidents such as happened at Bhopal in 1984. Nor does it create a normative or ethical framework in which the industrial heritage can contribute to an understanding of our current predicament: how to make the trajectory of technocratic consumerist materialist development 'sustainable'. Nor does it guide a conservator through the difficult ethical dilemmas which are particular to the industrial heritage. For industrial heritage conservation to become a resonant and relevant societal project, its normative principles need to acknowledge and engage with the 'dark satanic mills'.

There is no mention in the Charter of the implication of industrial heri-

tage in the 'technologisation' of human society, in the materialist human presence in the biosphere, in the political economies of capitalism and socialism, in the reinforcement or construction of the class system in many societies, or in the alienation of humans from their labour through wages.

The requirement of manufacturing to be efficient and to use the most competitive processes, required unsentimental and repetitive change to the machinery, production processes, and to the buildings which housed them. This inevitably and characteristically leaves behind in factory buildings the trace of multiple previous configurations, having no regard for the integrity of previous states.

The charter refers to evidential values explicitly seven times. The prioritisation given to the evidential value is rooted in the ephemerality of the subject matter and the preoccupations of archaeologists with the skills they can deploy. Heritage can be used for other purposes. The instrumental benefits to be derived from conservation generally have provided the justification for public expenditure on conservation. However, the preoccupation in this Charter with evidential value neglects the other types of value that engage the public, or the resources of public authorities, to act.

The Charter gives contradictory indicators as to how re-useable the industrial heritage is, an especially difficult issue. The evidential value leads to recommendations to maximise the retention of historic fabric, but this constrain re-use: industrial buildings either house redundant machines or they lose their defining fabric to a new use. The Charter does not provide a clear conceptual framework in which adaptive re-use and evidential value can be reconciled. Where does the ethic to preserve machinery in situ end, and adaptive re-use begin?

The social value of heritage buildings, places, landscapes or objects can bring people into relationship with each other. We can consider 'Geographies of manufacture' to define the social impact of the industrial revolution, with the resulting large-scale the systems of intense production and consumption - local, national and international - and the changes it wrought in relations between vast numbers of people, that it created. This sense of social value is only faintly reflected in the Charter. It is notable that the worker in a factory is adjunct to a machine, which is related to other machines and therefore other workers only through subjugation to the logic of manufacturing, of the production line.

Acknowledging that the original drafters of the Charter saw it as having an advocacy purpose generally for the industrial heritage, rather than guiding practitioners as to how to conserve it (as the Venice Charter was written to do), the following conservation issues, which regularly emerge at the level of the site or project, should be addressed if the Charter is ever revised.

a. The basis on which 'the most significant and characteristic examples' or 'the singularity of unique sites' should be identified is not elaborated. It is, for example, a significant characteristic of each site of manufacture that it has 'trumped' a preceding process in terms of efficiency, location or cost-effectiveness, and many claims for priority in conservation made for sites are based on 'firsts'. The obverse of this celebration of innovation is rivalry and redundancy, unless an overarching normative framework of the significance of industrial heritage to society is defined. Similarly, the dichotomy between some things being important for being 'unique', and others simultaneously for being 'typical', ought to be resolved. Both depend on having a scientific overview, but neither is by itself a marker of significance.

b. The Charter refers to 'the universal value of evidence', without recognising the simple large-scale lessons that ought to be derived from the 'profound historical consequences' of industrial heritage. We live in a world that has been transformed by the industrial revolution, and we should use its evidence to question whether that transformation is tenable or sustainable in any sense. The song 'We Work the Black Seam' by Sting provides a relevant normative framework through which to negotiate this legacy: it is not unreasonable to expect that a Charter that intends to motivate people to conserve industrial heritage should contain a similar thoughtful ethical framework.

c. In the factory, time ends when its product is sold. Whole sites, and systems of production, are abandoned or discarded when the profit margin evaporates. The ephemeral essence of buildings, machines and products of industrialisation points to a different conception of time to that normally used in monument conservation. The conservation ethic to 'prolong the cultural life of the object' with its simple view of the longue durée, does not fit easily with utilitarian profit-making, guaranteed obsolescence, extraction and exploitation that point to industrial culture's 'life out of balance'.

d. The Venice Charter, in its opening sentence, provides a reason to protect monumental buildings: they are 'imbued with messages from the past'. The question ought to be asked 'why is it important for society or the State to place a high value on the industrial heritage?' The motivations appear to be technical interest in processes as such (not products), scientific history, national pride, class pride, the romance of the ruin. With its critical approach to materialism, the green agenda throws a different light on the processes of production and consumption asking if they are 'ecologically sustainable'.

e. The enormous scale of some large factories and their sites presents a distinctive industrial heritage challenge: obsolescence that has landscape-scale effects. This suggests a land-use planning response. The Charter does not address how the partic-

NIZHNY TAGIL CHARTER, CONTINUED, PAGE 5

The Madrid tobacco factory has been partially reconverted into an exhibition space and social centre. (Carolina Castañeda, 2016)

SPAIN

NOT JUST CARMEN: SPAIN'S TOBACCO HERITAGE

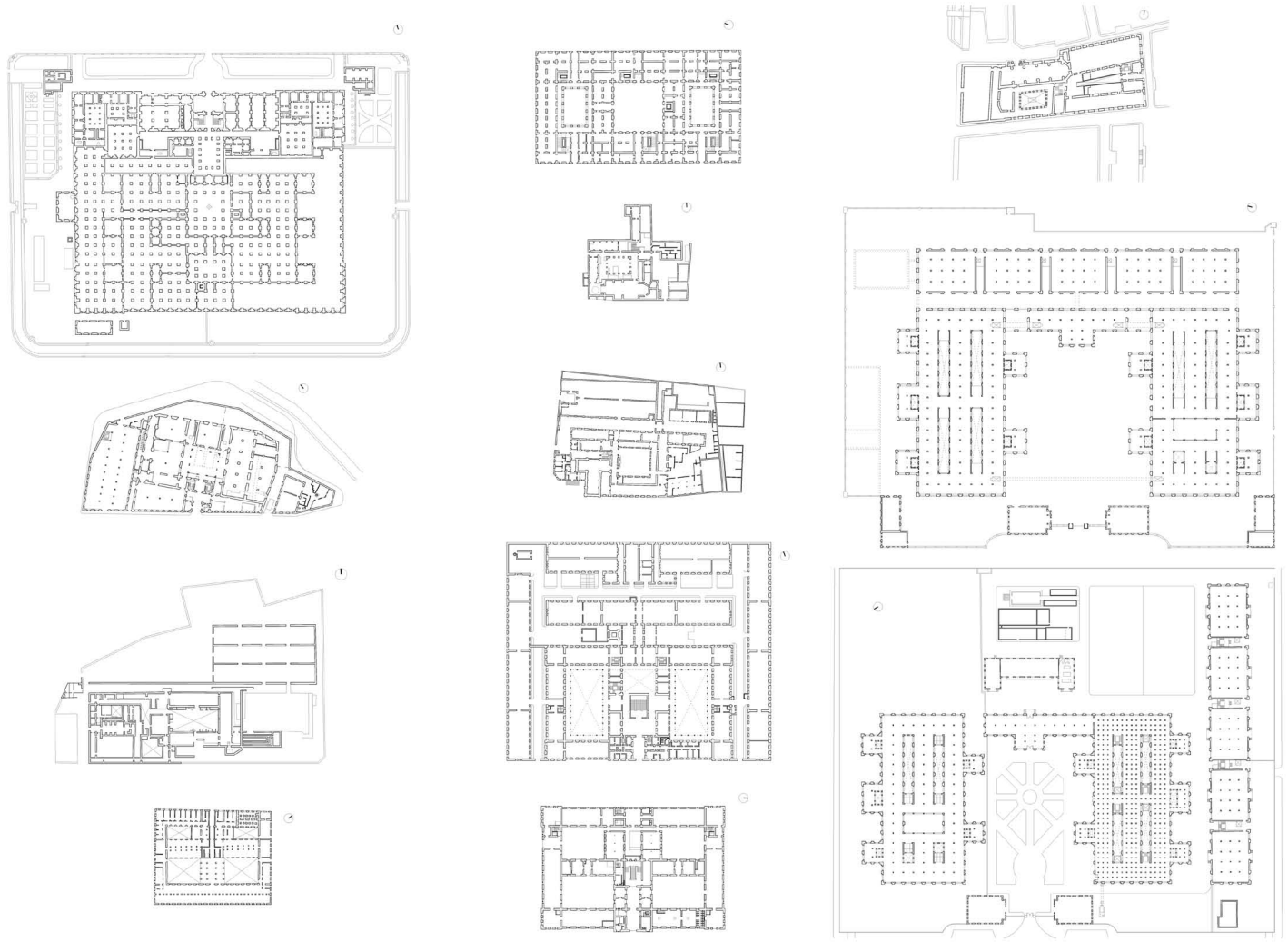
Dr Carolina Castañeda López, architect

The state-owned tobacco factories in Spain, built between the middle of the 18th and the beginning of the 20th centuries, occupy a distinct position in industrial architecture and a notable opportunity for new uses in the city centres in which they were constructed. A royal monopoly up until their privatization at the end of the 20th century, the closure of all of them a few years later left an important industrial heritage marked by their monumentality and privileged locations.

The earliest locale for the production of tobacco in Spain, and the first in the world, was in Seville, the principal point of commercial connection with the Spanish colonies. The first factory produced rapé, tobacco powder for sniffing, and it re-used an existing building, but the rapid popular growth of the custom of smoking tobacco prompted the design and construction of the completely new Real Fábrica de Tabaccos de Sevilla, the Fàbrica de San Diego, in 1760, the enormous manufactory later made famous in Prosper Mérimée's story. The need for tax revenue during the 19th century coupled with the increase in tobacco consumption supported several more generations of factories, most of them built in ports, from the pioneer in Seville up to the most recent in Tarragona and Malaga which were constructed in the first third of the last century.

For the Seville building, the military engineers responsible drew on French models of royal manufactories. However, the Spanish tobacco factories had a special reality provided by the overwhelmingly feminine workforce through the figure of the cigarrera. This conditioned from the beginning the use of spaces in which domestic and working lives were closely intermingled. The proximity of their homes to the factory and the fact that work companions were also neighbours, friends and often family members, intensified the transfer of female roles between the two. The factories produced a powerful sense of community and of identity which persists today.

At the architectural level, the compositional expression of the façades, which was the connecting element between the interior and their surroundings, pooled all the architectural codes of significance and representativeness. However, the monumentality of the façade rarely reflected the reality of the interiors, which were characterized by flexibility and the typical dynamic of the manufacturing space. A classic spatial distribution around open court-



The highly formal distribution layouts of the Spanish tobacco factories, from the oldest to the last, reading downwards: first column, Sevilla, Cádiz, Alicante and La Coruña; second column, Madrid, Santander, Gijón, Valencia and San Sebastián; third column, Logroño, Tarragona and Málaga. (Carolina Castañeda, 2016)

yards allowed the rationalization of the productive space, as well as its use for the control both of production and the morale of the women. This followed distribution schemes similar to other architectural types characterized for their coercive character. The work space was conceived of as a container for both raw materials and stored products, as well as the large number of female workers for the manual rolling of the products, or later on by installations for mechanized product lines.

The premises established at the beginning of the tobacco monopoly in Seville were oriented towards architecture of great compactness and tightness as a defence against the chronic losses due to smuggling. With the assignment of the lease on the tobacco monopoly to the Compañía Arrendataria de Tabacos (CAT, the Tobacco Leasing Company) in 1887, the productive spaces were rationalized and aspects considered in the first factory projects lost relevance. They moved from compact workspaces in cities such as Seville, Madrid or the factories created from re-used convents to a progressive disaggregation of the various functions as clearly differentiated entities, with an independent architectural expression in the form of pavilions, as in the examples of Tarragona and Malaga. Moreover, spaces derived from the female condition of the employees became more relevant to the programme of uses: lactation rooms, clinics, hygienic services, locker rooms and canteens equipped with kitchen for those workers who resided far away from the factory.

The closure of most of the tobacco works, after hundreds of years, at the beginning of the 21st century, left an important State industrial heritage whose architectural characteristics and strategic location provided the Spanish administration with opportunities for a contemporary adaptive reuse. Currently, the urban condition of tobacco factories, along with the abandonment of many of them and their public ownership, have turned these singular productive

Sculpture honouring the cigarreras or female cigar makers by Francisco Buiza outside the Tobacco Factory of Cádiz, converted into the city's Convention and Exhibition Centre. (Carolina Castañeda 2015)

The Patio de la Fuente o de la Fieldad courtyard within the Real Fábrica de Tabaccos de Sevilla. Made famous by Bizet's opera Carmen based on the novel by Prosper Mérimée, the old Royal Factory is one of the remarkable facilities of the Universidad de Sevilla. (Carolina Castañeda 2015)

sites into candidates for the development of projects that serve society as versatile spaces for the establishment of new uses.

Likewise, the safeguarding of the tobacco factory heritage is fundamental for the transmission to future generations of an industrial memory which is unique to Spain. Thus, this tobacco manufacturing heritage is understood as a participant element of the urban and territorial structure, as well as a strategic resource of connection between the past and the future through its appropriation by society.

Carolina Castañeda López' Fábricas de tabacos en España. Arquitectura industrial y paisajes urbanos can be ordered ***here****.*

NIZHNY TAGIL CHARTER, CONTINUED

ular industrial heritage values might be recognised and conserved at this scale.

f. The social cost of the factory system. The Charter exhorts that 'Industrial communities which are threatened by rapid structural change should be supported by central and local government authorities' (Art.4.IV), which is a particular view of government's role in relation to capitalism – picking up the pieces!

g. The retention and preservation of machinery is generally incompatible with the re-use of a factory, except as a museum. The Charter gives no guidance as to how to negotiate conflicting conservation ideals – the re-use of the building, the preservation of the machinery – when these are in conflict.

h. The cost of cleaning up toxic pollution, whether on- or off-site, is an economic problem often encountered in industrial heritage, and is not addressed.

This is an abbreviated version of 'The Heritage of Manufacturing in the Ecological Age: An Irish Perspective', published in the journal Entreprises et histoire, 2017/2 (n° 87), p. 107-132. Colm Murray is a member of ICOMOS. The views expressed in this article are his own.

Contact the author

Karmouz Tram Workshop, established between 1898 and 1902, © Mirhan Damir, 2018

EGYPT

KARMOUZ TRAM WORKSHOP: THE EXTANT (IN)TANGIBLE

Mirhan Damir, PdD candidate, Bauhaus University in Weimar and assistant lecturer at the Alexandria University

It is sometimes the case when a historical industrial site is left 'underdeveloped' is that it self-preserves its historical architectural as well as social features. The Karmouz Tram Workshop is located in the historic industrial sector of Alexandria and is one of the surviving witnesses of the city's modern industries that were introduced in the early 19th century with the help of European investments. Built between 1898 and 1902, when the Belgians introduced the City Tram industries in Alexandria, the Karmouz Tram Workshop still stands with its intact architectural, industrial and social attributes. Along with the constructed site, a planned laborer's quarter was constructed near the site to accommodate the workers of the Workshop. This quarter is characterized by its brick facades overlooking a shared garden. Today, this residential quarter still stands yet inhabited by residents of whom none work in the tram workshop.

At the beginning of November 2018 an international student workshop with the name 'City, Community and Heritage' took place in Alexandria with the cooperation of four international universities: Bauhaus-University Weimar and Kassel University in Germany, and Alexandria University and TU Berlin Campus El-Gouna in Egypt. The case study of the first part of the workshop took place in Karmouz Tram Workshop, and this article briefly explains the history and significance of this site as well as shedding light on its current challenges.

Nowadays, the Karmouz Tram Workshop is losing its notable urban significance and location by the historic Mahmoudiyah Canal, which is doomed to silting and transformation into a vehicle road. The site was built to allow the tram to park and be maintained inside its structures. However, with the increasing number of cars needed to cover the passengers, pitched roofed structures were built on an adjacent site to allow the tram cars to park and be maintained there instead of the Karmouz Tram Workshop site.

The English William Asquith machine still in use, © Mirhan Damir, 2018

A worker in the welding section with a 1930s William Asquith machine, © Mirhan Damir, 2018

The site is currently responsible for manufacturing tram spare parts for the whole city of Alexandria as well melting old ones and re-molding them to be reused again. The spare parts manufactured are for trams that were mainly bought from Japan and Germany, among other countries, in the 1950s and 1970s.

Although this might imply a number of advanced machines and laborers working here, this is not the reality. The site only consists of 100 laborers working on historical manufacturing machines that date back to the 1920s. The English vintage machinery by William Asquith Ltd is still maintained by the workshop workers and used for drilling, boring, surfacing and milling the tram spare parts. Most of the workshop workers have two jobs: working in the Karmouz Tram workshop on old vintage machines in the morning and then elsewhere on advanced CNC machines in the evening. Still wearing the blue-collar uniform and preserving the know-how to use these historical machines, the workers represent an intangible witness of an industrial phase that once existed in Egypt. Not only that, their work reflects an unintentional living demonstration of an art and craft knowledge that is nowadays statically exhibited in western museums.

The workshop is now operating under the authority of the Alexandria Passenger Transportation Authority and is not publicly accessible. It is presently threatened by the loss of its tangible and intangible characteristics; on the one hand, the buildings are not maintained and left to gradual deterioration, on the other hand, youth are not interested in learning the craftsmanship of the vintage machines. Correspondingly, it is only the old men who still work on site. Even though it comprises many attributes that reflect its tangible as well as intangible significance, it is until now officially unrecognized for its rich industrial value. However, this is not only the case for this site, but for the whole Egyptian industrial legacies. The listing of any industrial site, building, or structure is based on its individual architectural or historical value rather than its comprehensive industrial portrayal. Many similar examples such as the Karmouz Tram Workshop once stood in the city of Alexandria until they deteriorated, demolished and sentenced to oblivion

TAIWAN

TOWARD SUSTAINABLE CONSERVATION: PINGTUNG TOBACCO FACTORY

Szu-Ling Lin, Associate Professor, Department of Cultural and Creative Industries, National Pingtung University

Pingtung Tobacco Factory (PTF) is an industrial cultural heritage site in Pingtung City of Pingtung County, Taiwan. In 1936, this factory was established by the Japanese during the Japanese colonial period. Tobacco was an important economic crop and the Japanese implemented a tobacco monopoly. In addition to the PTF, the Japanese built three other factories with the same function in Taichung, Chiayi, and Hualien. Tobacco businessmen easily delivered the tobacco leaves to these four factories for processing.

After World War II, the Taiwanese government assumed control and continued the tobacco monopoly, and these four factories came under the operation of the Taiwan Tobacco and Liquid Corporation. The processes included separating and drying tobacco leaf stem and mesophyll, storing the cut tobacco, as well as instructing farmers to grow tobacco. However, after joining the World Trade Organization, the cost of native tobacco planting and production increased. Native tobacco production declined year by year. The Chiayi and Hualien Tobacco Factories were closed first. The PTF stopped operating in 2002 and the Taichung Tobacco Factory closed in 2017. Currently, the PTF has been preserved as a type of industrial cultural heritage to show the history of the tobacco industry since 2010

In Taiwan, most industrial heritage sites are industrial facilities in abandoned areas that have fallen into disrepair; however, some may still be in use. The government began to understand the importance of protecting Taiwanese industrial heritage through the promotional efforts of the Society of Train Research, which was founded in 1995 by a group of university students. This society appealed to the government for preserving the fan-shaped Changhua train workshops, built in 1922 during the Japanese colonial period. Since then, numerous industrial heritage sites have been inscribed as cultural properties for preservation, such as sugar factories, salt, wine and tobacco factories.

To rehabilitate these industrial heritage sites, certain strategies are practiced, which include historical investigations and repurposing the buildings. Industrial heritage sites are reused as cultural parks, such as the Huashan 1914 Creative Park in Taipei City, which was a wine factory during the Japanese colonial period. The concept of cultural parks in Taiwan was inspired by examples in Western

A labourer baking tobacco leaves in the PTF in the 1970s.

The factory buildings of the PTF in 2018.

The factory buildings and machines in the PTF today.

countries such as the Sheffield Cultural Industries Quarter in the United Kingdom, one of the first serious developments to implement strategies designed to support the growth of the cultural industries sector.

To preserve the culture of the tobacco industry, the Pingtung county government inscribed the PTF as a historic building in 2010. Inside the factory, certain buildings and machinery still remain. Preserving this site is significant for residents because few large cultural facilities are located in the southernmost county in Taiwan. To enhance the cultural atmosphere of the Pingtung area, the Pingtung county government will transform the PTF into a cultural facility in the future. Furthermore, the machinery and some areas will be opened to introduce tobacco processing and how the farmers growing tobacco, so that visitors will learn about the tobacco industry from this industrial heritage site.

Although the PTF was an important factory in Pingtung County, many local residents were unaware of its history. They were not allowed entry to this factory because of the tobacco monopoly and it was isolated from the community for a lengthy period. Now it holds a new status as an industrial cultural heritage site and will be open to the public in the future.

To rehabilitate the PTF, the Pingtung county government will establish a cultural and creative park within the factory to promote cultural activities in the Pingtung region. Pingtung is the southernmost county in Taiwan. Agriculture, services, and small retail businesses are the main industries for people living in this county. Few large cultural facilities are located in the Pingtung region, not like other modern cities in Taiwan. The Pingtung county government believes that the PTF as a cultural and creative park would enhance the cultural atmosphere in the Pingtung region. The machinery and certain buildings will be displayed, and this enables visitors to learn about the history of the tobacco industry in Taiwan. Before open formally, the current educational plans are underway, and people's participation activities are carried out in the course of the process to let the public know about this industrial heritage. An International Design Exhibition will be held in the PTF in October, 2019. Educational activities and cultural and arts events have continued to promote the PTF toward sustainable conservation.

THE INDUSTRIAL HERITAGE OF MODERN IRON- AND STEELMAKING IN EUROPE, Part II: PRESERVATION BEFORE EXTINCTION

Rolf Höhmann, Office for Industrial Archeology, Darmstadt

The preservation of modern large scale 20th-century ironmaking plants in Europe is developing in an amazing way – recently protected modern blast furnace works in Portugal, Spain, Italy, France, Luxembourg and the Czech Republic are favourably completing the already well-known examples in Russia, Poland and Germany. Blast furnaces as monuments of industry seem to become a fashion, although measures for long time protection and conservation are just in their first experimental stages and have to be developed further.

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 works 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.

The first half of this article appeared in the previous issue of the TICCIH Bulletin, 4/2018.

D. Monuments of industrial steel production

The development of modern steel production went from puddling furnaces to Bessemer and Thomas converters, Siemens-Martin furnaces, oxygen converters and electric furnaces. Nearly two thirds of the steel worldwide is produced in oxygen-blowing-processes, the other third mostly in electric furnaces using scrap iron and steel.

Only some puddling furnaces have survived. The re-erected furnaces in Blists 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 in 1995 in Unterwellenborn in Eastern Germany. Some converters survive as isolated objects in museums or as open-air monuments. Siemens-Martin furnaces might also still be producing in Eastern Europe, in Russia, the Ukraine and Romania (Huneodora), but their fate is of course uncertain. The Brandenburg steel works near Berlin, erected after the Second World War, consisted of an impressive line of 12 large

SM-Furnaces. One of these today survives in the original building and forms the center of an Industrial museum.

The modern oxygen-blowing process developed and introduced in Linz and Donawitz in Austria since 1952 ('LD-process'), was able to substitute most of the former 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 remaining in place in the Bagnoli plant in Italy.

The preservation of modern steel-producing-plants in Germany has not been finally successful. Four sites were in discussion:

- The combined Oxygen- and Electric Furnace steel work in Hattingen. Although an ideal addition to the already existing museum with its blast furnace, this plant has been scrapped.
- The large-scale oxygen-steelwork in Dortmund-Hoerde, formerly Hoesch´s Phoenix-East plant, was documented and evaluated as technical monument, but was due to political and economic reasons it was dismantled and sold to China.
- The two electric furnaces of the Guthoffnungshuette Oberhausen-Ost were discussed as part of a theme park, as attraction for the nearby giant 'CentrO' merchandise market but have been dismantled recently.
- The steelworks of the closed Maxhuette in Sulzbach-Rosenberg in Bavaria would have been ideal for protection and display. Its small size (three 60 tons converters), location in a full production line and special technique (bottom blowing) makes it especially valuable.

All these plants also featured modern continuous casting machines – one of the most important innovations in the steel production of the last 40 years. The caster in Hattingen, built 1967, was one of the oldest of its kind in the world.

E. Monuments of rolling mills

Information about older rolling mills in Europe is scarce. Complete industrial rolling mills preserved in situ are very rare. Again, Blists Hill features a relocated small working mill beneath the puddling furnace. Parts like frames and rolls are collected in several industrial museums all over Europe, for example in Fond de Gras in Luxemburg, in Gyöngyös in Hungary, in Sweden e.a. Three old rolling mill streets are still in use in Völklingen, dating partly from the beginning of the 20th century. The Maxhütte in Sulzbach also used its older lines until the end of production in 2002.

Many early rolling mills were driven by extremely powerful steam engines. Many of these engines are preserved and relocated to different places. But two are still working in Völklingen: One is a double-compound three-cylinder engine with a maximum output of 14.200 hp and another double-compound two-cylinder machine with 8.300 hp. Maxhütte in Sulzbach used until 2002 two double-compound two-cylinder engines from 1911 and 1913 with a maximum output of 14.660 hp, which still remain in their original place.

TICCIH
President: Dr. Miles Oglethorpe
Historic Environment Scotland
Longmore House, Edinburgh EH9 1SH, Scotland
e: miles.oglethorpe@hes.scot, t: +44 01316688611

Secretary: Stephen Hughes
e: secretary@ticcih.org, t: +44 1970 621215

Editor: Articles and news of recent and future events should be sent to the Editor, James Douet, C. Bruc, 176, 2. 4., Barcelona 08037, Spain, e: editor@ticcih.org

Bulletin layout: Daniel Schneider, e: ticcih@mtu.edu
TICCIH Membership: Daniel Schneider, e: ticcih@mtu.edu
TICCIH Website: Daniel Schneider, e: ticcih@mtu.edu

TICCIH is the world organization for industrial archaeology promoting conservation, research, recording and education in all aspects of industrial heritage. It holds a triennial conference and organises interim conferences on particular themes. Individual membership is $30 (USD), corporate membership $65, and student membership. $15

There is an online membership form on www.ticcih.org

The **TICCIH Bulletin** welcomes news, comment and (shortish) articles from anyone who has something they want to say related to our field. The Bulletin is the only international newsletter dedicated to industrial archaeology and the conservation of the heritage of industrialisation. The TICCIH Bulletin is published online to members four times a year.

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Conclusions

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-sized and complete blast furnaces as monuments. Germany has the largest number and probably now the most experience in the conservation and renovation of blast furnace plants.

The missing parts 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. Chances for conserving such industries still exist, partly in Germany and other west European countries and possibly in eastern Europe. But the political and economic changes in the eastern countries make conservation projects of this scale very improbable. A survey of the existing plants of historical interest has yet to be carried out.

Even in more wealthy countries, like Germany, the conservation and protection of important examples is not always possible. The Maxhuette in Sulzbach-Rosenberg could be the ideal object for a linear presentation of all processes, beginning with the raw iron production in a blast furnace, mixing of the iron in a 1.200 tons mixer, reducing 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 very compact on a small site. The small size of all installations would be very favourable to conservation and reconstruction measures. But problems with the owners, the state bodies, political and also economic difficulties leave the protection of this site uncertain, although Maxhuette already is a listed monument.

Information about valuable objects in this field should be spread in conferences or for example in the TICCIH Bulletin. Exchange of experiences in the documentation, evaluation and conservation of large industrial monuments should develop further. After the opening of the eastern European countries, more information about their once-secretive industries must be collected and published.

Sources:

The standard book on blast furnace sites still is Rainer Slotta's Volume 5 of the series *Technische Denkmäler in der Bundesrepublik Deutschland,* published by Deutsches Bergbaumuseum Bochum 1988. Naturally, by now, it needs updating. I would like to thank many people who gave me information, especially Mr. Toncour and Mr. Rudack of the Verein Deutscher Eisenhuettenleute (Association of German iron smelters) in Duesseldorf. Their worldwide data-base of the iron- and steel industry is a very valuable tool.

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CHILE

THE MANAGEMENT PLAN FOR CAMPAMENTO CHUQUICAMATA

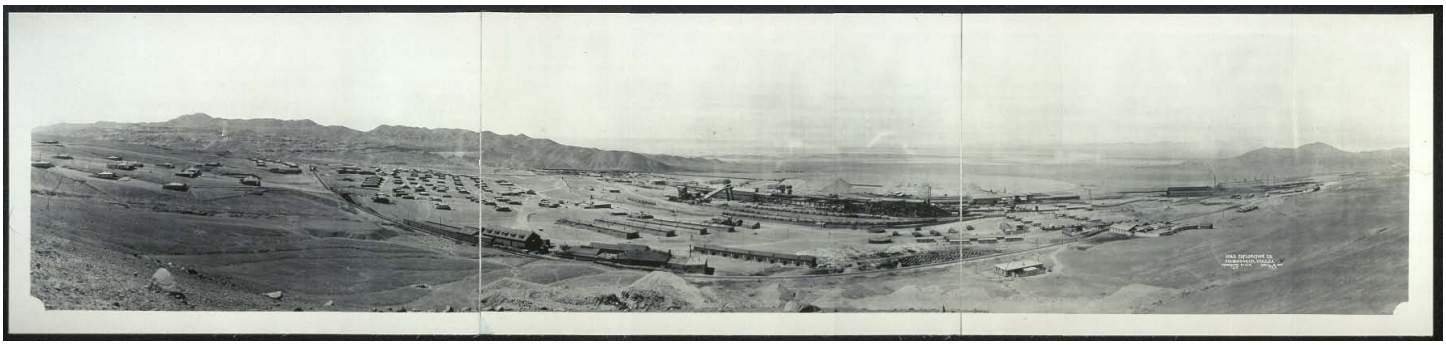
Dr. Arq. Jaime Migone Rettig, President TICCIH Chile, Member of TICCIH Board

The world's largest open-pit copper mine is known as Chuquicamata and has been in production for more than a century without interruption. A mining camp, Campamento Chuquicamata, was created parallel with the industrial development to house the workers, technicians, professionals and management of Chuquicamata. The camp located very close to the mine started around 1911 but was officially founded on 1915 and had about 25,000 inhabitants at its peak.

At the end of the 20th century, a process of gradual depopulation of Campamento Chuquicamata mining camp began, related to the expansion of the mine and the high atmospheric pollution. This culminated in the transfer of the last families to Calama and the complete abandonment of the site in 2007.

Through the initiative of groups of former inhabitants of Campamento Chuquicamata, declaration as a historical monument was proposed to the Council of Monuments of Chile, who protected it by Law 17,288 of National Monuments, apart from the camp as a Typical Zone and some unique buildings in 2015.

The mine is 15 km from the city of Calama, which is about 1,300 km north of Santiago. The territory that it occupies has more than 900 hectares and an elliptical shape of 5 km in length by 3 km wide. The excavated depth at its deepest reaches down to 1000 m, equivalent to more than three Eiffel towers joined together. It is currently in full production and copper is mainly extracted, but



The Campamento in 1925. Wikipedia Commons.

Phases of the Management Plan for Campamento Chuquicamata. 2018.

also gold and molybdenum. The production of the year 2017 was estimated at 350,000 metric tons of fine copper.

Manual exploitation of the copper dates back to pre-Columbian times, by the indigenous people of the area known as 'chucos' or 'chuquis' who made copper weapons and tools. From them comes the word Chuquicamata meaning 'land limit' and also 'spear point' according to the etymological versions interpreted today. There are archaeological records that date back to these incipient mining exploitations about 400 to 500 years before the Christian era.

Industrial exploitation of the copper began on May 18, 1915 with the production of the first bar of fine copper by the Guggenheim brothers' company, who called their firm 'Guggenheimn Bros', and who produced an explosion in copper production which attracted thousands of miners to work in the field. Later the company grew and incorporated different owners, transformed into the Chile Copper Co, Anaconda Co. and Chile Exploration Company.

In 1971 a constitutional reform was approved in Chile that culminated in the nationalization of copper mining, the property of Chuquicamata passing to the state, creating the company Corporación del Cobre, known by its acronym CODELCO. It is currently among the 100 largest companies in the world and among the most important in metal mining.

So we have part of Chuquicamata protected as industrial heritage for almost four years, an achievement of great relevance since the copper industry continues to operate and the two must coexist and dialogue to meet objectives. At the end of 2017 CODELCO requested a Management Plan for the Conservation of Campamento Chuquicamata, which we are concluding in the coming months.

A complete compilation of information from indirect sources was carried out, gathering texts, documents, magazines, books and publications in general regarding the history of Campamento Chuquicamata covering its birth, development, boom and final eviction in 2007.

An ad hoc form was designed with the preliminary aim of identifying the existing buildings as well as the main elements that constitute its urban furniture. The card also aims to define in advance the state of conservation of each from 100% / 75% / 50% / 25% / 0%, where 100% means an element could be used in its current condition, with a previous maintenance, while 75%, 50% and 25% are defined in terms of possible recovery and the effort that this entails to return to the previous condition, until 0%, that is, totally damaged or lost.

We have also surveyed the existing vegetation, identifying the most recurrent species, and defining three states of conservation at 100% that are in an acceptable condition, at 50 % that is drying and 0% that is totally dry. Those species in good condition are graphed in green, those that are drying are orange and in red those unrecoverable and totally dry species.

To complement the above, regarding the preparation of the files and the plans indicated, we have also prepared two tables with the list of registered sites and, on the other hand, the identified species. These documents are also annexes and complement this report.

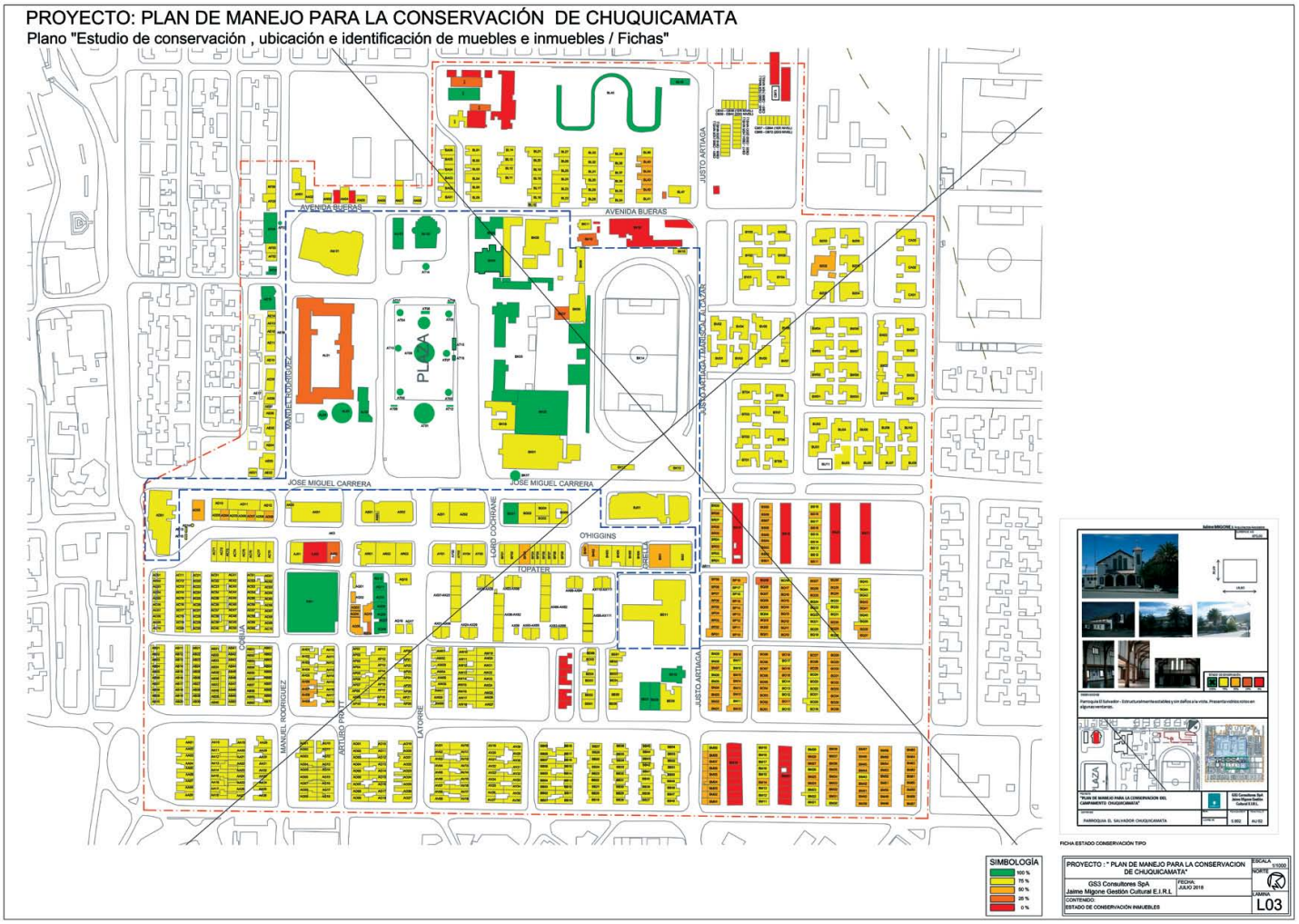
Stages in the growth of Campamento Chuquicamata: 1915, 1945 and 2001.

From the point of view of the elements identified within the Chuquicamata Camp, we have:

- The elements that we could identify amounted to 1,073 between the buildings and the street furniture.
- The identified properties are 1,044 and have various conservation status.
- The total sum of these properties contains 144.406,47 M2 built.
- This means that we have an average of 138, 32 M2 per property.
- The registered urban furniture, in our relevant opinion, is made up of 29 elements, which were considered as the most significant for the site.
- The identified vegetation reaches the sum of 660 species throughout the site.
- The species in good condition are 151 with 22.88% of the total
- The drying species are 102 with 15.45% of the total.
- Totally dry species are 407 with 61.67% of the total.

The Management Plan for the Conservation of Campamento Chuquicamata basically contemplates three phases of development and will be implemented within a period of 10 years. A first period was defined to implement Emergency Projects, which contemplates the design and execution of 10 that must be carried out within a maximum of two years and whose main objective is to stop the accelerated physical deterioration of the existing heritage. This stage will be managed directly by CODELCO as owner and principal of the site, financing the implementation of these 10 emergency projects. This initiative will be developed from the second semester of 2019 until the first semester of 2021.

A second period considers the development of an infrastructure and adaptation of the Camp to receive the tourism that is gradually growing over time. With the objective of generating a self-sustaining management model that allows its financing and an adequate conservation of the heritage site. This stage will also be managed by CODELCO, but the creation of a non-profit foundation is envisaged that will take charge of the management of the site and independently generate resources to administer it. This second period is defined with three years of transition so that by the end of the last year the foundation will be in charge of managing the Camp completely.



State of Current Conservation of Buildings. 2018.

Finally, during a period of five years, the Chuquicamata Foundation should take control of the entire Camp and its integral management, with an emphasis on a controlled use, based on cultural tourism, as the axis of its development. This institution will be able to receive economic contributions from CODELCO and also financial donations from other institutions, given its non-profit conformation, which will make it beneficiary with tax reduction of the resources that are delivered.

This plan was prepared by a multidisciplinary team that we have led in its implementation stage, in accordance with the requirements of CODELCO and the guidelines defined by the Council of Monuments of Chile.

UNITED STATES

EARLY SONAR AND SUBMARINE ARCHAEOLOGY

Zachary Liollio and Justin McIntyre

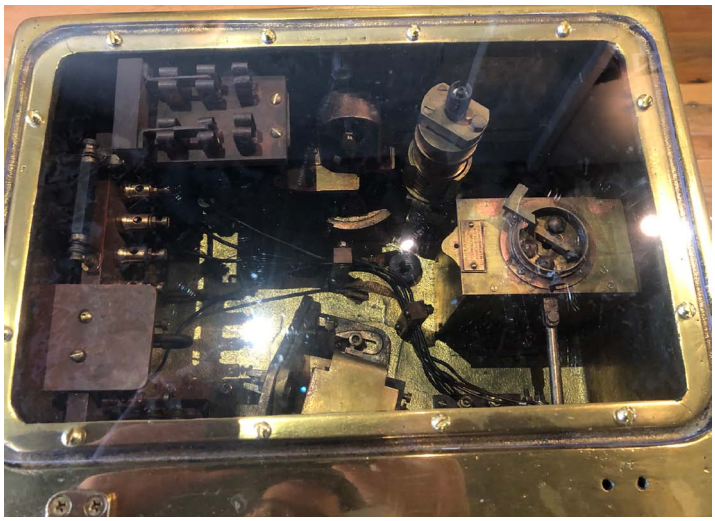
In less than five minutes, HMT (Her/His Majesty's Trawler) St. Cathan disappeared beneath the dark Atlantic waters. Thirty of her thirty-nine-man compliment went down with the ship. A thunderous collision sent the converted fishing trawler to the bottom, along with the Dutch merchant ship SS Hebe. Puncturing the St. Cathan with her bow, the Hebe had only begun to rescue survivors when water began to fill her hull too. The Hebe's captain, during an official inquiry, blamed 'the war' for their misfortunes. Both ships were steaming into the night in total blackness, under strict orders. No navigation lights, and not even a lit cigarette on the bridge. U-boats were prowling the coast, looking for the distinct silhouettes of their targets.

The full fury of the Battle of the Atlantic, during the Second World War, was waged off of American and Canadian shores. Its casualties can still be found, scattered in the shallows of the Gulf, and off of the Eastern Seaboard. US Merchant Marines paid an incredibly heavy price: one in every twenty-six mariners was lost. This ratio was the highest of any US government service or military branch.

It is a curiosity, then, that a modern British warship would be lost off of the South Carolina coast. In April of 1942, America had just fully entered the war. The U.S. Navy was scrambling to defend against German 'Wolf Packs' which were sinking great tonnages. It was painfully apparent that ships, loaded with vital supplies bound for the United Kingdom., needed escorts. Some civilian vessels, many of them trawlers, had already been commissioned in the Royal Navy for anti-submarine service. They were hastily sent to the U.S. East Coast in the interim and were under US Navy orders upon arrival.

The HMT St. Cathan was one of these vessels. Her refrigerated holds, once brimming with fish, were converted into ammunition magazines. Outfitted with a naval armament, including depth charges, a four-inch gun, and machine guns, she patrolled the treacherous waters near Charleston. Her crew of Royal Naval Reserve members often found the chain-of-command confounding. They seemed adrift between the authority of the two navies.

HMT St. Cathan didn't enter the fight blind, however. She had a piece of technology that was a closely guarded British secret, known simply as ASDIC (Anti-Submarine Division + IC, the latter two letters derived from 'supersonic'). This early type of sonar was built by the Marconi Sounding Device Co. Ltd. and tested extensively leading up to World War II. Called an 'Echometer,' it



The Type 421 Echometer in Georgetown [South Carolina Maritime] Museum. Its construction of primarily brass and copper helped to preserve it. Perhaps the greatest curiosity: a tag that explicitly forbids bringing the instrument into France.

uses sound waves to detect submerged objects and features. The particular unit carried aboard the St. Cathan, the Type 421, is composed of two main components (421A and 421B). The bottom cabinet houses the amplifier used for indicating the depths (421B). This base component works in conjunction with 421A, which provides a visual readout to the operator. For this unit, a peak of light on a long rectangular screen indicates the depth. A 'peak of light' would appear similar as a single heartbeat on a heartbeat monitor; the tip of the peak indicating a depth on a graduated scale. These depths or soundings were usually measured in fathoms (6-foot/1.83-meter intervals).

Astonishingly, the unit survived within the deteriorating hull. It was recovered by renowned diver Peter 'Pete' Manchee. He described the wrecksite; the deck of the bridge had collapsed over the years, leaving the ASDIC wedged in the mud and silt down below. Using his only liftbag on that dive, he floated the heavier 421B portion to the surface. The 421A would have to wait to come up another day. He hid it under some wreckage, awaiting his return. Pete explained, 'When I returned to retrieve the other half of the ASDIC, it was gone. About three-years later, I discovered that a friend of mine had found and recovered the other half. Wayne Strickland, and his son Donald, had brought it up. I explained to Wayne that I wanted to donate it to the Georgetown [South Carolina Maritime] Museum, and he was gracious enough to let me have it.' Pete's efforts to conserve the unit were performed painstakingly; the Echometer had to be totally disassembled (see 'before' photos).

The glass screen has since fallen away, as well as the shade that mounted on top of 421A's viewport (see as-built photo). Peering through a plexiglass cover (fabricated for display), the electronic components are present, however. Its current appearance is pristine enough to imagine the electric glow, as the operator monitored it diligently for U-boats.

The vibrant, warm subtropical waters of the South Carolina coast are famously unforgiving. This applies to archaeological resources as well. Despite the divers investing their own time, resources, and risk, they sometimes run afoul of the archaeological community. Pete put these allegations to rest by noting, '...wreck divers rescue artifacts so that they are not lost forever.' Indeed, many artifacts that decide a wreck's 'archaeological significance' are discovered first by private and commercial divers. State and Federal authorities often do not have the resources to conduct such thorough, investigative dives.

While some sites may be damaged by would-be salvors and relic hunters, the amount of information that responsible divers disseminate far outweighs any misgivings. This is partly due to the highly specialized equipment and skill sets divers bring with them, as well as a deep reverence for their fellow mariners. This extends as far as recovering fallen divers from wreck sites to give them a decent burial. The dangerous and scrupulous process of identifying and recovering artifacts from shipwrecks is an important one. As a testament to his labors, Pete Manchee and many other divers loan their collections out for the public's benefit.

The Marconi Type 421 Echometer is the centerpiece in an amazing collection. Justin McIntyre, the museum's new curator, is ecstatic about this acquisition. He believes it may be the only example of a Type 421, on dry land, in North America. The HMT Bedfordshire, for example, torpedoed off the North Carolina coast, may contain a similar unit. Other surviving units may still be found in the UK.

Among the glass covered cases, you will also find a depth charge pistol and gun sight from the same wreck. These brass relics serve as a memorial to an otherwise unknown tragedy, with international implications. This impressive collection would otherwise be unavailable to the public, if it wasn't for a dedicated group of individuals. The museum is now developing methods to interpret all of the artifacts through meticulous research and contemporary displays.

Through their stewardship, the SCMM is an important resource for understanding our industrial, maritime, and natural past. These salvaged discoveries also serve as monuments to a perilous maritime history. The sacrifices of the British sailors off of American shores are not forgotten here. There are few institutions in South Carolina that foster this relationship between private collectors, enthusiasts, and public museums.

The galeas Valkyrien from Höganäs in Sweden, launched in 1935. Photo: Christer Ericson.

SWEDEN

LEGAL PROTECTION FOR MOBILE HERITAGE

Anders Svensson, SIM and board member of Swedish National Railway History Association

Historical means of transport are not a homogeneous category of objects but contain a large variety of different types of vehicles and craft, ranging from large sailboats and heavy steam locomotives to recreational boats and small mopeds. The level of mobility that is allowed for this heritage is a controversial issue that has to be faced whenever vehicles are conserved, and one which has been discussed with much care in Sweden.

Civil society organizations, both nationally and internationally, play a significant role in the efforts to preserve and use this mobile heritage. The effort is characterized by a strong civic foundation with a very extensive non-profit side which is mainly financed by various societies and the members themselves. The non-profit forces that today preserve older means of transport do this largely with the stated ambition that the vehicles should be kept mobile, i.e. rolling, seagoing and flying.

In 2018, the Swedish government gave the National Heritage Authority a mission that concerns the protection of this mobile heritage. They have been constantly cooperating with civil society in the form of Transport History Network (ThN), a network of ten national associations for mobile heritage (railway, boat, car, aircraft) societies. There have been a number of meetings, both across the network and by sections, where opportunities for commenting have been given. The report was completed by the end of December.

Electric locomotive Du2 581 from 1943 with heritage train outside Kolbäck in middle Sweden, August 7, 2010. Photo: Mattias Eriksson

There is no specific legislation that protects the breadth of the mobile heritage. Instead, there are several different types of public conservation efforts. Common to the various government measures and initiatives, however, is that they cover and reach a very limited part of the total number of historical means of transport.

Conservation of the mobile heritage must to a large extent take into account the conditions that differ in part from other types of cultural heritage, and it also places demands on measures that are to some extent different in nature to conventional conservation practitioners. Appropriate protection and preservation of the variable cultural heritage requires the pursuit of two essential circumstances. One is about older vehicles and craft which need to be used in the future so that they can be preserved as a living cultural heritage. The second assumes that the use should be possible without anticipating or losing the older and cultural-historical techniques and designs of the means of transport.

In its ambition to keep historical means of transport moving, owners and managers of the variable cultural heritage need to relate to a large number of legal rules. In many cases, requirements and conditions that follow from the applicable law can lead to unjustified problems and, in fact, obstacles to older means of transport being preserved and used, i.e. keeping the mobile heritage mobile.

The National Heritage Authority has mapped and categorized the requirements and regulations that can affect the possibility of using and preserving the mobile heritage. The purpose of the compilation is to clarify what kind of problems and barriers there are and what consequences these can have. The categorization also includes requirements that do not primarily follow legislation, but which instead arise as a result of prevailing political objectives.

The current regulations are not only in the field of transport, but also especially in the environment, where the Environmental Code is the central legislation. These can be divided into two significant categories, environment and access to materials and use of resources.

In the overview of current law compiled by the National Heritage Authority, it appears that only in a few contexts are historical means of transport taken into account, for example, exceptions to rules or subsidies of fees and taxes. As it still happens, the relief covers only parts of the mobile heritage. Several of the exceptions

are also relatively weak from the need to protect the breadth of historical means of transport, and in most cases apply only to specific rules in different regulations.

National and municipal authorities do not currently have support for taking general account of historical means of transport in connection with regulation, decision making and other applications of law. A statutory consideration could enable a trade-off between the interests of preserving and using historical means of transport and the requirements and expectations that follow from other legislation and other objectives.

There is therefore a need to introduce a legal protection of historical means of transport. The purpose of a protection in the law for historical means of transport should be to give national and municipal authorities support to be able to consider historical means of transport which can still be kept mobile while maintaining older technology and execution as far as possible.

The National Heritage Authority believes that a rule of consideration is the best option for legislation that intends to protect the breadth of historical means of transport. A suitable placement of such a law guard is in Chapter 1. Cultural Environment Act. Since the variable cultural heritage is a very heterogeneous category of historical means of transport, the scope of the rule of consideration may need to be clarified and delimited in order to clarify the scope of application. (Shortened summary from Swedish National Heritage Authority report 2018/1142)

Is there legal protection for mobile heritage in other countries? We know that there is such a law in The Netherlands, but does one exist in any other country around the world? You can email **anders.svensson@jhrf.se** if you have any information in this issue!

Contact the author

Historic vehicles are an important part of the Swedish National Day celebrations, June 6, which is also Historic Vehicle Day and all over Sweden enthusiasts take out their vehicles to participate in events. Here, a collaboration between Norrköping municipality and the local historic vehicle club in 2013. Photo: Göran Schüsseleder.

THE HERITAGE POTENTIAL OF INTERNATIONAL OIL

James Douet

The oil industry is the latest industrial sector whose heritage is the subject of an international comparative study by TICCIH, aiming to provide guidance in assessing its value and significance. Anyone with an interest in the oil-industry heritage, or knowledge of important sites which should be considered, is encouraged to contact the author and participate in a study which will conclude in a conference in Petrolia, Canada, next spring. This fits with ICOMOS' program to extend the number of 20th century sites on the World Heritage List.

Considering its immense importance today, probably the most sought-after, certainly the most fought-over, resource of modern times, petroleum was generally ignored for millennia. Seeping out of the ground in more or less volatile varieties of hydrocarbon, it was applied as a building mastic, used for caulking ships, burnt to illuminate icons or bottled as a probably useless medicinal product.

The increasingly urgent search by the mid-19th century for an illuminating oil led to the separation of 'kerosene' by a Canadian and the invention in Poland of suitable lamps to burn it, helping to stave off the impending extinction of the sperm whale. While petroleum seepages had been exploited for centuries in many corners of the world, and notably around Baku, now in Azerbaijan, and in the Carpathian Mountains (districts within Poland, Ukraine and Roma-

nia), it took early United States capitalism to bring into being, with characteristic intensity, much of the modern oil industry. Following the 1859 oil strike in Pennsylvania, over barely a decade Americans produced the distinctive oil landscapes of closely-packed derricks, the boom-to-bust towns of frantic prospectors, rail-car and pipeline shipments, industrial refineries, futures trading, and an extreme form of vertical capitalist organisation, Standard Oil, so aggressively monopolistic the US government broke it up.

Within a few more decades combustion-engine vehicles, European by invention but American in their production, put the oil industry at the heart of every industrial nations' strategic preoccupations. Since the 1940s oil has been the 'feedstock' of the petro-chemical industry with its vast range of indispensable products. Which global industries' heritage could be of greater importance, or make a stronger claim to UNESCO's prize of Outstanding Human Value?

The difficulty is what we might call the 'heritage potential' of the oil industry. Construction materials and building typologies rarely have the monumental, durable or re-usable qualities that favour a historic legacy. The wooden derricks that gave such a distinctive look to the landscapes of the oil fields were rough and impermanent. Photographs are the only way now to appreciate the dense clusters of derricks in an oil-boom area; as indeed they are to comprehend the extraordinary concentrations of the Mississippi petrochemical corridor, giant refineries like Abadan, Iran, or the lonely deep-water oil platforms out in middle of the North Sea. Modernisation of processing plants because of rapid obsolescence, coupled with the corrosive effects of petroleum products, is often so radical that structural and mechanical evidence largely disappears. The Norwegian national museum of the petroleum industry **Norsk Oljemuseum**, perhaps the best in the sector, and has a large collection exhibited in a modern museum building, but it depends on an unmatched programme of documentary collecting to comprehend the history of North Sea oil.

Nor has oil left post-industrial landscapes which can compare with the stone quarries of ancient Egypt or the Roman gold mines of Las Médulas in Spain. The petroleum industry has notoriously used rivers and the atmosphere to dispose of its waste liquids and gases. Oil sands tailings ponds or pools of toxic sludge behind artificial dams are unlikely to be conserved for their heritage values.

It will take imagination and ingenuity to find heritage evidence for oil's importance, and this study will be a serious step towards the recognition of the industry's global impact.

The study is supported by Fairbank Oil who are responsible for the Oil Springs National Historic Site in Canada, one of the pioneer oil fields to be exploited on a commercial scale.

Contact the author

The opportunities for conservation of significant plant and buildings may be limited or difficult to justify. Photo: Creative Commons.

The conserved jerker-line system at Oil Springs, Ontario, was devised so a single steam engine could operate multiple pump jacks pumping oil, with a contemporary derrick in the background. First Commercial Oil Field National Historic Site of Canada. Photo: Parks Canada Agency, A. Roos, 2005.

INDUSTRIAL MUSEUMS

THE PORTO TRAM MUSEUM

Ana Isabel Lino and Dr Maria Leonor Botelho, CIT-CEM (Centro de Investigação Transdisciplinar «Cultura, Espaço e Memória») a unit of I&D, Faculty of Arts and Humanities of the University of Porto

The Museu do Carro Eléctrico do Porto - Porto Tram Museum - is nowadays considered a good example of the reuse of an old industrial space, and stands out among the most recent reconversion interventions carried out in Portugal's second city of Oporto.

The museum was founded in 1992 and takes advantage of the facilities of the former Massarelos Thermoelectric Power Station (Central Termoeléctrica de Massarelos), which was a project dating from 1909 and complemented in the year of 1912 by the engineer Luís Couto dos Santos. Born in Brasil, he came to Portugal where he studied Civil Engineering at the Academia Politécnica do Port, became a Professor at Faculdade Técnica da Universidade do Porto in the year of 1915, being soon after nominated Director.

The Thermoelectric Station would be inaugurated in 1915, serving as a power supply for the city trams at the service of the Carris company. Carris was founded in 1873, under the name Companhia Carris de Ferro do Porto, one year after the birth of Companhia Carril Americano do Porto, the pioneer company in Oportos's public transportation business. It closed after 1962, although it continues to function as a sub-station of energy transformation.

Today, besides feeding Oporto's electric traction lines, it is used by the city as a museum space. After being closed for a while, in the year of 2012, the museological building was re-qualified and enlarged under the project of the German architect Thomas Kröger, who won the prize in 2010 for the Requalification Project of the Tram Museum of Porto. The plan reflects 'the beauty of industrial architecture and represents the attitude of façades incorporating technological pretensions, usual at the epoch' (MELO, 2010).

In this context, an intervention affected «all the walls of the building in its two main aisles: the Engines Room and the Permanent Exhibition Room with the trams» (DIAS: 2015). Moreover, two new glazed volumes were added, which extend themselves outwards and intensify the relationship of the building with the river Douro. It reopened to the public in 2015.

The building that houses the Museum is under the control of the STCP (Serviço de Transportes Colectivos do Porto) and belongs to the Portuguese Museum Network (Rede Portuguesa de Museus). In 2010, an application for the QREN ON2 (a national financing programme for stategy and development) was approved, aiming at the musealization of the Engines Room, which allowed the necessary interpretive and logistical conditions for its opening to the public and its full enjoyment.

Project of the Thermoeletric Power Station, 1921. PIMENTEL, Cristina; LAMEIRAS, Sandra V. (2011) - A requalificação do edifício da antiga Central Termoeléctrica de Massarelos – Registos de um projecto em curso. Porto: Edição STCP, S.A., pp.14-17.

The tram exhibition occupies the former electricity generating station

Among the main **objectives** were the preservation and conservation of species and artefacts representing the history and development of the city's urban public transports on rails, presenting to the visitors these pieces of industrial heritage and enabling their interpretation.

Contact the authors: **Ana Isabel Lino** and **Maria Leonor Botelho**

WORLD HERITAGE AT A CROSSROADS

Stephen Hughes, TICCIH Secretary general

Among the most informative sessions at the ICOMOS 2018 General Assembly in Buenos Aires was the second of the General Assembly World Heritage Information sessions, which provided one of the clearest explanations ever given of the World Heritage Inscription and Management process by those managing it.

Clara Rellensmann (ICOMOS Germany) introduced the session commenting that ICOMOS' opinion had once been valued in World Heritage Inscription, but this was now more of a self-service procedure. Most states just valued the inscription of their World Heritage sites and then the resulting tourism and economic gain.

Nicole Franceschini (ICOMOS Italy) provided an overview of World Heritage Politics and ICOMOS' role in the implementation of the World Heritage Convention. While looking for a brighter future internationally the World Heritage framework was established in 1972. It was operational by 1975 with 193 state parties. The USA and Israel later left the process and the UK has discussed but rejected this option. ICOMOS is noted in the World Heritage Convention as taking an active role in the built heritage with IUCN taking a similar role for the natural heritage.

There are now 1,092 World Heritage Sites, still with the earlier concentration in Europe. There's a question of how many more World Heritage Sites Europe there could be. The World Heritage process should be about conservation and not just be about the inscription process.

World Heritage nominations must be submitted to UNESCO by February 1 every year and passed on to ICOMOS, IUCN or both organisations. The organisations ask for at least two desk reviews from a pool of international experts or suggestions from the International Scientific Committees (ISCs) or from National Committees to define the unique Outstanding Universal Value (OUV) of the proposed site. The expert field missions concentrate on determining the current state of conservation of the site and questions of authenticity and integrity.

Built heritage sites are then considered by the ICOMOS World Heritage Panel which sits each year in Paris for 10 days, then again in March to review its initial decisions. By contrast the UNESCO World Heritage Committee used to be made up of heritage experts but is now largely politicians.

The World Heritage List was crowded already by the end of the 1980s. In 1992 the concept of cultural landscapes was introduced aiming to inscribe a range of traditional landscapes. UNESCO World Heritage Centre recognised the need for a 'Global Strategy' in 1994. In 2005 Henry Cleere wrote the influential 'Filling the Gaps' strategy for ICOMOS. And the development of World Heritage Studies in the areas of the 'gaps' that it identified, such as in the industrial heritage, have facilitated a broader and more diverse range of inscriptions.

Today, Europe still has 47% of World Heritage Sites but Asia is now catching up with 23%. There is pressure from Africa to revise the global strategy. The inscription in 2018 of two nominated World Heritage Sites previously recommended for non-inscription by the ICOMOS World Heritage Panel was unprecedented: political persistence and lobbying by the authorities and governments of Saudi Arabia and Germany ensured that the Al-Ahsa Oasis and Naumburg Cathedral were inscribed.

Members need more understanding of the concept of World Heritage and Outstanding Universal Value (OUV). The development of these ideas should move outside from state parties to the local communities.

The role of the ICOMOS Secretariat

Marie-Laure Lavenir, Director-General since 2013, explained what the Scretariat does. For the last two years there have been two World Heritage Units within ICOMOS, one concerned with inscription led by Gwenaille Bodin and one implementing monitoring which is run by Regina Durighello. There are 32 evaluation missions a year in co-operation with the 11,000 members of ICOMOS, and co-ordinated with the thematic studies programme in which TICCIH takes a lead.

World Heritage Nominations have become much fuller in the last twenty years, increasing from 20 to as much as 2,000 pages. There is an initiative to arrange 6-7 desk reviews per nomination rather than the three previously used. But regrettably there are only 15-20 monitoring missions a year, ordered by the UNESCO World Heritage Committee. There are some advisory missions and 50 State of Conservation Reports are completed and 50 contributed to. There are some 20 referrals of World Heritage Nominations from state parties to UNESCO and back if they are to be developed.

The annual ICOMOS World Heritage Panel now follows a three-phase structure: three days studying the nominations and then a new phase of questioning state parties about gaps in their nominations and then five days making 'pre-decisions'. These are reviewed at a second Panel meeting in March, the decisions of which are conveyed to the State Parties in May. Final decisions are made at the at World Heritage Committee in June.

What the World Heritage Committee does

Alfredo Conti of ICOMOS Argentina gave an overview of the ICOMOS World Heritage Panel which assesses whether the nominated World Heritage sites have Outstanding Universal Value based on three aspects: whether the nominated site fulfils the World Heritage Criteria, has sufficient integrity and authenticity, and adequate State protection. The panel which meets in November and March.

The Panel composition changes to ensure a regular balance; a cultural balance and associated organisations such as TICCIH and DoCoMo are included with IUCN as observers, and ICOMOS World Heritage advisers and staff.

The Panel work is now split into three parts:

- Information by the advisers, written comments by the Panel members, and identification of the main issues;
- Comments on issues raised with the state parties;
- The conclusions re referral, deferral or recommendations for inscription of World Heritage nominations received during the first November Panel. Provisional decisions have been made and requests defined that are to be sent for further information.

Between the two World Heritage Panels held annually, written requests are for made for material for further decisions: there is a deadline of 23 February for this information to be considered by the second Panel on the 10 March. That means there is a ten-day window in which 200-300 words has to be read by panel member and advisers.

Prospective World Heritage Sites can then be recommended for inscription, deferral (delay to a later date) or referral (further discussion and clarification). The final decision on whether to inscribe any prospective Site is made by the World Heritage Committee in June or July.

The second panel meeting in March takes 5 days and the main November meeting takes 9 days. This is an expensive commitment so there is a danger that the ICOMOS Panel could become non-representative.

World Heritage evaluation missions

Monica Luengo of ICOMOS Spain gave an overview of missions which are not easy but are usually a wonderful experience. An evaluation mission must concentrate on the state of conservation of a prospective World Heritage Site, its integrity and authenticity, and management concerns such as buffer zone boundaries.

A file of experts who can comment on these criteria is used in selecting people to undertake evaluation missions. The mission expert usually makes notes and take pictures so as not to forget field details: they can request additional information and is the eyes and ears of ICOMOS. It is important for the field expert to not try to reach a final decision on a property and to try to establish empathy and understanding with the team and to keep a low profile in the media.

Reactive Monitoring Missions

The statement of Outstanding Universal Value (OUV) for a World Heritage Site defines its qualities and the justification for its inscription. If the OUV is threatened in any way the site can be put on the World Heritage Site in danger list by the World Heritage Committee. If the OUV of a site is deemed to be lost it can be excluded from the World Heritage List.

Betina Adams from ICOMOS Brazil spoke about Reactive Monitoring Mission which can be requested by the World Heritage Committee when the OUV of a site is under threat. The assessment of local ICOMOS experts can be helpful and the political will is important.

National Committees in the World Heritage Scenario

In the ICOMOS statutes there is no specific reference to this role, but the UNESCO World Heritage Guidelines stress the reality of fieldwork on the ground and was examined by Christophe Rivet of ICOMOS Canada. ICOMOS in the nominating country has some interaction with the evaluator and in providing perspectives on a site's condition and in providing written reports. Perhaps there should be a facility for conveying National Committee's views to the ICOMOS World Heritage Centre. Each ICOMOS National Committee needs to set its own secretariat of members to help with nominations.

Toshiyuki Kono (ICOMOS President)

A sensitive issue is that the UNESCO World Heritage Committee is discussing receiving recommendations from outside the presently recognised voluntary bodies – ICOMOS, IUCN and ICCROM. It may amend the operational guidelines to facilitate this. There is also the issue of the designation of sites of memory and the World Heritage Committee has asked for comments from the designated voluntary bodies.

CONFERENCE REPORTS

Off-site symposium: Creators of Industrial Buildings, 26-27 October 2018, Prague, Czech Republic

Jan Zikmund, Research Centre for Industrial Heritage FA CTU

The aim of this meeting was to present general principles behind the emergence of industrial heritage, which are at the same time the fundamental principles of industrial civilisation – rationalisation of design and implementation, creative specialisation, standardisation, and global transfer of experience.

On the first day was held in Zauhlovačka in Vratislavice, the town of Liberec, where papers were presented by leading European experts: Axel Föhl, from the German International Committee, TICCIH; Mark Watson, the Scottish Conservation Directorate; Swiss historian of architecture Michael Hanak; Paul Smith from the French Ministry of Culture; Prof. Dr. emerita of History of Architecture and Urbanism, TU Delf, Franziska Bollerey; and Czech historians of architecture Jindřich Vybíral, Academy of Arts, Architecture and Design, Prague, and Martin Strakoš, National Heritage Institute of Ostrava. The conference was followed by an excursion to a nearby boiler house of a carpet factory and brewery.

The second day was dedicated to excursions to former spinning and weaving mills of the towns of Liberec, Smržovka, Tanvald, Velké Hamry, Rokytnice nad Jizerou, Jablonec nad Jizerou and Nová Paka. These outstanding buildings are the most characteristic examples of industrial heritage to be found on the territory of the Czech Republic and the symposium aims to contribute to the recognition of their values in the European context and to introduce steps to save them from an imminent end.

The Vratislavice symposium was held as part of the project titled the Industrial Architecture: Monuments of Industrial Heritage as Technical Architectural Works and as the Identity of a Place, supported by the Applied Research and Development of National and Cultural Identity Programme (NAKI II) of the Ministry of Culture of the Czech Republic, and was a follow-up to the symposium focusing on small, neglected, ignored industrial buildings found in the countryside and urban environment organized by the VCPD together with the Vestiges of Industry platform in 2016. Both events received a positive feedback from the audience and more meetings of this kind can therefore be expected in the future.

PUBLICATIONS RECEIVED

Monument – Patrimony – Heritage, Industrial Heritage and the Horizons of Terminology

Simone BOGNER, Birgit FRANZ, Hans-Rudolf MEIER, Marion STEINER (Eds)

Arbeitskreis Theorie und Lehre der Denkmalpflege e.V., DFG-Graduiertenkolleg 2227 «Identität und Erbe», in Berlin, Oktober 2017, © 2018

ISBN 978-3-95954-061-2

Review by Massimo Preite

In recent years there have been no lack of original theoretical contributions on the issues of industrial heritage. However, the raised interest has often been limited to the regions of the heritage under discussion.

Even this book seems at first to be another reflection destined to remain confined to a small circle of scholars. Edited by Simone BOGNER, Birgit FRANZ, Hans-Rudolf MEIER and Marion STEINER, it is the result of two meetings aimed at clarifying the meaning of some concepts such as denkmal (monument), erbe (patrimony), and industriekultur (industrial culture), and could appear to address only German speakers. In fact, the horizon of the reflections goes well beyond the requirements of interpretative models of the concepts mentioned above. It embraces the most relevant problems that the conservation of industrial heritage poses today to the international scientific community.

The multiplicity of themes and approaches developed by the authors is well anticipated by the brilliant introduction which offers the reader a stimulating update of the notion of heritage, intended as 'more associated with acting subjects' than as 'heritage object'. This is a conceptual turning point of great consequence, since the preservation of industrial (physical) heritage also becomes an 'invention', therefore an effect of subjective programs. The pages dedicated to how conservation's practices of industrial monuments were invented in Germany are of the greatest interest: the early appreciation of industrial heritage in the former East Germany (where the first inventories of the industrial monuments date back to the early 1950s); the universal value that the TICCIH Nizhny Tagil Charter (2003) assigns to industrial heritage and

therefore the insistence not to be satisfied with local meanings in the study of industrial testimonies; the need for greater courage in exploring all the implications of the value of intangible heritage, without excluding those linked to 'dark' aspects of past industrial history.

Many of the themes in the introduction by Meier and Steiner are developed in the essays of the other authors. The space available here does not allow an account of each of the numerous topics that are dealt with. At the same time, we must start from the key concept in the Germanic area on cultural heritage: the concept of Industriekultur. The term is not new and undoubtedly in the last years an inflationary use has been made of it. The reconstruction, led by Axel FÖHL (Industrie + Kultur = Industriekultur?), of how the definition of this concept, first introduced by Hermann Glaser and then redefined by Klaus Pirke, Walter Müller-Jentsch, and others, has evolved is therefore particularly helpful.

What deserves more attention is that in the early Glaser formulations, dating back to the mid-1960s, Industriekultur had a very open meaning that embraced the entire cultural history of the industrial age. In such a broad sense, the preservation of material evidence, of so-called industrial monuments, did not enjoy a specific priority. Only a few years later the first inventories of the decommissioned industrial heritage began to be compiled, thanks to the art historian and curator Roland Günter who was responsible for the first registrations of production facilities in the Oberhausener und Mülheim / Ruhr Denkmalliste. Afterwards industrial museums were started from 1979 in the Rhine and Westphalia, but it is only with the launch of the International Building Exhibition Emscher Park - IBA, running from 1989 to 1999, that the conservation practices achieved a 'sort of quantum leap'.

The contributions offer a wide variety of approaches to how preservation should be done. Among the models pointed out by Föhl there is above all the IBA approach that has succeeded 'to make the forbidden places available' to the public, just as the highly deserving Dortmunder Landesstiftung 'Industriedenkmalpflege und Geschichtskultur' continues to do with Hansa Cooking Plant and other remarkable sites. Today, after more than 25 years of experience with industrial museums and industrial monuments, it can no longer be denied that 'the didactically prepared parts of the plant should be confronted with largely unchanged but accessible monument zones', because 'the smell of past processes, which rises in the nose when climbing to 'real' blast furnace, impresses more than the synthesized imitation effect with which museums today we want to impress the visitors'.

However, it is necessary to agree with the concept of 'unchanged monument zones'. In theory, monument zones can remain unchanged, limiting any conservation interventions to the strictly essential to slow down the collapse of structures as much: this is an option argued by Stephanie HEROLD (Heritage und 'Denkmal-Kultus', Industriedenkmale zwischen 'material turn' und Alterswert) in terms of a 'decay of building', to be considered not as a loss, but as a form of transformation. In this case, a monument should be seen as an object exposed to time's action and its value attributed to the idea of the time that has been elapsed since its creation.

This process of 'material turn' can be managed through a 'curated decay' program, even if it is legitimate to ask, as Herold does, 'to what extent this approach should be carried out in practice or if it should be understood simply as an interesting theoretical concept'?

The opposite case is the careful and well documented examination of Axel BÖCKER (Welt(kultur)erbe Völklinger Hütte - Denkmalpflegerische Alltagsarbeit und wissenschaftlicher Hintergrund) on the evolution of the conservation strategies for Völklinger Hütte. The fame of this UNESCO site (1994) does not correspond to the equal notoriety of the history of its preservation. At the time of its designation as a cultural monument (1986), 'experiences in dealing with industrial monuments of similar nature did not exist ... Thus, in order not to frighten the public with excessively high maintenance expenditures, the term 'controlled industrial ruin' was invented in analogy with monument ruins and aimed at preserving them for as long as the substance permitted. This was to be expected in this model'.

Such an interpretation of Völklingen Ironworks as a temporary monument (ephemeral) would enter in collision with the UNESCO guidelines. For this reason, in the nomination for the World Heritage List, 'the concept of a controlled industrial ruin led to the principle of minimally invasive rehabilitation of the historical building components'. This principle forms the basis from which specific procedures have emerged for the corrosion protection of the metal parts, for the decontamination of the polluted areas of the plant and for the restoration of the degraded parts of the historic plant, procedures aimed at durable protection the integrity of the monument.

This 'minimalist' conception of conservation is also the most suitable, according to Axel Föhl, to thwart the potential risks often run by industrial heritage recovery interventions. These include both tendencies to 'aestheticize' abandoned sites, and the excessive invasiveness of some technological modernization interventions (air conditioning systems, acoustic treatments, etc.), which, in some cases, distort the original identity of the ancient industrial spaces (Jahrhunderthalle in Bochum represents a negative example for Föhl that must not be followed).

Nevertheless, however conservative interventions may be 'minimal', they can't help but obey a symbolic strategy. This is the theme of the beautiful essay by Susanne HAUSER (From Derelict Land to the Preservation of Industrial Remains) in which it is noted

that from the redevelopment interventions of the former industrial sites in the last few years two different 'symbolic strategies' emerge, one of 'return to nature', the other of 'return to memory', which, however distinct from a conceptual point of view, can obviously intertwine in the same intervention.

The first of these two strategies stems from the acknowledgment that derelict industrial sites may be favourable places for the spontaneous development of new vegetation, not autochthonous and able to survive without any human care. Disused industrial zones and abandoned mining sites have surprisingly demonstrated their suitability to support the development of a great biodiversity (even more than certain rural areas).

These processes of spontaneous re-naturing do not reproduce the previous ecological system, on the contrary they give the opportunity for associating the design of a new post-industrial nature with the parallel reuse project of an industrial site. The risks of this strategy - reported by Elissa ROSENBERG in her insightful article (Picturing the Landscape: The New Topographics and the Rise of a Post – Industrial Landscape Aesthetic) - are that of an excessive emphasis on wilderness and the formation of a new landscape conveying a 'view of nature as a healing, regenerative force, external to culture and history'. In this sense the design of Duisburg North Landscape Park by Latz + Partner pursues a model of renaturing opposite to the cancellation, behind the appearances of a false reconciliation, of the destructive effects that the arrival of the industry has brought to the pre-existing ecosystem. All the signs that still document the conflicting relationship between technology and nature have been preserved: as Peter Latz has claimed 'destruction has to be protected so that it isn't destroyed again by the recultivation'. Only in this way, concludes Rosenberg, post-industrial landscapes can remain inseparable from culture and history.

Along this road we approach the second symbolic strategy enunciated by Hauser; 'return to memory'. In this case, the symbolic strategy favours the links between technology and history that find the first examples of representation in science museums, starting from the 18th century, in the main industrialized countries, followed in the 20th century by the first experiences by eco-museums of treating the whole industrial territories (the Ironbridge Gorge Museums).

The conservation of industrial memories (whether they are production machines in a museum, individual factories or manufacturing districts) aims 'to support the self-confident idea of local, regional, or national identity'. However, troubling problems are also emerging for this strategy, especially in the former European industrial regions, as 'economic changes push the former industries into the background and, in the long run, make the material remains alien to the local population'.

So how can we react to the growing difficulty in maintaining a 'local reference to old industries… once the generation with a vital connection to the closed slate quarries or textile mills, to the decommissioned mines or steelworks, has died?'. This is the crucial question that, as experts in industrial heritage, we should all ask ourselves. The merit of this book is to offer some valuable suggestions to this dilemma.

Before concluding, I would like to mention at least two of them. Of great interest is the encouragement of Lars SCHARNOLZ (Neue Industriekultur - Warum eine Aktualisierung der Industriekultur erforderlich ist) to make a decisive change of perspective of the Industriekultur, which has so far remained too late on a retrospective view of industrial heritage. It has been too easily assumed that the deindustrialization of the second half of the 20th century was the end of an era, followed by a post-industrial society. On the contrary, the lesson we can draw from what happened in old industrialized countries is the exact opposite. It is no longer possible to ignore the intense processes of re-industrialization that affect countries where industry was considered to be concluded, and which are shaping a new industrial landscape. In the face of the rebirth of a new industrial cycle, a radical rethinking of the mission of the Industriekultur becomes irrevocable. Limiting its sphere of interest only to the past events of industrial development leads to a deadlock: 'More decisive is the connection with a vision of the future. Old power plants and disused production halls are not only of considerable social value ... From this point of view, former industrial buildings as Völklingen Ironworks, Zollverein colliery, F60 conveyor form to decisive bridge to industrial renewal. They remind us of the consistent protection of an industrial architecture with a fundamental interface between historically conscious conservation and industrial renewal. '

Another way to react to the weakening of the 'local reference' of the industrial heritage (previously reported by HAUSER) is the way indicated by Dietrich SOYEZ to escape the 'territorial trap' (Auswege aus der 'territorialen Falle': Tomioka und Yawata als japanisch-europäische Modelle für die (Re-) Transnationalisierung von Stätten der Industriekultur). This the pitfall exposed when every vision of industrial heritage is limited to the geographical region to which it belongs and is unable to grasp the intrinsically cross-border nature of the processes of industrialization: 'Industry - as Soyez claims - is inconceivable without transnational transfers of ideas, inventions, people, machines, assets, capital'.

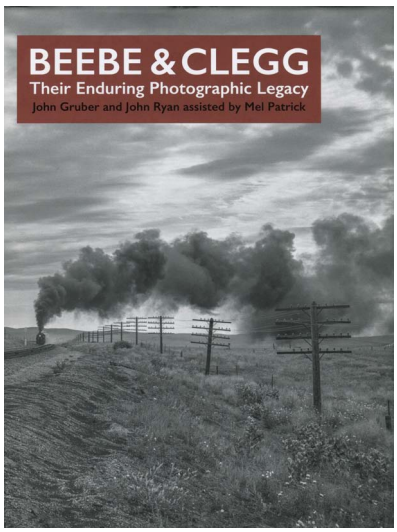
On the other hand, this insertion of industrial heritage into a global network of technology transfers and know-how is not always taken into account. Soyez cites the example of Völklinger Hütte's Unesco inscription (1994): in its OUV statement the inscription is justified on the basis that the property represents 'a unique witness to the history of technology and industrial culture of the 19th and early 20th centuries', while very little consideration has been given to the history of technological transfers to and from abroad,

and to the connections of the events of this property to 'almost a century of wars, occupations, annexations and border changes'. As examples that have managed to escape the risks of the 'territorial trap', Soyez brings another two inscriptions to UNESCO List: Tomioka Silk Mill (2014) represents an industrial heritage whose value can only be understood by means of the transfer of experts, technological knowledge and machinery from France to Japan. In the second case, the transnationality of Yawata Steel Works (one of the 11 Sites of Japan's Meiji Industrial Revolution, 2015) is an effective testimony of the transfer from Germany of both technical equipment and engineering know-how.

Soyez's exhortation not to fall into the 'territorial trap' and to enhance the transnational characteristics of the industrial heritage is an invitation to be saved. An echo can be felt from the introduction of this work, where the two curators Meier and Steiner, complaining that 'national narratives still determine views of cultural heritage', advocate supranational 'heritage communities ... who feel a sense' of affiliation with a common heritage without nationally-defined or territorial attachments'.

How not to share this appeal? This is surely the direction in which to proceed, also to compose 'as aspects of a shared heritage' all potential 'ruptures, diverging narratives and conflicts' arising from the social construction of the cultural heritage into complex societies.

The book is available online: **https://doi.org/10.11588/arthistoricum.374.531** (ISBN 978-3-946653-98-1, open access). The print version has been published by Jörg Mitzkat, Holzminden, in 2018 (ISBN 978-3-95954-061-2).



John Gruber and John Ryan, assisted by Mel Patrick, *Beebe & Clegg: Their Enduring Photographic Legacy* (Madison, WI: Center for Railroad Photography and Art, 2018).
ISBN: 978-0-692-07999-7

224 Pages. Hardcover, $65.00 USD.

200 B&W Illustrations.

Review by Betsy Fahlman, Arizona State University

Photographer Lucius Beebe (1902-1966) embraced many roles in his life, including being a Manhattan café society dandy and bon vivant who was also a syndicated columnist, but he had the most fun with railroads. Beginning in the late 1930s, he pioneered introducing 'railroad photography and the word of railroading to wide popular audiences,' a passion he continued after he met his life partner, Charles Clegg (1916-1979) in 1941. As an openly gay couple, they cultivated a public image as sophisticated New Yorkers (and later as chicly rustic westerners) with a reputation for flamboyance, pursuing rail adventures made possible by Beebe's wealth (their private wooden car was named the Gold Coast, and it was replaced with a 1938 Pullman they named the Virginia City). A celebrity, Beebe had a talent for garnering publicity promoting their many trips and publications. As Beebe, the public face of the professional partnership declared: 'If anything is worth doing, it's worth doing in style.'

This copiously illustrated and engaging volume is divided into nine sections, with short introductions preceding a generous selection of photographs. The first two are 'Their Life and Times Together' and 'Beebe and the Beginnings,' both of which chronicle their biographical details and the photographic equipment they used. Illustrations include documentation of the champagne salute they staged at Promontory, Utah, in 1949 marking the eightieth anniversary of the completion of the Transcontinental Railroad. Elegantly dressed in top hats and tails, they re-enacted the golden spike ceremony with all dignified camp.

'The Visual Influences' discusses Beebe within the context of the energetic expansion of photojournalism during the thirties and forties that was spurred by pictorial magazines that published high quality images by Margaret-Bourke White and others, including Fortune and Life. Celebrity photographer Jerome Zerbe, Beebe's boyfriend during the thirties, was another important influence.

By the time he met Clegg, Beebe had already published three railroad books (their first book together was published in 1945; an

PUBLICATIONS RECEIVED

extensive 'Beebeography' lists a selection of their many publications that appeared between 1921 and 1967). In 'Main Lines and Limiteds,' he shows his preference for the drama of steam engines. He savored 'the stirring thunder or exhaust' over diesel; double headers offered even more spectacular visual effects. His prose was decidedly not stuffy and was described by a critic in the New York Times as 'effervescent, ambidextrous,' while another writer characterized it as 'rococo.'

After World War II Beebe and Clegg began chasing the last vestiges of small-scale railroading, soon to become extinct, a subject presented in 'Short lines: 'Not as Long but Just as Wide.' These rural trains that hauled both passengers and freight were the victims of the 'big trains and fast limiteds of mainline railroads,' yet they represented 'a microcosm of the whole pageant of railroading,' one grounded in a strong sense of place and an enthusiasm for local detail. Beebe and Clegg loved the Old West and were 'smitten' with 'traditional steam railroading,' one of their favorite short lines was the subject of 'Nevada and the Virginia & Truckee.' Beginning in 1948, they summered in Virginia City, Nevada, and moved there full-time in 1950. They edited the former mining boom town's historic newspaper, the Territorial Enterprise, for nearly a decade before resettling in California in 1961.

'On the Narrow Gauge' explores the 'austere, down-home' enterprises that existed in the Rocky Mountain regions, pairing rail travel with rugged and remote landscapes. One memorable trip was made on the Denver & Rio Grande Western, whose routes were the 'most extensive and developed' in southwestern Colorado. They travelled in style, and the train was well stocked with fine wines and excellent food. No deprivation while experiencing the high lonesome of the American West for Beebe and Clegg!

The volume ends with an assessment of 'Their Photographic Legacy.' With Clegg, Beebe published some thirty volumes, transforming 'the seemingly prosaic subject of railroads into books that beguiled the public.' Railroading books are plentiful these days, but it was Beebe and Clegg's volumes that spurred that broad interest. The life they shared was a good romp, cushioned by the wealth that made possible the shared pleasures of America's historic railroads and the journeys they took. The photographs will enable readers to vicariously experience Beebe and Clegg's many excursions and adventures. This wonderful volume reclaims vividly a true railroading character who transformed the narrowness of hobbyist arcana into an exploration of one of the great American icons and doing it with considerable style.

COMING SOON

2019

MEXICO

Congreso Internacional sobre Patrimonio Industrial. Retos y Prospectivas en las Américas. CFP.
6 - 8 May, Monterrey, Nuevo León.
Information

UNITED STATES

Preservation of Industrial Archaeology and its Construction History, Association of Preservation Technology and the Construction History Society of America. CfP.
May 17, Chicago.
Information

TAIWAN

Water as Heritage, International Scientific Committee on Water and Cultural Heritage, ICOMOS Netherlands and LDE Centre for Global Heritage and Development, the Delft University of Technology and the Taiwan International Institute for Water Education.
27-31 May 2019, Chiayi: The theme 'Waterways' is being coordinated by Dr Hsiao-Wei Lin of Taiwan and Dr Irene Curulli, both TICCIH members.
www.water-as-heritage2019.org

COMING SOON

UNITED STATES
Society for Industrial Archeology 48th Annual Conference
June 6-9, Chicago, IL.
www.sia-web.org

FINLAND
Industrial Labour & Literary Culture in the Long Nineteenth Century, Piston, Pen & Press research project and the Finnish Labour Museum.
CFP: June 7, Finnish Labour Museum Werstas, Tampere.

POLAND
Technology and Power, ICOHTEC 46th Symposium.
22-27 July, Katowice. Includes 3rd ICOHTEC Summer School for PhD students and early career scholars.

POLAND
Big Stuff 2019: Preserving large industrial objects in a changing environment.
September 12-13, Katowice, Upper Silesia.
Information

SPAIN
XXI Jornadas Internacionales de Patrimonio Industrial - GEOGRAFÍAS, GEOMETRÍAS Y EMPLEOS.
25-28 September, Gijon.
www.incuna.es

GUATEMALA
IX COLOQUIO LATINOAMERICANO DE PATRIMONIO INDUSTRIAL.
4 - 7 November, Ciudad de La Antigua Guatemala

THE INTERNATIONAL COMMITTEE FOR THE
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