TICCIH

The International Committee for the Conservation of the Industrial Heritage

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MESSAGE FROM YOUR PRESIDENT

HALF A CENTURY OF TICCIH IN 2025!

Miles Oglethorpe, TICCIH President

—

Welcome to Issue 107 of our Bulletin! Looking back over the last three months, it seems that it has been even busier than usual—but maybe it always feels like that! There have been several successful online conferences and meetings, not least in Serbia and Indonesia. We continue to have meetings with UNESCO's regional office in Bangkok to discuss a potential initiative in Southeast Asia, which is really exciting.

As for in-person events, I attended an inspiring annual conference in the amazing city of Łódź in Poland, during which ERIH (European Route of Industrial Heritage) celebrated its 25th anniversary. I

TICCIH's 50th Anniversary logo and brand (design by Esteban Vásquez)

ON THE COVER: SAVAM Glassworks in Altare (Savona, Liguria, Italy) A glass production facility from the 1920s-1930s, originally part of the Società Artistico Vetraria (SAV), with origins dating back to the second half of the 19th century, May 2017. Photo Focus on Industrial Heritage: Photographer Roberto Marini

Chhatrapati Shivaji Maharaj Terminus in Mumbai (photo by author)

also completed a mini-pilgrimage to Mumbai to attend a wedding, during which I was able to pay homage to one of the world's most fabulous railway stations, the incredible Chhatrapati Shivaji Maharaj Terminus (inscribed by UNESCO in 2004). There has also been a flurry of other activity, not least in Norway, but much of our focus inevitably has been on preparing for our World Congress this year in Kiruna, Sweden.

This has caused me to reflect back on how far TICCIH has come since its birth in the early 1970s. So, it's exciting to think that Kiruna will host our 50th anniversary and that there will be a session on the first day of the programme that will commemorate key people and achievements. With this in mind, we are asking members to go rummaging in their own archives to dig out photographs and documents that capture important moments and people who have been instrumental in the evolution of TICCIH. For the earliest years, this was a considerable challenge because there were no mobiles and phone cameras at this time, and because it pre-dates digital photography, the expense of film and processing was constraining. Photographs, in particular, were, therefore, a lot rarer than they are

TICCIH
President: Dr. Miles Oglethorpe
Historic Environment Scotland
Longmore House, Edinburgh EH9 1SH, Scotland
e: ticcih.president@gmail.com, t: +44 0131668861 1

Secretary General: Dr. Marion Steiner
ESPI Lab on Critical Industrial Heritage Studies, Valparaíso, Chile
e: secretary@ticcih.org

Editor: Articles and news of recent and future events should be sent to the Editor, Bart Vanacker, e: editor@ticcih.org

To propose the publication of your photographs and find the publication rules, write to Francesco Antoniol at antoniol@virginiastudio.it

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

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TICCIH is the world organization on Industrial Heritage, promoting its research, recording, conservation and dissemination and education on industrial heritage. It holds a triennial conference and organises interim conferences on particular themes. Individual membership levels range from $10 to $40 (USD), corporate membership is $65, and student membership levels range from $5 to $10.

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

The **TICCIH Bulletin** is the only international newsletter dedicated to the worldwide conservation of the heritage of industrialisation, and is sent direct to members four times a year. The Editor welcomes all news, critical comment and articles related to our field. Everything published in the Bulletin can be accessed in a searchable Articles Index on the TICCIH web page.

Back issues can be downloaded as a pdf file from the TICCIH web site, www.ticcih.org

The Vienna House Hotel was part of the Poznański Mills complex in Łódź. The picture is taken from the swimming pool on the roof of the former mill (photo by author)

ERIH celebrated its 25th anniversary in Łódź in Poland (photo by author)

now. So, if anyone finds anything significant that they are willing to share with us, please contact me at TICCIH.President@gmail.com.

Kiruna will also be especially important because we will be looking forward and exploring ways of enhancing TICCIH, expanding the balance and geographical reach of our membership, and putting our organisation on a more resilient, sustainable footing. In this respect, the General Assembly at the end of the conference will be particularly important.

We are acutely aware that there is a need for new blood on the Board, so we are keen to encourage anyone interested in being nominated for election to do so in the coming months (watch out for notices in the Bulletin!). This August, some Board members will be stepping down, and some of you will be aware that I intend to stand down as President, having served two consecutive terms. I will not be going far and look forward to supporting TICCIH for many years to come, but there is now an opportunity for new people to take the helm.

With this in mind and driven by the energy of Marion Steiner, our Secretary General, we have been working to modernise both the work of the Board and to amend our Statutes and Nizhny Tagil Charter so that they are fit for purpose. We plan to formally introduce new positions with defined functions on the Board. A principal aim is to better share the workload, which will be assisted by establishing mini-teams tasked with taking forward specific pieces of work. We will discuss all this and seek approval from our membership at the General Assembly in Kiruna, so we are hoping as many of you as possible can be there.

Even though I have only just begun to excavate through my older TICCIH documentation, the process of re-living the early years of TICCIH has been fascinating and hugely rewarding. It is extraordinary to see the range and scale of past achievements and to remind ourselves of the debt we owe to the early pioneers of industrial heritage. Were it not for them, so much of what we have now would have disappeared. Even so, it is also sobering to be reminded that some of this legacy is not safe and secure. For example, later in this Bulletin, you can read about the unique Vale de Milhaços Gunpowder Factory in Portugal, which was saved after its closure but now, 20 years later, needs help to survive and thrive.

Finally, I would like to thank Esteban Vásquez for designing TICCIH's 50th Anniversary logo and brand, which is tremendous and a great start to 2025!

FIVA – TICCIH AUTOMOTIVE INDUSTRIAL HERITAGE RECOGNITION AWARD GIVEN TO AUTOWORLD IN BRUSSELS

Nataša G. Jerina (FIVA) & Günter Dinhobl (TICCIH)

—

On November 15th, the 2024 FIVA – TICCIH Automotive Industrial Heritage Recognition Award ceremony was held in Vienna during the general assembly of FIVA. FIVA (Fédération Internationale des Véhicules Anciens or International Federation of Historic Vehicles) is the worldwide organisation dedicated to protecting, preserving and promoting historic vehicles and related culture and their safe use. It was founded in 1966 by an international group of historic vehicle organisations to encourage the safe use on the roads of self-propelled, mechanical vehicles that are more than 30 years old for the benefit of their owners, dedicated enthusiasts, and the general public.

The collaboration of FIVA and TICCIH came into life when the memorable MoU was signed in Paris in 2022, and the FIVA – TICCIH Automotive Industrial Heritage Recognition Award was established (see TICCIH Bulletin #96, 2022). This Award lays the groundwork for acknowledging excellence in conserving industrial heritage.

In 2023, the 2023 FIVA – TICCIH Automotive Industrial Heritage Recognition Award was granted to MotorWorld in Germany and handed over at the beginning of the year. Motorworld Group, a dynamic network of locations and venues dedicated to all facets of motoring culture, has been recognised for its remarkable contributions. With a focus on celebrating automotive history, innovation, and lifestyle, Germany-based Motorworld provides a vibrant platform for exhibitions, events and gatherings. These industrial historical sites transformed with a modern touch retain their industrial character while offering visitors a contemporary automotive experience.

This year, several nominations and ideas reached our organisations, and after an assessment, the 2024 FIVA – TICCIH Automotive In-

Award-giving ceremony on November 15th in Vienna (photo by Mario de Rosa, FIVA)

From right to left: Nataša G. Jerina (FIVA Vice-President and head of Culture and Youth Commission), Peeter Henning, Vincent Introvinge (both Autoworld), Günter Dinhobl (TICCIH national representative of Austria) (photo by Mario de Rosa, FIVA)

TICCIH 2025 Kiruna
Heritage in action

dustrial Heritage Recognition Award was given to Autoworld in Brussels. Autoworld is located in the Parc du Cinquantenaire, established in the 1880s to commemorate the 50th anniversary of the Kingdom of Belgium. It hosts a park area, some monuments and exhibition halls. One is the neo-classical hall building, where Autoworld is currently situated. In its history, this historic exhibition hall hosted numerous motorcar and motorcycle exhibitions from 1902 to 1936.

Since 1986, this historic building – excellently restored, of course – houses most of Ghislain Mahy's extensive collection of classic cars: more than 300 vehicles – cars, trucks, and motorcycles – are on permanent display. It covers the motorcar's evolution from as early as 1896 to contemporary models, opening the future of automobiles.

Autoworld is a place for visitors to experience automotive history. Expert scenography showcases cars from the most iconic years since 1960. Special sections highlight sports and competition cars, vehicles owned by the Belgian Royal Family, micro and bubble cars, and notable car designs in general. The exhibition also includes "Belgium at Autoworld," which is dedicated to the heritage and history of Belgium's car industry.

Nowadays, Autoworld has been a dynamic museum for decades, regularly presenting temporary exhibitions that explore a wide array of automotive themes throughout the year. On behalf of TICCIH-President Dr Miles Oglethorpe, the National Representative Günter Dinhobl (TICCIH Austria) and FIVA Vice President Nataša G. Jerina presented the award to the Autoworld representatives. The FIVA – TICCIH award underlines this great initiative of presenting industrial heritage both of buildings and vehicles to the public. Since decades in the past, for decades in the future.

Contact the author

Kiruna mine in Sweden (photo by Dag Avango)

TICCIH WORLD CONGRESS: SECOND CALL FOR PAPERS

TICCIH - the International Committee for the Conservation of the Industrial Heritage – invites you to its 19th World Congress under the theme "Heritage in Action: Legacies of Industry in Future Making" in Kiruna, August 25 – 30, 2025. We invite interested researchers and practitioners to submit proposals for conference sessions.

The TICCIH 2025 congress focuses on tensions and controversies surrounding industrial heritage and its relation to broader tensions in present-day society. It explores how we think about the past and the future in the present and how we construct historical narratives to connect the two and attach them to built environments and artefacts to get where we want to go. It is a theme that addresses key global issues connected to the UN sustainability goals, the goal conflicts emerging between them and pathways to bridging tensions through heritage. The theme also includes the issue of how we can work with contemporary industries as heritage and the heritage of the future.

In addition to the overall theme, there are eleven subthemes, ten

thematic and one open. Choose one of the subthemes based on what suits your paper best:

1. Industrial Heritage and Traces of Colonialism
2. Heritage in Motion in Time and Space
3. Industrial Heritage and a Sustainable Future
4. Who's Heritage – Inclusion or Exclusion?
5. Post Industrial Heritage – For Whom?
6. Action For a New Generation
7. Industrial Heritage in Popular Culture – Dystopias or Utopias?
8. Heritage at Risk
9. AI – Friend or Foe?
10. Nominating and Managing industrial World Heritage Sites
11. Open Themes

You can also choose to attach your presentation to one of the submitted sessions (you must do so if you are already part of a submitted session). This is optional. If you do not choose a specific session, you will, if accepted, be placed in a session in one of the subthemes presented above. If you want to participate in a particular session, please choose the session name in the designated box when you submit your paper. Just follow the instructions. It is done at the end of the submission.

You can find the submitted session proposals here.

Please note that no guarantee submitted sessions or individual papers will be accepted. If you submit your paper to a session that will not be accepted, and your paper is accepted, your presentation will be placed in another suitable session. Likewise, if your paper does not meet the scientific requirements, it will be rejected even though you might be part of a submitted session proposal.

Submit your paper abstract describing the objectives/topic of your paper in no more than 250 words before January 31, 2025. You can also attach one picture, figure, or table (PNG/JPG). Every submission also needs to include a short bio of the presenter (in most cases, the person or persons submitting the session), in total, no more than 100 words.

WORLWIDE

NORWAY

HIGHLIGHTING NORWAY'S HYDROPOWER HERITAGE FOR TOURISM DEVELOPMENT

Knut Markhus, TICCIH Norway

—

In Norway, hydropower has been a pivotal source of electricity since the early 1900s and continues to be the dominant source. Hydropower plants are dispersed across the country, particularly in the west, where some facilities hold significant cultural and historical value, whether decommissioned or still operational. These sites also present untapped tourism potential.

The Hydropower Tourism project in the Western Norwegian Fjord Landscape (2022–2025) aims to explore how historical hydropower installations can serve as a foundation for sustainable tourism and regional revitalisation. Focusing on three fjord areas—Lysefjorden, Tyssedal, and Høyanger—the project links historical sites, museums, and local tourism industries to develop innovative visitor experiences centred on hydropower heritage.

The Turbine Hall in the protected Tyssedal Hydropower Station, the main venue of Kraftmuseet (photo by Matt Coch)

Two western counties launched this initiative with support from the Norwegian Directorate for Cultural Heritage. According to the Directorate, the cultural environments of hydropower in Western Norway hold substantial value and offer significant potential benefits for tourism, local communities, and regional development.

Tyssedal Hydropower Station is beautifully situated by the Hardanger Fjord, a sought-after tourist destination in Norway (photo by Harald Hognerud, Kraftmuseet)

A powerful accommodation option: Energihotellet, located in what was formerly the main building of the Røldal-Suldal Hydropower Plant (photo by Photo Dag Jenssen)

"The Directorate for Cultural Heritage assesses that facilities for hydroelectric power production constitute visible and important cultural environments in the western Norwegian landscape and have interesting potential for tourism, owners, local communities, and the region. The project can also contribute to comprehensive dissemination and management of cultural environments related to an important part of the history of the West Coast," the Directorate stated when awarding funding.

The project brings together various parties that have often not worked closely together before: municipalities, museums, power plant owners, accommodation providers, and destination and development companies.

In its final phase, the project has driven enthusiastic efforts to develop diverse tourist opportunities within Western Norway's hydropower landscape. Several distinctive experiences have been refined and marketed, including, among others:

- The Flørli hydropower station in Lysefjorden, featuring one of the longest wooden staircases in the world, with 4,444 steps;
- A mine walk in Sauda, a small town steeped in industrial history;
- Cycling tours through hydropower landscapes;
- A via ferrata climb along the pipeline at Kraftmuseet;

The stairs along the K1 penstock in Høyanger are in the process of being developed into a tourism attraction (photo by Vegard Aasen, Veri Media)

- The "Kraftduo" experience in Høyanger combines two hikes that explore past and present hydropower production, complemented by local accommodation.

The project addresses challenges such as balancing diverse stakeholder priorities, extending tourism seasons, and aligning cultural preservation with tourism demands. Early findings from the ongoing evaluation suggest that these initiatives attract new visitor segments and contribute to local economic growth by diversifying tourism offerings and leveraging hydropower heritage as a unique draw.

"This project has been invaluable for us," says one participating municipality. Several participants highlighted the need for greater involvement from hydropower plant owners to ensure continued progress. The final evaluation, expected in winter 2025, will determine the effectiveness of the project's focus and methods and guide its potential Continuation. More information can be found on the Kraftmuseet and Fjord Norway websites.

Contact the author

CHILE

SHUTDOWN OF THE ONE AND ONLY INTEGRATED MILL IN CHILE

Viktor Mácha, The Beauty of Steel

—

Picture this: a steel mill perched over the ocean, far, far away on the eastern shores of South America. The mill will shut down for good in just a few weeks, and you have one final chance to document its manufacturing process. No one has ever done this before, and no one ever will again. Would you seize the opportunity, even knowing it would be an expensive, whirlwind trip?

I did. It wasn't the first time I sacrificed everything for a steel mill.

After a sudden invitation from the plant director, Jean-Paul Saure Roeckel, earlier this year, I booked my flights. I travelled to Chile to capture the final days of Siderúrgica Huachipato—the only integrated steel mill in this remote and beautiful country.

The decision to build an integrated metallurgical plant in Concepción was made during the presidency of Juan Antonio Ríos in 1946. The ironworks were named Compañía de Acero del Pacífico (CAP) and became the largest steelmaking site in Chile. Production began in 1950 with a single blast furnace, a coke plant, an open-hearth shop, and a bar mill. The plant's planned annual capacity was 182,000 tonnes of steel.

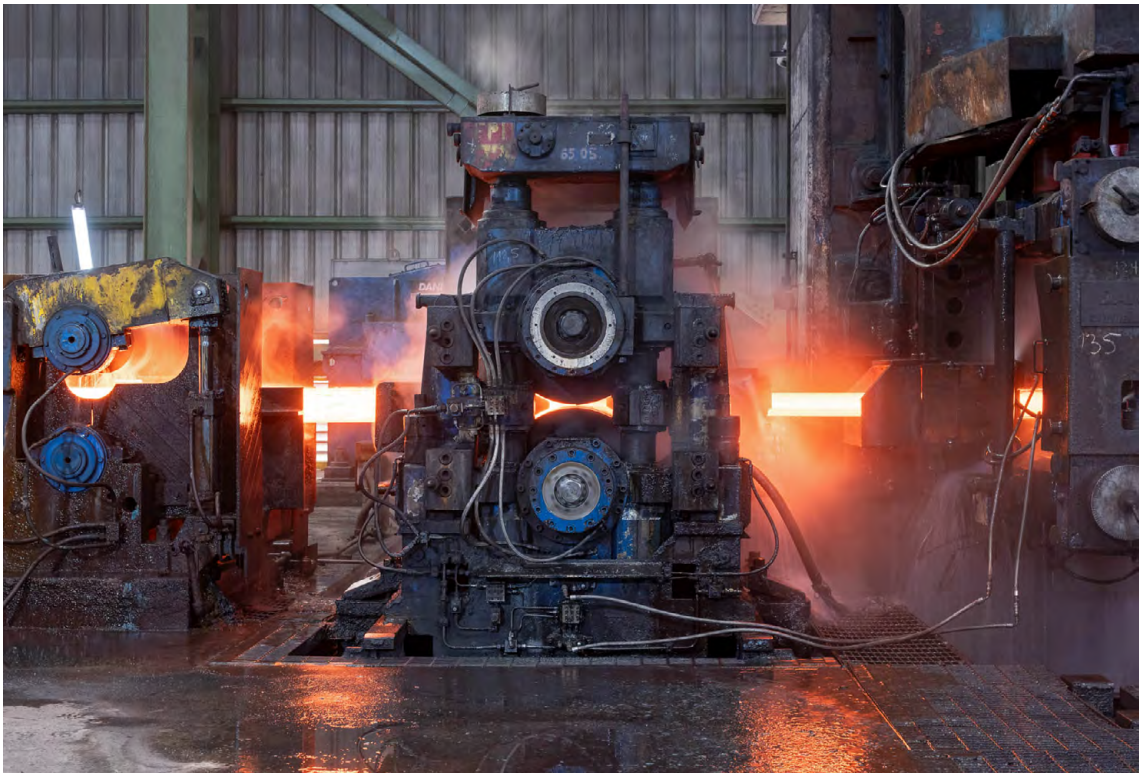
Siderúrgica Huachipato was the only integrated steel mill in Chile (photo by author)

But then, on May 21, 1960, a devastating earthquake struck, causing significant damage to both the town and the mill. Despite the destruction, steel production resumed after just eleven days.

A second blast furnace was commissioned in 1966. A decade later, in 1976, modern LD converters with a capacity of 90 tonnes replaced the outdated open-hearth furnaces. By the early 1980s, the plant had undergone a complete reorganisation, which led to the formation of a new company called Grupo de Empresas CAP.

In 1990, a second coking plant was built, entirely replacing the original one from the 1950s.

In 1990, a second coking plant was built, entirely replacing the original one from the 1950s (photo by author)



A state-of-the-art rolling mill produced steel bars and rebars (photo by author)

Then, in 2008, Danieli supplied a state-of-the-art rolling mill for producing steel bars and rebars. However, on January 27, 2010, another powerful earthquake hit Concepción, paralysing production for two months.

In 2013, the hot strip mill was mothballed due to low demand. But the worst was yet to come. The mill entered 2024 in serious trouble, struggling against an influx of cheap Chinese steel imports. The company was teetering on the brink of shutdown. Quick government intervention temporarily saved the mill, imposing high tariffs on imported Chinese steel products. But before the tariffs could

take effect, China flooded the Chilean market, saturating it with enough steel to meet two years of demand.

That was the breaking point. Siderúrgica Huachipato could no longer compete. The light at the end of the tunnel, made of Chinese steel, vanished for good. Heavy-end operations ceased on September 15, 2024, just four days after my unforgettable and deeply melancholic visit. The workers knew the end was near, but that didn't stop them from producing steel with unparalleled dedication until the very last day.

Siderúrgica Huachipato will be remembered as Chile's last integrated steel mill. It marked the end of a beautiful 74-year era, and I will forever be grateful for the chance to witness it.

Contact the author

Elemore Pithead Baths, 2024 (photo by C20)

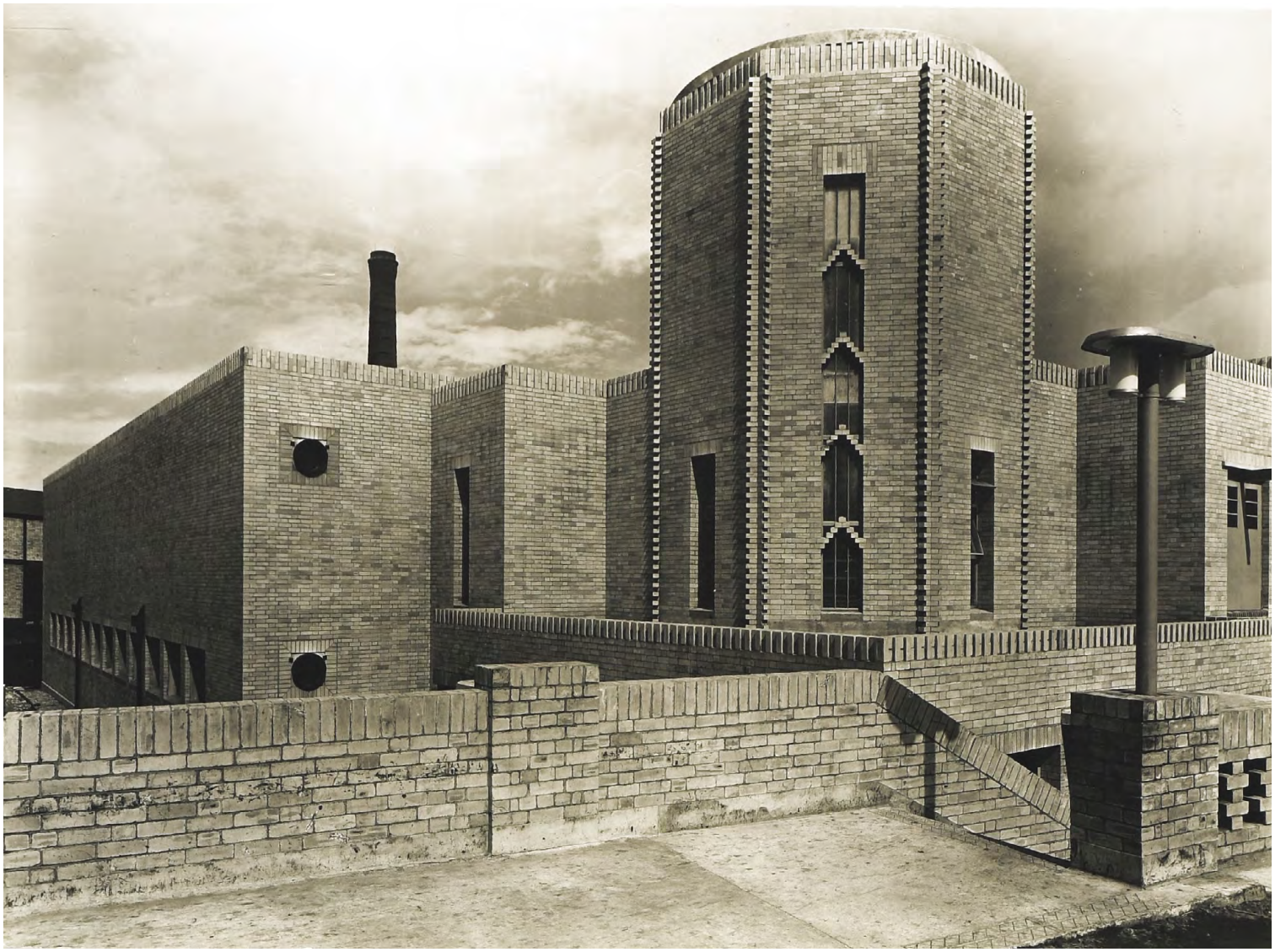
UK

REDISCOVERING PIONEERING YET FORGOTTEN PITHEAD BATH BUILDINGS

Oli Marshall, Campaigns Director Twentieth Century Society

Pioneering Pithead Baths programme transformed the coal mining industry, brought European architectural modernism to working-class communities across the country, and delivered widespread health and welfare benefits some two decades before the founding of the NHS. Yet, the story of Britain's pioneering Pithead Baths has been almost completely forgotten. Now, a new research project, led by the Twentieth Century Society (C20) – the national charity that campaigns to protect the UK's modern architecture and design heritage – and Queen's University Belfast, aims to shed new light on their legacy and discover how many of these ground-breaking buildings remain. So far, 65 surviving examples have been identified across the former coalfields. The project now calls on local heritage groups, ex-miners, and mapping sleuths to record further examples and help complete the picture.

A one-day symposium in London last Autumn presented interim findings from the project. It brought together experts from Germany, Poland and the Netherlands to discuss innovative approaches to mining heritage across Europe. Legendary banner-maker Ed Hall – a regular collaborator of artist Jeremy Deller, who won the Turner Prize for his recreation of the 1984 Battle of Orgreave – was commissioned to design a striking trade union style backdrop for the occasion (pictured), which it hoped will now go into the permanent collection of the National Mining Museum.



Silksworth Pithead Baths, County Durham, 1934 (photo by C20)

'White shining temples of health'

Described in 1938 by critic and broadcaster Anthony Bertram as "a colossal social experiment taking architectural form", Pithead Baths allowed coal miners to wash at work before returning home, serving more than half a million workers daily. Mandated by the Miners' Welfare Committee, designed by their in-house architects, and funded by state-legislated levies on coal production and profits, this was an unprecedented progressive building programme. It acted as a powerful propaganda tool for the wider coal mining industry.

The light-filled, communal, clean, and spacious Pithead Bath buildings completely contrasted with the often bleak and isolated environments associated with the country's coalfields. In addition to providing heated showers for the first time, they also included facilities for drying dirty clothes and storing them in specially designed heated and ventilated lockers. Separating industrial dirt from the domestic environment had a transformational effect on workers and their families. Previously, miners would have had to bathe at home, usually in a tin bucket, with coal dust linked to elevated infant mortality rates.

The design and look of the buildings were also of great importance, drawing inspiration from the Dutch modernist architecture of Willem Marinus Dudok, particularly the schools and civic buildings he designed during the 1920s and 30s in the town of Hilversum, near Amsterdam. They combined strong horizontal and vertical elements – a tower to store the water, with a long, low block for the showers and changing areas. Distinctive features of the early modern movement were commonplace in Pithead Baths, from steel-framed streamlined windows to projecting concrete canopies and pale-coloured engineered brickwork.

They were deliberately designed to be not only the best buildings within the colliery but in the whole community. The socialist campaigner Katharine Glasier describes them as 'white shining Temples of Health', where 'a spiritual bath is in fact part of their function' (Bertram).

Mapping the survivors

Between the 1920s and 50s, approximately 800 Pithead Baths were constructed at collieries stretching from Kent to the Scottish Highlands. Following the collapse of the coal mining industry in the later years of the 20th century, most colliery sites were comprehensively redeveloped and relandscaped, leaving almost no trace of the bath buildings. This physical absence has been echoed in architectural history: while the modernist legacy of the London Underground stations in the 1930s and 40s remains much celebrated, the immense social contribution of Pithead Baths has been almost completely overlooked.

Using data from the National Archives, a new map and database on the C20 Society website plot the approximate location of every colliery that constructed a pithead bath building until 1940. Researchers have identified 65 examples of Pithead Baths that still survive in various conditions—around 8% of the total number built.

Some are in ruins, and many have been repurposed for agricultural or light industrial usage, such as workshops, offices, MOT garages, salvage centres, or storing farm equipment. A handful are used as caffs, community halls, and scout huts, and one extraordinary example in the Scottish borders is the conversion of a private home with a design inspired by Frank Lloyd Wright. Just a handful of the surviving Pithead Baths are protected by national listing – 3 sites in England and 5 in Wales, with none in Scotland.

The most significant of these is Chatterley Whitfield, in Staffordshire, listed at Grade II and part of the most complete example of a large-scale colliery in the UK. Opened in 1937, it was once the second largest baths complex in the country, and after the colliery closed in 1977, it became a mining museum until it closed due to financial difficulties in 1993. Unused ever since the building is now in a perilous condition and is on the Historic England Heritage At Risk Register for being at 'Immediate risk of further rapid deterioration or loss of fabric'. An extensive feasibility study by Stoke-on-Trent City Council and Historic England in 2022 demonstrated the potential to regenerate the site as a centre for geothermal energy technology research, as well as education, heritage, homes and food production. Still, the multi-million-pound funding required has yet to materialise.

Miners's Modernism Banner by Ed Hall (photo by C20)

You can contribute to the project at the C20 Society website.

Contact the author

POLAND

NEW SCIENTIFIC PROJECT LAUNCH: SAFEGUARDING THE GDAŃSK SHIPYARD THROUGH POLLUTANT IDENTIFICATION AND CONSERVATION STRATEGIES

Anna Orchowska, Department of History of Architecture and Conservation of Monuments, Faculty of Architecture, Gdańsk University of Technology

—

In the heart of Gdańsk lies a relic of immense cultural and historical significance: the former Gdańsk Shipyard, a site where history was forged and the fight for democracy in Poland began. Recognised as the birthplace of the Solidarity movement, this industrial complex holds a prominent place in Poland's heritage. Yet, this monument to progress and resilience faces a hidden and pressing threat—post-industrial pollution.

Why the Gdańsk Shipyard Matters

The Gdańsk Shipyard is more than an industrial relic; it symbolises cultural resistance and transformation. Celebrated for its role in the rise of the Solidarity movement—a pivotal moment in Eastern Europe's history—the shipyard's legacy is interwoven with the struggle for democracy. Its historical and architectural significance earned it a place on the presidential list of historical monuments in 2018, and its complex of buildings includes many structures protected as immovable cultural property.

However, the shipyard's industrial past complicates its preservation. Decades of ship production and material handling have left a legacy of hazardous substances embedded in building materials, dust layers,

A section of the former Gdańsk Shipyard buildings, as seen from the Equipment Quay, featuring, among others, the Mechanical Processing Hall and the Engine Building Plant in their current state of preservation, as the subject of the research project "Dangerous Heritage: Harmful Pollutants and Their Identification in the Substance of an Industrial Monument Versus a Model of Its Conservation", 2024 (photo by author)

and surrounding soil. These pollutants pose a dual threat: they endanger human health and compromise the structural and historical integrity of the site.

Project Duration and Goals

The 36-month timeline reflects the ambitious scope of the project, which aims to address these challenges through:

1. Identification of Contaminants

Researchers will conduct quantitative and qualitative analyses to identify pollutants in the shipyard's historic substance. This includes examining building materials, residual dust, and soil for harmful substances that may threaten human health or degrade the historic structures.

2. Impact Assessment on Conservation

The study will assess the effects of these pollutants on conservation procedures. This knowledge will inform restoration efforts, ensuring that interventions mitigate pollution risks while maintaining the authenticity of the shipyard's historic substance.

3. Development of a Conservation Model

The project will integrate chemical analyses with detailed knowledge of the shipyard's architectural and industrial history to create

Surveys (collection of samples for chemical tests) performed by members of the research team from the Gdańsk University of Technology as part of the work preceding the research. Photo taken inside the Moulding Workshop Hall (No. 38A), 2022 (photo by author)

innovative conservation procedures. These procedures aim to balance the preservation of authenticity with safety measures, offering a potential model for safeguarding polluted industrial heritage sites globally.

The Challenges of Preserving Industrial Heritage

Preserving industrial heritage like the Gdańsk Shipyard requires balancing the need to safeguard historical authenticity with the imperative to address health and environmental risks. The project confronts several key challenges:

Conflicting Priorities: Conservation efforts traditionally prioritise preserving historical layers, but safety considerations may necessitate removing contaminated materials. Striking a balance is critical.

Underestimated Risks: Traditional conservation practices often overlook the impact of industrial pollutants on historic structures. This project aims to integrate pollution assessment into heritage protection protocols.

Adapting to New Uses: Many post-industrial sites are repurposed for modern functions. Ensuring these adaptations respect the site's original substance while addressing safety is complex.

A Multidisciplinary Approach

The "Dangerous Heritage" project represents an innovative fusion of fields, integrating chemical research, architecture, industrial history, and conservation science. Combining data from chemical analyses with historical insights will offer a comprehensive understanding of how industrial activities have shaped the shipyard's current condition.

The study will focus on a selection of buildings within the shipyard chosen to represent diverse industrial activities. This targeted ap-

proach will provide detailed data on the types and levels of contamination, enabling researchers to tailor conservation strategies to the unique challenges of each structure.

A Legacy of Innovation

A new interdisciplinary research project, "Dangerous Heritage: Harmful Pollutants and Their Identification in the Substance of an Industrial Monument Versus a Model of Its Conservation," has been launched to safeguard the historic Gdańsk Shipyard. The project, funded by the Polish grant agency the National Science Centre, is led by Prof. Jakub Szczepański and a team of researchers from the Faculty of Architecture and the Faculty of Chemistry at Gdańsk University of Technology.

The project focuses on identifying pollutants in the structures and surroundings of the Gdańsk Shipyard, assessing their impact, and developing conservation strategies that safeguard the site's authenticity while ensuring safety. By doing so; it seeks to preserve the Gdańsk Shipyard as a vital part of the historical legacy for future generations. Supporting the protection of industrial heritage, the initiative aims to deepen the understanding of post-industrial sites and advance conservation methods. Through integrating scientific research and heritage studies, the project aspires to establish a framework applicable to similar industrial heritage sites, promoting greater awareness of their significance and tackling the challenges they present for preservation.

Contact the author

MEXICO

GERMAN MANAGEMENT & TECHNOLOGY: PRODUCING STEEL FOR MEXICO. THE CASE OF THE FUNDIDORA DE FIERRO Y ACERO DE MONTERREY (1906-1940)

Alberto Casillas Hernández

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In the history of Mexican Monterrey's Steel Mill scene, the arrival and implementation of German technology are often neglected. Javier Rojas mentions that from a technological point of view (machines, equipment, tools and knowledge), American industrialisation was influenced by European technical inventions, mainly British and German.

The same wave of industrial technology that originated in Europe and passed through the United States of America from the 19th century onwards influenced the Mexican Northeast, with particular emphasis on Monterrey (Nuevo León). From the beginning of the industrial stage in 1890, Monterrey received at least three cultural influences: British, German and American. The first was present in the textile industry; the second left a marked mark on the steel, beer and glass industries; the third covered all industrial areas, particularly the fields of machinery, equipment, tools and production organisation; and indeed, in management.[1]

Following the theory that Javier Rojas makes about the three cultural influences, we will address the importance that the German influence had within the steel industry, focusing on the documentation and historical vestiges of the extinct Compañía Foundidora de Fierro y Acero de Monterrey (1900-1986), scattered throughout Fundidora Park,[2] referring to the importance of the people and/or social entities that recommended the suitable equipment for producing steel articles to supply the national market with tons of steel in its various applications. Where did they come from, and who were these people or associations? What was their participation in the development of the steel industry? Why the preference for German machinery?

We will address these questions with the usage of industrial archaeology, which uses the most appropriate research methods to better understand the past and the industrial process through the documentary collection of the Fundidora Monterrey, made up of acts, annual reports, correspondence, technical and administrative pamphlets, plans and photographs. Likewise, we will make use of the industrial heritage by examining and learning about the history and operation of the few technological vestiges of German machinery that are preserved in Fundidora Park, answering questions such as: What is the origin of these industrial vestiges and what caused the arrival of Germans at the Foundry?

Foreign Workers

Before the blast furnace began operations in February 1903 and the steel-making and rolling departments began in June of the same year, steel mill technology of American origin was new and unknown to Mexicans, so steel technicians were needed. In 1902, the Company's Board of Directors allowed Oscar Goldstein to travel to Europe to hire technicians who could take charge of the steel and rolling departments and instruct all Mexicans about the work operations.

1. Rojas J. (2006). Presencia de la tecnología industrial norteamericana en las fábricas pioneras de la industria de Monterrey. (1890-1910). https://www.cat.com/cda/layout.

2. Hereinafter it will be referred to in several ways: Fundidora Monterrey, Fundidora Co., Monterrey steel industry, Monterrey steelworks, Steel Elephant.

Manuel González Caballero and staff of Fuerza Motriz, group portrait, 1926 (AGN/Parque Fundidora/FototecaNL, Colección: Fundidora)

The German foreigners occupied the more critical positions[3] by strategically directing a company, generating the electricity supply for the movement of all departments and designing future expansion projects, protecting the company's interests in labour-management relations and conducting technical visits to acquire machinery and raw materials. Stefan Rinke affirms that, for the Mexico of the Porfiriato, the German empire had increasing importance not only as a source of capital but also and above all [...] as a provider of technology, mainly machinery. [4]

The Asturian Adolfo Prieto y Álvarez de las Vallinas, then CEO of the Company, knew that to financially save the company, increase production and get potential clients, it was essential to have a business partner who would place his laminated products on the national market and he found it in the German Orenstein & Koppel company which had the successful sale of rails within the Mexican market from 1909 to 1912.

Arturo Valencia Islas states, "Before 1910, railway companies bought the necessary rails abroad to carry out their repairs and track replacement. Between 1910 and 1913, Ferrocarriles Nacionales (National Railways) bought between 49 and 74% of their rails from Fundidora of Monterrey, which had begun manufacturing them in 1903, these orders representing between 50 and 60% of its production." [5]

German Directors

In October 1905, German engineer León Schweitzer was hired by Vicente Ferrara to attend to the queries made in the country's capital about the construction of buildings with structural steel at the commercial agency in Mexico City, and in June 1906,[6] was appointed Managing Superintendent of the plant in Monterrey[7] until 1917. He was CEO Adolfo Prieto's right-hand man. He made several trips in 1909 to the United States and Europe to witness the advances and modifications introduced in Steel Furnaces and Rolling Mills. He undertook installation work on the 18" Mill in 1909, and the

3. AHF. Ibid, p. 17

4. Rinke, S., 2007, pp. 35-67. Avalible: http://www.dimensionantropologica.inah.gob.mx/?p=410 (Consulted August 20th 2022).

5. Valencia, I., (2019), p. 30 https://miradaferroviaria.mx/los-extranjeros-en-la-conformación-del-sistema-ferroviario-mexicano-1880-1914/Mirada Ferroviaria, Año 12, Nª 36, mayo-agosto 2019, p. 30. (Consulted April 24th 2022).

6. AHF. Board of Directors. Minutes No. 15. Extraordinary session of June 5, 1901, pp. 95-96.

7. AHF. Board of Directors. Minutes No. 98. Extraordinary session of June 18, 1906, pp. 272-173.

Siemens Schuckert Werke (SSW) turbogenerators inside the power plant (photo by author)

construction operations of the fourth Steel Furnace inaugurated on October 1, 1910, and obtained an increase in steel production.[8]

He also reactivated the productive departments and kept them in operation even amid the Mexican Revolution (1910-1920) by sending tons of rails and structural steel to Mexico City.[9] When the revolutionary conflict reached the city of Monterrey, engineer Schweitzer could preserve the scarcity of resources and the responsibility of protecting the plant against attacks that occurred in October 1913 and April 1914 within the negotiation table.[10] Later, in 1922, the German engineer Melitón Ulmer Stoelting (1922-1929) replaced Roberto Gayol as general director and faced the third major metallurgical conflict from September to October. On May 21, 1929, engineer Melitón Ulmer Stoelting voluntarily separated from the Company.[11]

Subsequently, the engineer Emilio Leonarz, of German origin, replaced Melitón Ulmer in the position of General Director and inaugurated the position by placing the first stone for the building of the "Acero" Recreational Society.[12] Following the recommendations of engineers and consulting firms, Emilio Leonarz made trips through Germany[13] to find better purchasing conditions for technological equipment in Berlin, Bavaria, Hamburg, and North Rhine/Westphalia. Highlights include the Allgemeine Elektricitäts-Gesellschaft (A.E.G.) to increase electrical energy; the Maschinenfabrik Augsburg Nurnberg to acquire steam boilers; the Deutsche Maschinenfabrik, A.G. (DEMAG) for crane equipment, the Wenninger Elektro-Schweissmaschinen-Wok, To get a wire rod coil welding machine, the Gutehoffnungshütte Oberhausen Aktiengesellschaft (G.H.H.) for the purchase of a Bessemer Converter, among others. Emilio Leonarz retired from the company for personal reasons, and on June 21, 1940, Adolfo Prieto replaced him with Matías Elizondo,[14] who held the position of assistant manager of the office in Monterrey.[15]

8. AHF. Annual Report of 1909, pp. 188-189.

9. AHF. Annual Report for 1913, p. 282.

10. AHF. Annual Report 1914-1915, p. 298.

11. AHF. Collectivity, Monterrey, N.L., June 1929. Volume IV, No. 41, p. 14.

12. Ibid, p. 20.

13. Company Staff. Board of Directors. Foundry Company.-Secretary of State. Minutes No. 236, 25-VII-1935, p. 7.

14. AHF. Board of Directors. Foundry Company.-Secretary.-Minutes No. 282.-21-VI-1940- -pp. 4-5 File I. Years 1928-1938.

15. AHF. Board of Directors. Foundry Company.-Secretary.-Minutes No. 236.-25-VIII-1935- -p. 7 File I. Years 1928-1938.

German Engineers and Consulting Firms

However, what was the reason for Fundidora Monterrey's interest in German technology in the 1930s? Stefan Rinke[16] points out that between 1924 and 1925, there were a series of very significant changes in Germany's economic and social fields, as well as in the field of domestic and foreign policy influenced by American loans and the Dawes Plan that managed to lower inflation in the German economy. Secondly, this phase of economic recovery allowed some multinational companies to obtain federal or private contracts in Mexico, such as the construction of power plants or others, such as Siemens or A.E.G., who managed to find direct representations in Mexico at the end of the 1920s. On the other hand, Aparicio Cabrera supports Stefan Rinke's idea about the Dawes Plan by indicating that "it partially alleviated the burden that war reparations implied for the German economy, stimulated foreign investments in that country and helped German industrialists have financing to once again participate with manufactured products."[17]

With the departure of Emilio Leonarz in 1940 and the death of Adolfo Prieto in January 1945, some aspects of German influence went down. There were undoubtedly significant changes starting in 1945 that technologically reconverted the Monterrey steel company, and new actors would enter the scene.

German Technology of the Motor Department

The historical development of the Motor Power Department was characterised at the beginning of the 1920s by its innovation and independence from external elements that made the Monterrey steel company dependent on a deficient supply of electrical energy, monopoly and the duration of forced contracts that Compañía de Tranvías, Luz y Fuerza Motriz de Monterrey Company tried to impose on companies in the city.

In 1911, Schweitzer, general superintendent, ordered the purchase of three generators from the commercial house Siemens-Schuckert Werke (SSW) to face the expansion of rolling mills and meet the demands of its clientele. The engines Siemens-Schuckert Werke supplied electrical energy to the Steelmaking, Structure, Warehouse and Shipping departments, as well as the 18"-12" commercial mills, consisting of cranes, rollers and electric saws of the rolling mills.[18]

At the beginning of the 20th century, the German firm Siemens-Schuckert Werke (SSW), together with the A.E.G. (Allgemeine Elektricitats-Gesellschaft), dominated construction work and heavy electric equipment in Latin American countries such as Argentina, Mexico and Chile. Engineer Schweitzer's background in this German company was enough for him to order the purchase of three direct current (DC) electric generators.

The reconstruction and modernisation of the country during the governments of Álvaro Obregón and Plutarco E. Calles demanded that the Company bet on new production lines such as the Industrial and Refractory Brick Factory (1927), Wheel Factory, expansion of the Commercial Iron Warehouse and construction of the electrified 11" mill (1930), increasing electrical energy production. This situation led the company's directors to purchase a second Turbogenerator from the German company Allgemeine Elektricitats-Gesellschaft in April 1929. The following year, the new 2,300 kW Turbogenerator was installed and began operations with its production plant.[19]

In 1934, the production of steel ingots was increased by acquiring a supply of pots and cranes of greater tonnage for the Steelmaking Department, and in 1936, the new battery of Soaking Pitts Reheating Furnaces was put into operation to receive the quantity of steel ingots at roughing in rolling mills. The latest additions would again bring a very significant increase in the generation of electrical energy. For this reason, the purchase of a 6,000 KW turbine was authorised in 1935,[20] to the same German house that sold them the previous 2,000 KW (1921) and 2,300 KW (1929) turbogenerators, the Allgemeine Elektricitats-Gesellschaft (A.E.G.). By then, the Foundry had a capacity of 10,300 KW of electrical supply.

In 1947, the Department of Motive Power faced a delicate situation: the existing 6,000 K.W. turbogenerator. Brand A.E.G., which had always carried most of the Plant's load, had to be dismantled for repair and an emergency agreement with the Company of Luz y Fuerza de Monterrey to continue providing the necessary energy for the movement of the cranes.[21] Finally, a General Electric brand turbogenerator was acquired from the United States, which included a steam turbine and a centrifugal fan with a capacity of 6,000 K.W. to be reconditioned in the General Electric Workshops, with all the necessary guarantees.[22]

The Germans, in their category of directors, superintendents, consultants and/or business partners, carried steel technical knowledge and influenced the industrial, technological, and commercial development of the Compañía Fundidora de Fierro y Acero de Monterrey in the first 33 years of existence (1909 -1942). Industrial archaeology allowed us to track and compare the industrial vestiges with the documentation related to Council Minutes, Annual Reports and cross-correspondence between the Administrative Management in Mexico City and the plant in Monterrey.

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16. Rinke, S., 2007., pp. 35-67.

17. Aparicio, A., 2013., pp. 105-107.

18. AHF. Plano A-856 Datos sobre los motores de la Cía. Fundidora de Fierro y Acero de Monterrey, S.A. Monterrey, N.L. 7-6-12 Planoteca Fondo 110. Sección: Fundición.

19. AHF. Fuerza Motriz- Annual Report for 1931. Collection 121 Extensions and Improvements. Section 1. Exp. 31. pp. 20-21

20. Annual Report for 1935. April 13, 1935. Fund 121 Extensions and Improvements. Section 1. Exp. 39.

21. AHF. Correspondence from Rodolfo Barragán, Deputy Director of the Monterrey Iron and Steel Foundry Company, S.A. to the Monterrey Tram, Light and Motive Power Company, S.A., Monterrey, N.L., March 27, 1947. Box 1. Motor Power.

22. Figure 1. 6,000 KW G.E. blower machine located in the Generators/ Conarte Building, inside Fundidora Park. Photograph: Iván Montalvo. Fundidora Park, Monterrey, Mex.

After the end of the First World War and the decline of the civil war in Mexico, there was a second German influence in the country that Fundidora Monterrey would take advantage of during the 1920s and 1930s: betting on continuity in German electrical technology with boilers to produce steam and generation of electrical energy and being self-sufficient for other industries that depended on said fluid.

The preference for German technology will disappear during the Second World War, as it will be replaced by technology preferred by the new actors in the management of the Compañía Fundidora de Fierro y Acero de Monterrey.[23]

Contact the author

23. Casillas, A. (2023). Management y tecnología alemana: Produciendo acero para México: El caso de la Compañía Fundidora de Fierro y Acero de Monterrey, S.A. 1906-1940. Colección Memorial del Noreste N° 16. Centro de Estudios Humanísticos de la Universidad Autónoma de Nuevo León.

Beaufort was restored and placed back in its familiar place (photo by author)

BELGIUM

COCKERILL MONUMENT RESTORED TO ITS FORMER GLORY

Bart Vanacker

The 1872 monument to Belgian British iron magnate John Cockerill was restored in late 2024. Earlier that year, during the farmer protests of 1 February on Place Luxembourg in Ixelles, the heart of the European Union, the monument was severely damaged (see TICCIH 104B). While the statue of John Cockerill remained unscathed, Beaufort, one of the four figurines depicting Cockerill's workers, was knocked down during the protest.

Beaufort was dragged off his plinth by the farmers and thrown onto a burning pile of pallets. In the fall, the bronze statue was damaged in 10 places. Exposure to the fire had blackened the bronze and partially melted one arm. The compass Beaufort held in his right hand was lost, although it may have been lost earlier. Once the farmers left the Luxembourg Square in Ixelles, the bronze statue of mechanic Beaufort was taken to safety.

Bart De Temmerman specialises in the restoration of statues and works for the restoration department of Denys, a contractor working for the Brussels-Capital Region. He took the statue in hand over the past few months. He repaired the dislocated parts, cleaned the bronze and redid the hot patina. He also reconstructed the compass based on historical photos. In mid-December, De Temmerman placed the statue back in its familiar place at the foot of John Cockerill. Since the sculpture was now anchored to its pedestal, it no longer seems possible to drag it off its pedestal.

Contact the author

The patina was wholly worn off because the Beaufort statue was set on fire (photo by Stéphane Larose – Commune d'Ixelles)

Torneträsk railway station. Built in 1915 as one out of four transformer buildings along the electrified Riksgränsbanan section (Kiruna to the Norwegian border) of Malmbanan (Iron Ore Railway) (photo by Curt Persson)

SWEDEN

KIRUNA'S IRON ORE MINE AND THE IRON ORE LINE: A JOURNEY THROUGH INDUSTRIAL HISTORY AND REMARKABLE SITES

Roine Viklund

Kiruna, Sweden's northernmost city and well above the Arctic Circle, is a fascinating destination where industrial history and natural beauty intersect. Founded in 1900, Kiruna owes its existence to the rich iron ore deposits discovered in the region. The town grew around the mining industry, and its development is tightly woven into the story of LKAB (Luossavaara-Kiirunavaara AB). This mining company has played a pivotal role in shaping the area. Recognising the economic potential, LKAB was established in 1890 to exploit the region's vast resources. The story of Kiruna is one of pioneering innovation, adaptation to extreme environments, and a relentless drive to harness natural resources.

Initially, iron ore was extracted from open-pit mines atop the two mountains, Kiirunavaara and Luossavaara. As these surface deposits were depleted, mining moved underground. Today, the Kiirunavaara mine is the world's largest and one of the most advanced underground iron ore mines, with production occurring more than 1,365 meters below ground.

During the TICCIH World Congress in Kiruna, we will visit the mine and travel down to 520 metres, where the LKAB Visitor Center and Mining Museum are located. In the mine, we will be guided in an authentic mining environment where displays, films and machines

Two Oa-series double-locomotives hauling 30 iron-ore wagons during the test-period in early 1915. The type Oa locomotives were built by Siemens but were assembled in Sweden (photo by Borg Mesch, Kiruna kommun)

will illustrate ore mining and the production of iron. At the mining museum, we will be able to take part in the century-long history of the mine and learn how the mining operations have evolved. LKAB is currently mining down to level 1365 m.

Iron Ore Line

The area's remote location and Arctic conditions presented logistical challenges. Transporting more significant quantities of iron ore to the blast furnaces by the coast was difficult. The construction of the Malmbanan railway line between 1888 and 1903 marked a turning point in Kiruna's industrial history. Stretching 473 kilometres, it connected Kiruna to the ice-free port of Narvik, Norway, making it feasible to export ore year-round. The railway became a vital artery for Sweden's mining economy, and its engineering solutions to Arctic challenges were groundbreaking for the time. Modern trains, such as the IORE-class locomotives introduced in the early 2000s, are among the most powerful in the world. Each IORE locomotive can haul up to 8,500 metric tons of ore, reflecting the line's importance as a backbone of Sweden's mining economy.

The idea for the Iron Ore Line emerged in the late 19th century, coinciding with the discovery of rich iron ore deposits in northern Sweden. By 1888, the need to transport ore efficiently led to the construction of the first segment between Gällivare and Luleå. However, the real breakthrough came with the opening of the Riksgränsbanan in 1903, completing the link to Narvik.

Narvik's port was ice-free year-round thanks to the Gulf Stream, which is crucial for transporting iron ore to international markets. The railway overcame immense challenges posed by Arctic conditions, including harsh weather, rugged terrain, and extreme cold. Early trains relied on steam locomotives, which struggled with the Scandinavian mountains' steep gradients and freezing temperatures.

The electrification of the Riksgränsbanan in 1915 was a groundbreaking achievement. It was the northernmost, and one of the

The presence of iron ore at Kiirunavaara "Ptarmigan Mountain" was known by the mid-17th century but could not be commercial exploited until the railway was built, connecting the mines with the ice-free port in Narvik (Norway), in 1902 (inaugurated by the King in 1903). In the beginning the extraction of ore was through Mountaintop removal mining (MTR). The ore was transported on carts down a slide to a ramp at the foot of the mountain where it was trans-shipped into railway wagons for further transport. In the forefront is the Steam-electric power station used by LKAB before Porjus was built (photo by Borg Mesch, Kiruna kommun)

world's first long-distance electrified railway sections. This development marked a pivotal shift from steam to electric traction, which was more reliable, efficient, and environmentally friendly.

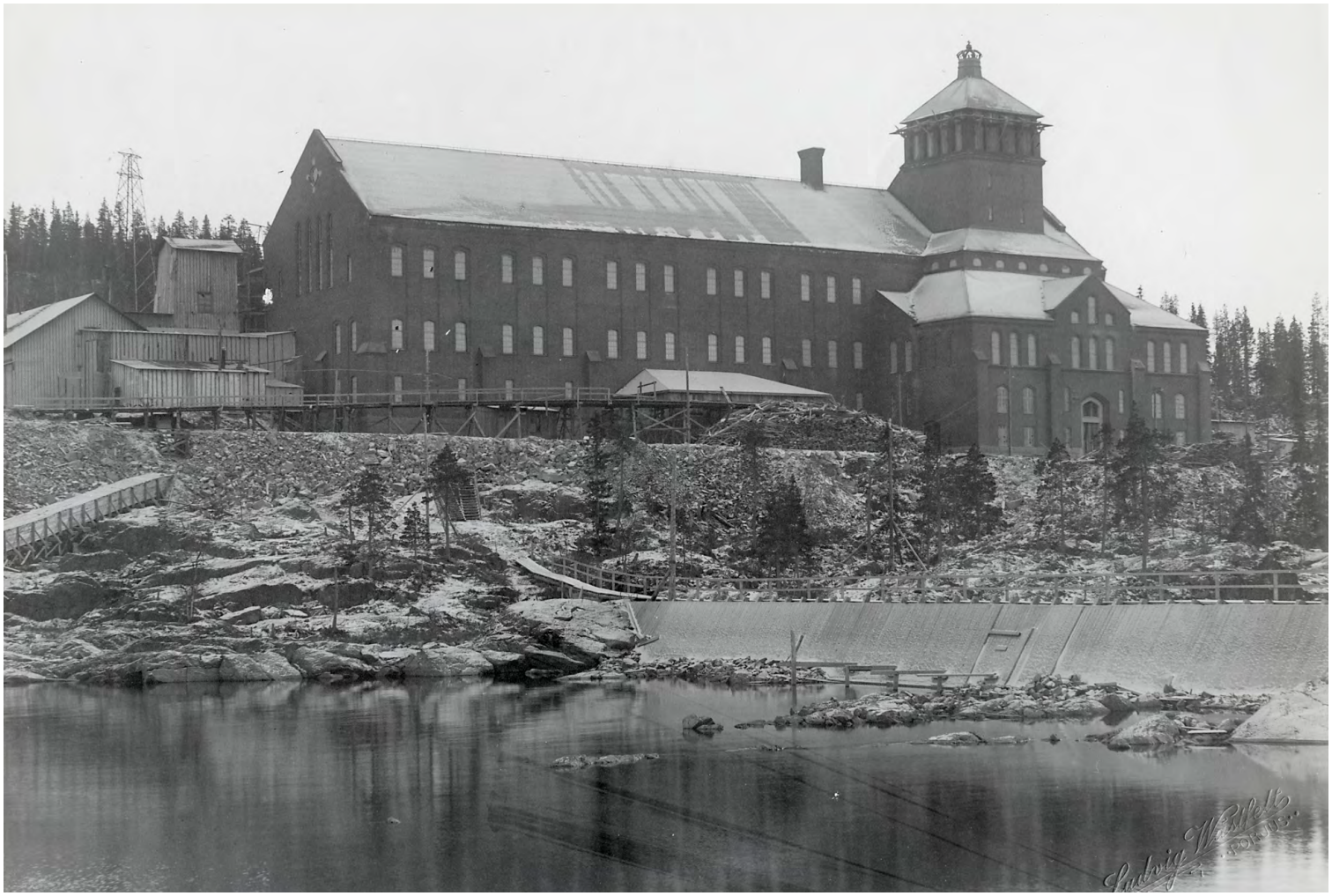
Electric locomotives offered greater power, enabling trains to carry heavier loads over steep gradients. This was essential for hauling iron ore trains weighing thousands of tons through the challenging mountain passes. Electrification also reduced operational costs, as electricity was cheaper and easier to procure in the region, thanks to Sweden's abundant hydroelectric resources.

Hydropower plant

Porjus hydropower plant, located in Jokkmokk Municipality, Norrbotten County, Sweden, is one of the country's most historic and significant hydropower facilities. Situated on the Lule River, it was completed in 1915 as part of Sweden's ambitious effort to harness renewable energy for industrial and societal development. Today, Porjus symbolises Sweden's leadership in sustainable energy and engineering ingenuity.

Porjus was built primarily to provide electricity for the Malmbanan (Iron Ore Line) electrification, particularly the Riksgränsbanan section, which connects Kiruna to the Norweigan border. The goal was to replace steam locomotives with electric ones, enabling more efficient and reliable transport of iron ore under the challenging Arctic conditions. This marked a bold step in the early 20th century, as Sweden became one of the first nations to electrify a major railway with renewable energy.

The plant was also designed to support Sweden's growing industrial needs. By harnessing the power of the Lule River, Porjus provided a sustainable and locally sourced energy solution, laying the groundwork for Sweden's long-term commitment to hydropower.



The Porjus Hydroelectric Powerstation was built 1910-1915 by Siemens and ASEA. It is one of Sweden's oldest and largest hydropower station and was built for the electrification of Riksgränsbanan (photo by Ludvig Wästfelt (1915), Järnvägsmuseet och de transporthistoriska samlingarna)

Challenges and Future Prospects

Mining-related subsidence beneath the city has made the ground unstable, necessitating a dramatic relocation project. This initiative, led by LKAB and supported by the Swedish government, involves moving entire neighbourhoods, infrastructure, and historic landmarks several kilometres eastward.

The relocation, one of the world's most ambitious urban transformation projects, reflects Kiruna's resilience and commitment to preserving its community while sustaining its industrial lifeline. Iconic structures like Kiruna Church and the Hjalmar Lundbohm House, named after the city's first managing director and visionary founder, are being carefully dismantled and reconstructed in the new town centre.

Despite its successes, Kiruna faces significant challenges, including environmental sustainability and the social impact of its relocation. LKAB's commitment to decarbonising its operations and exploring fossil-free steelmaking methods aims to address global climate concerns while securing the industry's future.

The city's relocation, though disruptive, is also a unique opportunity to design a sustainable and modern urban environment. The new town centre showcases innovative architecture, energy-efficient housing, and community-focused planning, setting a benchmark for cities worldwide facing similar challenges.

Kiruna's industrial legacy is a testament to human ingenuity and perseverance in the face of adversity. From discovering iron ore to creating one of the world's most advanced mining operations, Kiruna has demonstrated the ability to innovate and adapt while remaining deeply connected to its resource-based heritage. Today, visitors to Kiruna can witness this legacy firsthand, marvelling at a city that continues to balance tradition with transformation in the heart of the Arctic.

Contact the author

The 'Moulins de la Meuse', a former grain mill in Beez (Namur), reused as headquarters of the Walloon Heritage Conservation Administration, the location of the FABI-AWAP-PIWB symposium days (photo by Patrick Viaene, 2021)

BELGIUM

REPORT OF A REMARKABLE SERIES OF STUDY DAYS IN WALLONIA (BELGIUM) ON REPURPOSING INDUSTRIAL HERITAGE

Bart Vanacker & Patrick Viaene

In 2023 and 2024, the *'Comité Patrimoine & Histoire'* of *FABI* (Federation of Belgian Engineering Associations) and PIWB (Patrimoine Industriel Wallonie-Bruxelles) organised a fascinating series of study days on the redevelopment of industrial heritage. The series of study days was titled *'Revaloriser/Réaffectation du Patrimoine Industriel'*. The programming was mainly in the hands of engineer Michel Provost, the tireless chairman of the FABI heritage cell and *'éminence grise'* of engineering heritage in Belgium. The study days were held in the prestigious setting of the renovated grain mill *'Moulins de Beez'* (Namur) and were generously supported by AWaP, the Walloon ministerial service for architectural heritage,

The first introductory study day took place on 29 March 2023. The theoretical framework of the repurposing issue was explained in detail. The position of industrial heritage in relation to ICOMOS and UNESCO (World Heritage Nominations) was also presented. This 'indoor' study day was followed up with two-day trips with site visits, namely to the fully preserved, multifunctional site of Tour & Taxis in Brussels (on 18 April) and to the well-known site for mechanical engineering and railway equipment Fives Cail (today known as *Eco-quartier Fives Cail*) in Lille in northern France (on 25 April 2023).

The second study day, 'Economy of industrial heritage', was held on 25 May 2023. Several repurposed buildings in the Brussels canal zone, such as the former *Moulaert* grain mill—now *'COOP'*—in An-

Shaft-tower of the colliery Saint-Albert in Péronnes-lez-Binche, a unique mine headgear in concrete, dating from the interwar period, threatened with demolition for many years (photo by Patrick Viaene, 2019)

derlecht, were presented. Furthermore, cases from Lille (Northern France) and the area around Liège (*Piedboeuf* Brewery in Jupille) were discussed.

The third study day of the series took place on 5 October 2023, with attention to, among other things, the former railway site *Les Grands Ateliers 'La Luma'* in Arles (repurposed in several phases into new residential and business zones), the former spinning mill DMC, renovated into the European headquarters of *General Electric* in Belfort (both in France), the heritage site in the wool washing mill *'Le Solvent'* with fully preserved machine room and adjacent warehouses in Verviers, the heritage (including an old power station) of the Wincqz quarry in Soignies and an ecological housing project in the former *Tannerie Houben* in Dourbes (Viroinval). On 17 October, a visit to Leuven led by Luc Verpoest followed, including an explanation of the future of the Central Workshops used as a cultural

Detail of a steam engine in the power hall of Le Solvent Belge in Verviers, used until recently for the washing and processing of wool by the Traitex company (photo by Patrick Viaene, 2017)

centre and the repurposed *Brewery Den Hoorn* with the harbour landscape of the Vaartkom.

The fourth study day, on 30 November 2023, dealt with industrial landscapes, paying attention to both small-scale sites (such as the lime quarry and kiln *'Carrière Requiem'* in Calonne—Tournai) and extensive (post)industrial landscapes, such as the old industrial area of Charleroi-West on the one hand (in particular the ambitious urban development project *'Porte-Ouest'*) and the southern bank of the Meuse valley between Seraing and Liège on the other.

It is precisely at these two locations that the last two Walloon blast furnaces have been preserved: one in Marcinelle (Charleroi) and one in Ougrée (near Seraing). However, despite the heritage sector's efforts, the survival of these two symbols of modern steelmaking is still not guaranteed. The study day clarified how difficult it is to balance between demolition (with soil cleaning of vast, desolate industrial sites) - for which considerable budgets and European support are available - and the preservation and integration of significant industrial artefacts in a new sustainable context.

Role of associations

During the fifth study day (on 8 February 2024), attention was paid to the role of associations in repurposing industrial heritage. They play a key role in specific heritage domains, such as 'Save Our Elevators' for preserving historic lifts. *'BruxellesFabriques'* was at the forefront in the rescue and restoration of a great deal of Brussels heritage, such as the last popular *'cafés'* in the canal zone, the fully equipped engine room of *Brasserie Wielemans*, the preservation of loading and unloading gantry cranes along the Brussels-Charlero Canal, the historical character of the Havenlaan, etc.

The heritage that associations focus on is often unexpected: from the heritage of glass manufacturer *Duroborr* in Soignies to historic aircraft (*BAPA Belgian Aviation Preservation Association*), 'rolling heritage' (*'Patrimoine Bus et Car'* and *'PFT - Patrimoine Ferroviaire et Tourisme'*) to the preservation of a remarkable factory chimney in Mouscron (*'Les Trinte-six Ramoneus de l'Vesdre'*). The study day made it clear that contrary to what is often said, associations in Wallonia are taking on a leading role in the rescue and management of industrial heritage, including challenging cases, as demonstrated by a group of activists for the preservation of the Le Martinet mine site in Charleroi or the fight for the conservation of a concrete headframe by the *Collectif de Défense de la Tour Saint-Albert à Péronnes-lez-Binche*.

Preservation and appreciation

The sixth study day (on 28 March 2024) dealt with the preservation of (and appreciation for) movable industrial heritage. The day was introduced by the French technology historian Michel Cotte and Catherine Cuenca of the CNAM (*Conservatoire National des Arts et des Métiers*) in Paris. New digital research methods are increasingly vital in studying technical and industrial objects. However, it remains essential to probe the meaning of objects in the context of the development of society. The presentation by Alain Forti, the Le Bois du Cazier museum curator, also made this clear. He emphasised the importance of the only preserved fire engine used during the rescue operations during the 1956 mining disaster in *Le Bois du Cazier* (262 dead) that was deployed during the rescue operations of

Le Bois du Cazier. Frequently mentioned during this study day was the dire need for adapted storage spaces for collections (as commented by Bruno Van Mol about the *"Musée de la Route"* in Mons), the problem of asbestos removal (including in the collections of the *Industrial Museum-Ghent* and the *MMIL 'Maison de la Métallurgie et de l'Industrie Liégeoise'*). There is a great need for more trained personnel to examine, restore and demonstrate machines. Patrick Viaene outlined the enormous challenges for the sustainable preservation of movable industrial and technical heritage in Flanders, which provides interesting material for comparing the situation in Wallonia. Apart from a few differences (such as the more significant number of private collections and the abundance of small-scale heritage initiatives in Flanders), the situation regarding mobile industrial heritage is very similar in the various regions.

The last, closing study day on 26 September 2024 was entitled *"Le patrimoine mobilier et immatériel des techniques industrielles: apprendre à conjuger le pasté et le present"*. Thierry Denuit opened the study day by highlighting the efforts of the *SNCB* (Belgium's public train company) to preserve Belgium's rich railway history, showcasing locomotives, carriages, and other artefacts spanning two centuries. The public can view some of these items at *Train World*, while other pieces are stored across various depots. The Monceau workshop is refurbishing an iconic torpedo wagon, which will soon be displayed at the *Maison de la Métallurgie et de l'Industrie de Liège*.

Pieter Neirinckx from Ghent's Industry Museum discussed managing a vast collection, now over 66,000 items. However, size was always challenging, especially when collecting industrial heritage like machinery. That is why collection plans are now in place. After all, the museum cannot keep collecting everything. Hence, objects were repurposed or kept 'in situ', such as the turbine *STAL* (Svenska Turbinfabriks AB Ljungström) in the textile mill De Porre in Ghent. Working machines also require knowledge to maintain and demonstrate them. So, transferring knowledge is at least as important and complex.

Not only museums but also companies have a lot of historical heritage, such as *FN Browning's Fondation Ars Mechanica, D'Ieteren* in Brussels and *Michelin*. The French tyre manufacturer archives and valorises its innovations, including the electron microscope from 1947 and an 11-wheeled test vehicle developed by Citroën for Michelin. Also noteworthy is the Piste de Cataroux, a concrete ramp used as a test track which will be repurposed. Presentations from *ULB* in Brussels emphasised challenges in preserving scientific relics, such as a 1925 material-testing lab. Adriaan Linters, the former *Flemish Society for Industrial Archaeology* president, concluded the study series. He described the VVIA's achievements and explained the current context of industrial heritage in Flanders.

This ended this series of study days that reached an exceptionally high level, both with the views and perspectives put forward and regarding the number of speakers and site visits. A book detailing the dozens of contributions made during this event will be published in mid-2025.

Contact the authors: Bart Vanacker & Patrick Viaene

SPAIN

HERITAGE DYNAMICS IN POST INDUSTRIAL TERRITORIES. REPORT ON THE XXVIth 'JORNADAS' OF INCUNA IN GIJON (SPAIN)

Patrick Viaene

—

INCUNA is an important industrial heritage institution based in Gijon (Asturias, Spain). In 2024, the institution celebrated its 25th anniversary with a retrospective exhibition in the newly restored 'Old School of Commerce'. The name INCUNA incorporates INdustry, CUlture and NAture, the three interconnected fields, wherein the association developed countless research projects, publications and actions for the sustainable conservation and reuse of industrial buildings. INCUNA is particularly active as an industrial history and heritage publisher, organising an annual plenary symposium, the so-called 'Jornadas'. From 25 to 28 September 2024, INCUNA held the 26th edition of these Jornadas.

The main themes were 'Urban Heritage and Local Development', 'Mining Cultures and Industrial Memory, from the Local to the Universal', 'Cultural Itineraries and Touristic Routes' and finally 'Water and Light: Ingenuity and Social History'. Dr Alfonso Munoz Cosme (Senior researcher from the Universidad Politécnica in Madrid) presented one of the most spectacular talks. He offered an impressive chronological panorama of 'conservation victories' versus losses of industrial heritage in Spain.

It was a great experience to participate in numerous outstanding presentations of research projects, realised by young investigators, particularly by female researchers active in southern Europe and Latin-American countries. An excellent idea was the presentation by authors and editors of recent publications about industrial heritage.

Special attention was also given to industrial films. The INCUNA 'Film Fest', presented in 2024 for the seventh time, was an excellent choice of restored historical films about industrial production and industrial landscapes.

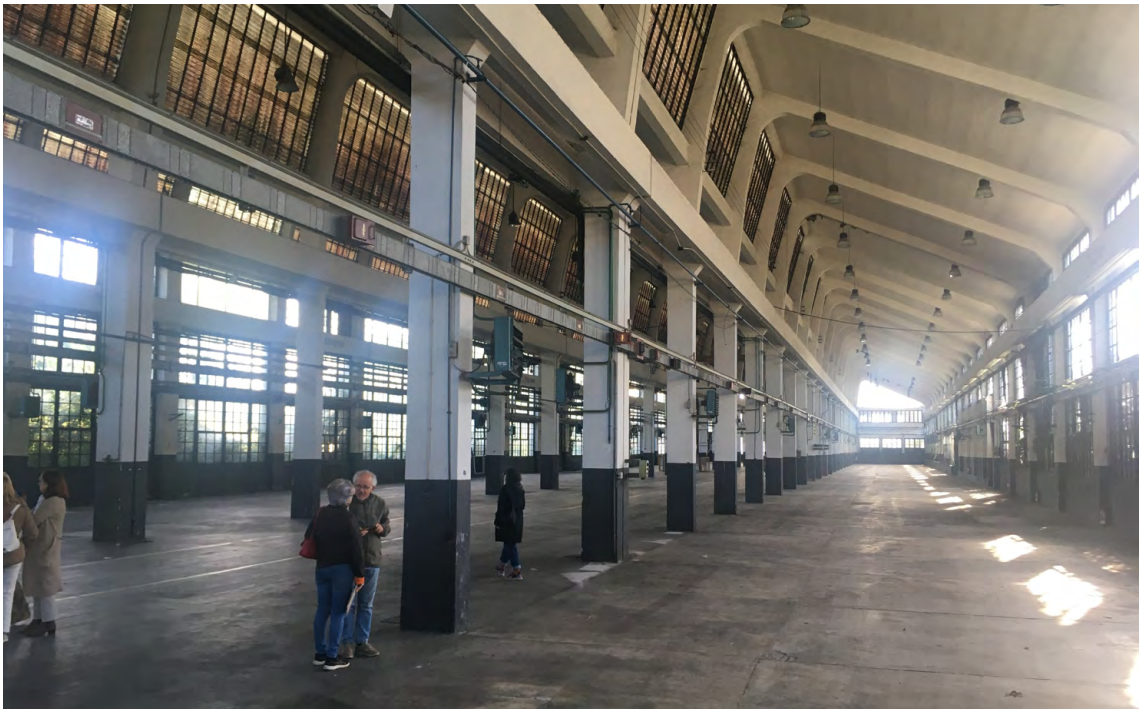
Fabrica de Armas de la Vega (Weapon factory in Oviedo) with partially integrated old cloister architecture in the workshops (photo by author)

Academic ceremony on the Spanish Heritage Distinction, delivered to INCUNA (photo by author)

Arms factory

The indoor part of the Jornadas, held in the university campus 'El Laboral', an impressive architectural complex dating from the dictatorship era under General Franco, was followed by interesting excursions. In Oviedo, there was a guided tour in the former 'Fàbrica de Armas de la Vega', including historical remnants of a cloister and one of the oldest chapels of the region. The municipality of Oviedo recently proposed ambitious plans for creating an on-site urban district that respects the valuable parts of the arms factory. The multifunctional re-use of such a huge complex is the only option to bring new life to the site. Other visits were devoted to the newly presented art collections of the Museo de Bellas Artes of Oviedo, related to the labour and social life of Asturias, and to the MUMI (Museo de la Mineria) in El Entrego,

Visit of the Fabrica de Armas de la Vega in Oviedo (photo by author)



One of the more than 20 sections of the Vega Weapon Factory in Oviedo (photo by author)

an outstanding mining museum. During an academic ceremony in this museum, INCUNA received the prestigious "Premio Hispania Nostra 2024", honouring a quarter century of efforts for researching and conserving industrial heritage in Asturias.

The next plenary INCUNA International Conference on Industrial Heritage will occur in Gijon from 18 to 21 June 2025. This 27th Jornadas will coincide with the 15th Annual Congress of SEHCYT, the Spanish Society for the History of Sciences and Technology. Both institutions will collaborate and unite their efforts. Proposals for papers must be submitted before 28 February 2025, and abstracts with a photo and brief CV of the author/s must be sent through the website of the XXVII International Conference on Industrial Heritage.

Contact the author

Incline drum house at Dinorwic Quarry in Wales (photo Bart Vanacker)

CHILE

NEW DEADLINE TO SUBMIT ABSTRACTS FOR THE SECOND CONGRESS ON ELEVATORS AND FUNICULARS OF THE WORLD

Dr.Arq. Jaime Migone Rettig, TICCIH Chile

—

TICCIH-Chile, Università di Pavia (Italy) and APPI-TICCIH Portugal invite you to participate on July 11, 12 and 13, 2025, in the international meeting "Elevators and Funiculars of the World. Second International Congress of Industrial Heritage." The conference will take place in Santiago de Chile. All national and international experiences of conservation, intervention, enhancement and new technologies are invited to participate in this meeting, for which we cordially invite academics, researchers, professionals, companies and students from public and private institutions to participate in this congress.

Send your presentation abstract before January 30, 2025 (new deadline) to Congresoascensores2025@gmail.com. Identify the author and contact information (phone, email, institution) and add a summary text of your presentation of 200 to 300 words with 2 to 3 illustrative images; for more information, registration and submission of abstracts, message Congresoascensores2025@gmail.com.

MEXICO

CALL FOR PAPERS 10th INTERNATIONAL CONGRESS ON INDUSTRIAL HERITAGE

Camilo Contreras Delgado, TICCIH Commissioner for Latin America and the Caribbean

—

The Committee for the Conservation of the Industrial Heritage of Nuevo León, made up of academic, governmental and social institutions, in alliance with TICCIH International, has created a space for exchanging ideas and experiences related to Industrial Heritage. The tenth International Congress will occur in the Adolfo Prieto School of the Fundidora Park, Monterrey, Nuevo Leon, Mexico, from May 12 14, 2025.

Around the world, valuable efforts are being made to reflect on the present and future of industrial heritage. However, thinking, reviewing and acting from our Latin American context is necessary. From what conceptual, methodological and management angles is Industrial Heritage in this region being addressed?

In 2023, Monterrey hosted the X Latin American Colloquium for the Conservation of Industrial Heritage. [see TICCIH Bulletin #102, 2023]. In continuity with this colloquium and our previous congresses, we have committed to convening a discussion on topics such as governance, gender perspectives, sustainability, and the revision of methodologies and concepts in this region.

During the Congress, we will continue the MapaPI workshops and present examples of registers in the Latin American region [see TICCIH Bulletin #103, 2024]. MapaPI is a collaborative mapping project that will be of great use and interest to those who decide to participate. Later on we will provide information on the origin and development of the project.

With this background, we invite people from the academic, governmental and private sectors, as well as cultural managers, artists and undergraduate students, private sector, as well as cultural managers, artists, and undergraduate and postgraduate students, to submit proposals in the form of papers under the following themes:

1. Governance in the management of Industrial Heritage
2. Theories and methodologies in the conservation-restoration of Industrial Heritage
3. Collective memory as a pillar of Industrial Heritage
4. Experiences and proposals on the architectural reuse of industrial assets
5. Cultural and Artistic Manifestations of Industrial Heritage
6. New technologies and approaches in researching and disseminating Industrial Heritage
7. Archaeology at industrial sites

A paper is considered to be an oral presentation of the progress or conclusion of research, project proposals and experiences related to the theme of the Congress. For the registration of paper proposals, the guidelines mentioned in this document must be followed. Send your abstracts and curricular sketches via this form.

Timing

- 12 March 2025: Deadline for receipt of abstracts
- 31 March 2025: Deadline for communication of results
- 20 April 2025: Distribution of the general programme
- 12 to 14 May 2025: Celebration of the X International Congress on Industrial Heritage.

For further information, please contact us at cpatrimonioindustrial@gmail.com, visit our website or follow us on Facebook.

USA

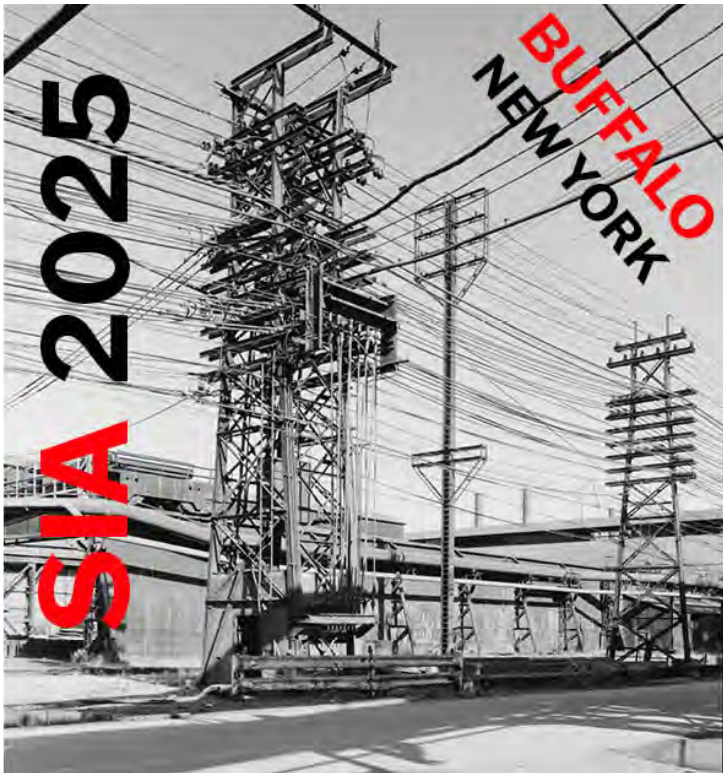
CALL FOR PAPERS FOR THE SOCIETY FOR INDUSTRIAL ARCHEOLOGY'S 53rd ANNUAL CONFERENCE

Marty Johnston, SIA Presentations Committee Chair

—

The Society for Industrial Archeology invites proposals for presentations and poster displays at the 53rd Annual Conference in Buffalo, New York, May 29 through June 1, 2025. The presentation sessions will be held at the conference hotel, the Hyatt Regency in downtown Buffalo, on Saturday, May 31, 2025.

We invite presentations on all topics related to industrial archeology, industrial heritage, history of technology, social change related to industry, and historic industrial structures and bridges. Papers about regional industries and transportation in Buffalo and Western New York are particularly encouraged – including grain, steel, hydropower and chemical industries. Of note, 2025 is the 200th anniversary of the Erie Canal. We also encourage presentations on challenges facing industrial heritage and on the contributions made to our field by industrial museums. Poster displays are also encouraged and may present works in progress or finished projects. All presentations and poster displays should offer both interpretation and synthesis of data.



The deadline for proposals is February 10, 2025. Submit an abstract using the online submission form. More information on the conference can be found on the SIA website.

BOOK REVIEW

VALE DE MILHAÇOS GUNPOWDER FACTORY IN PORTUGAL FROM THE 19TH TO THE 21ST CENTURY: FROM STEAM-POWERED INDUSTRY TO HERITAGE FOR THE FUTURE

Graça Filipe and António Santos Carvalho. Published in 2023 by Caleidoscópio – Edição e Artes Gráficas, and A Câmara Municipal do Seixal Ecomuseu, pp.192, soft covers. ISBN 978-989-658-838-0. Anyone interested in acquiring a copy of the book should contact Graça Filipe and António Santos Carvalho. Copies can also be purchased from the publisher.

Reviewed by Miles Oglethorpe, TICCIH President

Almost 25 years ago, I was immensely fortunate to attend a wonderful conference co-hosted by the Seixal Municipal Ecomuseum in Portugal. The programme included a visit to the Vale de Milhaços Gunpowder Factory. The site was incredibly well-preserved, starkly contrasting to the many ruinous gunpowder mills I had previously encountered and been asked to record in my own country, Scotland. For many reasons, not least contamination and health and safety issues, explosives factories are notoriously difficult to preserve, so I knew immediately that Vale de Milhaços was uniquely special. I also knew that the explosives industries have historically tended to be ignored, undervalued and misunderstood, so it was amazing to encounter a gunpowder factory in such a complete state.

Almost a quarter of a century on, the Vale de Milhaços Gunpowder Factory has survived, thanks in particular to the work of the Seixal Municipal Ecomuseum, the municipality itself, and the industrial heritage community in Portugal. However, despite being listed in 2012, it now finds itself at a point where its future is not guaranteed and action is needed to secure and enable it to deliver real benefits to the communities around it. Although it has been in the care of the municipal authorities, there are significant conservation and protection issues, so its long-term prospects are uncertain.

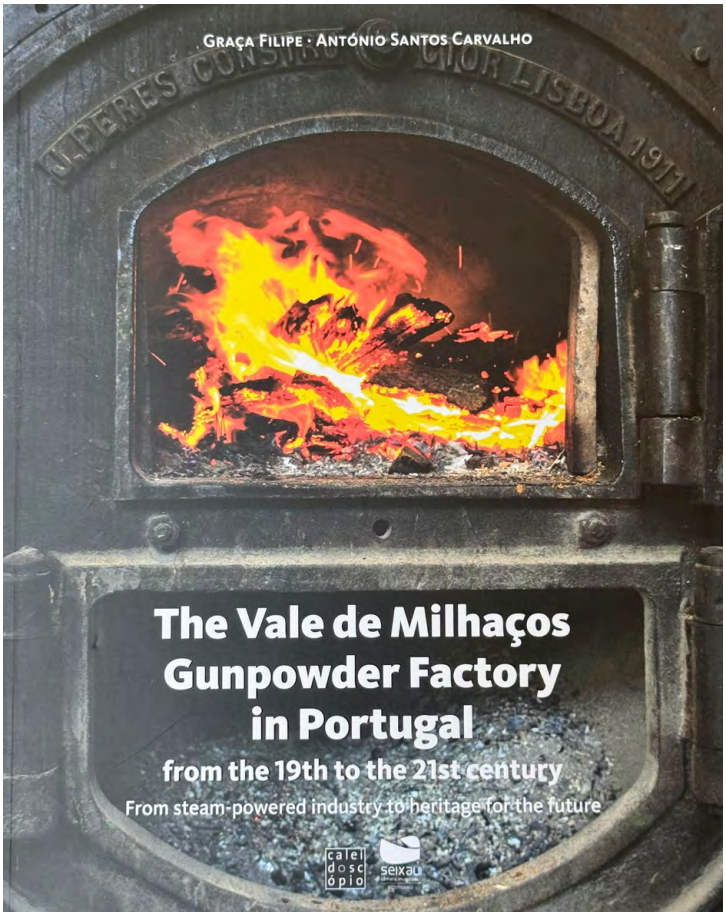
It was for this reason that it was recently nominated for inclusion in Europa Nostra's following annual list of The 7 Most Endangered Heritage Sites in Europe, the hope being that it elicits a positive response from the national and municipal authorities and provokes interest at a European scale. However, perhaps the most important initiative has been the collation and publication of the book *Vale de Milhaços Gunpowder Factory in Portugal from the 19th to the 21st Century: From Steam-powered Industry to Heritage for the Future* by Graça Filipe and António Santos Carvalho.

This is an extraordinary publication that brings together a history of the business and the factory, an overview of the recent management of the heritage and museum, examples of historical records and a comprehensive inventory of the 'in-situ heritage', supported by historic (1998) and recent photographs of the site's main components. It then addresses operational and technical conservation issues in detail, primarily related to the unique steam-powered transmission system.

The Vale de Milhaços Gunpowder Factory commenced production in 1896, finally ceasing operations in 2002. Apart from its almost complete state, it is unusually well documented, mainly because its heritage value was recognised from the 1970s and was the subject of recording activity, not least by the Portuguese Industrial Archaeology Association and the Seixal Ecomuseum itself. This is reflected in the book's content, which features some outstanding photographs capturing the gunpowder manufacturing process in detail when it was still working in 1998.

The historical significance of gunpowder is often overlooked, so it is important to reflect on its impact on the world. In this case, it was used for military purposes and various other functions, not least to produce mining explosives, detonator cords, propellents for weapons used by hunters, and pyrotechnics. The business also exported to Africa (notably Angola) and had to navigate a difficult path through licensing regulations and, as a private business, with the Portuguese state's own factories.

As with most explosives manufacturing sites, the Vale de Milhaços Gunpowder Factory had its fair share of accidents and tragic injuries and fatalities, one of the worst, killing eleven workers only a year after it commenced production in 1897. Thereafter, the hazardous nature of the industry resulted in a sequence of accidents, the last of which occurred a year after production ceased in 2002 during a cleaning operation. This type of issue has always resulted in demolishing sites shortly after closure. The



fact that it survives to this day is, therefore, a huge achievement and makes the factory extra special.

The book comprises an extraordinary record of that achievement and is itself a great asset in the ongoing struggle to ensure that the factory will have a viable future. It is a compelling document that demonstrates the outstanding importance of the site. It should play a key role in helping to persuade decision-makers to provide appropriate support in the future. It will also prove to be a major asset if, as suggested, a UNESCO World Heritage nomination is prepared for the property.

Visit Seixal's municipal website for practical visit info and a description of the heritage present, or read this article published in 2012 in Europa Nostra (pdf).

INDUSTRIAL ARCHAEOLOGY IN NORTHERN ITALY

Roberto Marini. A selection of the author's photos can be found on Flickr. ***Follow his account on*** Instagram.

I started taking my first photographs of industrial sites in the 1990s. Later, I deepened my understanding of Italy's industrial past thanks to my university education and my work as a corporate archivist, often having the opportunity to directly investigate an industrial site's origins and social and historical context.

The aesthetic of my photography is not particularly sophisticated, as I consider it essential to represent the industrial artefact faithfully. The use of colour is important, and I enjoy depicting buildings and industrial structures immersed in nature, which attempts to reclaim the lost territory.

I believe that enhancement makes sense only if the recovery of the industrial site is careful and scholarly; otherwise, abandonment is more evocative, perhaps in a controlled environment within an industrial-naturalistic theme park.

To propose the publication of your photographs in the photo column and find the publication rules, write to Francesco Antoniol.

Biacesa Hydroelectric Power Plant on the Ponale Stream (Lake Garda, Trentino)
A power plant supplying electricity to the city of Rovereto, operational from 1906 until the post-World War I period
November 2007

Cement Factory of the Società Anonima Milanese e Azzi, Ozzano Monferrato (Piedmont)
A plant with six vertical kilns for the production of natural Portland cement, active between 1911 and 1924
September 2012

Gleno Dam, Vilminore di Scalve (Lombardy)
A multiple-arch dam, initially planned as a gravity dam, built between 1919 and 1923. It collapsed on December 1, 1923, causing over 350 fatalities
November 2013

Banfi Silk Mill, Dignano (Friuli-Venezia Giulia).
A facility for silk processing and spinning, active from 1921 to 1954
April 2010

TICCIH

The International Committee for the Conservation of the Industrial Heritage

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