TICCIH The International Committee for the Conservation of the Industrial Heritage

TICCIH CONGRESS 2012 IN TAIWAN

TICCIH Congress 2012

The International Conservation for the Industrial Heritage Series 1

Proceedings of the XVth International Congress of the International Committee for the Conservation of the Industrial Heritage

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Preservation of Our Industrial Heritage with New Meaning

The XVth International Congress of the International Committee for the Conservation of Industrial Heritage (TICCIH), being held at the National Taipei University of Technology from Nov. 4 through Nov. 8, 2012, is an extraordinary event as it provides a great opportunity for scholarly communication in the field. The TICCIH operates under the auspices of the United Nations Educational, Scientific and Cultural Organization (UNESCO). It is the primary consultative body to the International Council on Monuments and Sites (ICOMOS) on industrial heritage site assessment and listing. Holding its general assembly every three years, the TICCIH is the world's leading organization for the protection of industrial heritage. The TICCIH Congress, therefore, is the most powerful venue for sharing new ideas on preserving industrial heritage.

Industrial transformation and social change gave rise to manufacturing and operations challenges that meant traditional industries that had once been the engine of Taiwan's economic development spun into decline. In recent years, a number of cases where industrial heritage sites have been rescued have seen questions raised over the value of preserving our cultural heritage. An important question for Taiwan today, then, is how to reappraise and find a new purpose for now-disused industrial sites in a time of rapid technological change.

"Industrial heritage" in no wise indicates "outmoded" or "abandoned." Rather, respecting these sites as living testimony to economic and cultural development is a way of reflecting on our past. With the government taking the lead and the private sector playing an active role, we have had many successful cases of preserving industrial heritage sites and redeveloping them with an eye to sustainability over the past few years. This has opened up new possibilities for industrial development while creating job opportunities.

I am particularly grateful to the Organizing Committee for having arranged this event, which gives our professionals and scholars the opportunity to meet face-to-face with more than 100 of their peers from nearly two dozen countries. We are especially pleased to have been selected as host of the 2012 TICCIH Congress and its related symposia, as this year we celebrate 10 years of promoting preservation of our industrial heritage sites. The Forum for the Regional Industrial Heritage in Asia is especially important, for here a mechanism for a regional industrial heritage cooperation network based on the opinions of participating experts can begin to take shape. This

can stand as an important guidepost for the future development of the field, and highlights the milestone that is the first TICCIH gathering in Asia.

Lung Yingtai

Minister of Culture

Republic of China (Taiwan)

保存與契機－產業文化資產保存整合時代的新意義

國際工業遺產保存委員會（TICCIH）第 15 屆會員大會暨學術研討會於 2012 年 11 月 4 日起 8 日在臺北科技大學舉行。這次國際學術交流盛事，展現臺灣近年推動產業文化資產相關成果，將本地文化特色推向國際舞台，意義非凡。

「TICCIH」是聯合國教科文組織(UNESCO)轄下，協助國際文化紀念物及歷史場所委員會（ICOMOS），針對產業類世界遺產場所審查與登錄的諮詢組織，是目前全世界最重要的產業文化資產保護機構。每三年一次的會員大會，是國際間最重要的意見交換與保存推動平台。

隨著產業轉型與社會變遷，臺灣早期賴以經濟起飛的產業正因經營、生產形態的改變而式微，這些伴隨臺灣成長、茁壯的輝煌紀錄，迅速消失。而近年來，社會上出現許多產業文化資產搶救事件，其實都源自於對文化資產「價值」的質疑。因此，如何使這些已經脫離原有功能的產業文化資產，在新科技時代裡適時轉換價值、被重新利用，是臺灣正面臨的重要課題。

「產業文化資產」早已不再是「老舊」與「荒廢」的代名詞，而是人類回顧經濟文明與國家文化進程的重要見證。文化已經成為市場經濟的重要元素，也是世界新經濟的趨勢。臺灣在政府的帶領下，已經營造出許多成功的案例，並且也注入民間參與的活力，不但共同營造出保存與永續發展的友善環境，同時也創造了產業發展的新選擇與國民就業機會，是文化資產活化再利用的重要標竿。

感謝籌備大會的用心，提供我們這次難得與來自 20 個國家、百餘位專家學者面對面經驗交流的機會。2012 年正值我國推動產業文化資產保存工作 10 年之際，做為國際工業遺產保存委員會(TICCIH)第 15 屆會員大會暨學術研討會的主辦國，足見我們過去努力的成果獲得肯定，也期勉、督促著我們在未來必須更深化國內產業文化資產保存與開發相關工作，做出更專業、更完善的成績。同時，藉由這次「亞洲工業遺產區域合作論壇」的機會，以凝聚各國專家學者、先進的寶貴意見，形成亞洲地區產業文化資產合作網絡的機制，作為日後亞洲地區推動產業文化資產發展的重要方針，期更彰顯首次在亞洲舉辦之重要性。

文化部長

龍應台

Carrying on Legacy and Enlightening the Future

Embarkation of Industrial Conservation and Development for Taipei City

It is truly a great honor that we can host the TICCIH Congress in Taipei as its debut in Asia. First of all, I would express my sincere gratitude and extend my best wishes, on behalf of Taipei City Government and all citizens, to TICCIH, Prof. Lin, Hsiao-wei, the Chairman of the Organizing Committee, and her team as well as many supporting staffs from Bureau of Cultural Heritage, the Ministry of Culture and other institutions for their hard work. It takes two years to have the Congress held in Taipei which serves a substantial honor for our promoting cultural preservation and urban revitalization in the capital city.

Taipei is a modernized metropolitan and due to a rapid economic development, we often encounter conflicting issues between the conservation of cultural heritage and urban development. Hence, it is even much tougher to secure industrial heritage in a grand size. Nevertheless, with many efforts made through multiple channels, we focus on recent industrial heritage along the legacy of old railway for conservation. Last September, we completed the renovation of Songshan Tobacco Plant which is now re-utilized and becomes Songshan Cultural and Creative Park where Taipei World Design Expo 2011 was held with great success and also various activities as well as exhibitions. The Park has become a recreational milieu for many citizens no matter whether it is holiday or not. The industrial heritage consists of many aspects and symbolizes a connection between industrial modernization and urban development. It is Taipei's most precious cultural heritage with multiple historical values and is regarded as one of the important cultural lives in the city.

The "Conservation" of industrial heritage in Taipei does not only witness the historical context of an age but also better explains the horizontal expansion, from the west to the east, of the urban development of Taipei in the past. From the initial establishment of a railroad by Liu, Ming-chuan, the governor of Taiwan in Qing Dynasty, to the reconstruction of railway in the Japanese Colonial Period, the railway development connected Keelung through Kaohsiung. The products such as sugar, salt, tobacco and liquor, as well as camphor were monopolized back then. The industries of these items were set up in all over Taiwan. Railway thus became a critical lifeline for the economy of these industries and for the products transportation. The important infrastructure in Taipei and new factories were built along the railway, which facilitated the development of the nearby regions and attracted more population. All these provided power to the economic and industrial development of Taipei.

The economy of Taiwan boomed after 1950s. Many industrial factory structures and facilities were left behind as a result of dense population and a rapid development of commercial business which caused shutdown or transition of traditional industries. We now set up a goal for "2016 WDC Taipei"

to implement the policy of “Design is People”. While applying for “World Design Capital”, we will aggressively accelerate the urban rebirth upon its cultural trails. In fact, in addition to the successful case of transforming Songshan Tobacco Plant into the Songshan Cultural and Creative Park, there are some more projects such as Taipei Warehouse of Taiwan Sugar Corporation which has become a home for Ming Hua Yuan Taiwanese Opera Troupe - an intangible cultural heritage. Taipei Distillery was turned to Huashan Culture Park for exhibitions and activities. Jianguo Brewery is still in operation and the Rail Administration has engineering work in process, which will tactfully display the present and the past of Taipei railway. The other worth mentioning is that Taipei Railway Workshop, located next to Songshan Cultural and Creative Park, has witnessed significant industrial heritage of Taipei railway, and therefore will be more actively re-utilized with the surrounding area.

We will be even more confident and optimistic towards the future, and will further learn as well as share the experiences from one another to obtain more recognition and support from local people for conservation of the industrial heritage so that proper policies can be carried out and the implementation be achieved. Consequently, the government and private sectors can cooperate to fulfill our vision for a city with industrial and cultural heritage. It is wonderful that TICCIH Congress is held in Taipei and plays a role to facilitate the conservation of industrial heritage for Taiwan, Asia and the whole world. This is indeed a big task with a long way to go, yet a joyful mission worth celebrating. We expect to team up with you to make every endeavor for the conservation of industrial and cultural heritage for Taiwan and Asia.

Mayor of Taipei City

HAU Lung-Bin

承先與啟後－臺北市的工業保存與發展啟航

很榮幸，臺北市能承辦 TICCIH 在亞洲第一次召開的會員大會；首先，本人代表臺北市與市民，表達誠摯的謝意與祝福。感謝 TICCIH 和承辦大會的林曉薇教授及其團隊，以及文化部文化資產局等部門單位積極籌辦相關工作，經過二年的努力，在臺北召開大會，為本市推動文化保存及都市再生的重要殊榮。

臺北是現代化的大都會地區，由於經濟快速的發展，使我們更容易面臨到文化資產保存與都市發展相互衝突的議題。其中，要保存大型「工業遺產」更屬不易，然而臺北市近年透過多方的努力，以舊鐵道遺跡沿線的近代產業遺產群作為保存重心。去年 9 月，我們修復完成松山菸廠，再利用為文創基地的松山文創園區，並成功辦理了世界設計大展及各式的活動及展覽，現在園區無論是平日或假日，更成為市民休閒遊憩的場所，多樣性產業遺產，象徵產業近代化中連結著城市發展過程，是臺北市具有多元化歷史價值的珍貴文化資產，視為文化生活重要的一環。

「保存」，除了見證時代的歷史脈絡，更可說明臺北市過去的城市發展是由西向東擴張。從巡撫劉銘傳興建鐵路之創始，到日治時期整修鐵道，串聯了基隆到高雄，而當時的專賣制度包括糖業、鹽業、菸酒、樟腦等產業紛紛在臺灣各地設置，鐵道就成為臺灣產業經濟與物資運輸的重要命脈，當時臺北重要的城市基礎設施、新式工廠也沿著鐵道設置，帶動鐵道沿線周邊的發展以及人口的流動，成為臺北經濟與產業發展的重要動力。

1950 年代後經濟起飛，許多工廠因人口聚集、商業活動發展而結束作業或遷移，留下許多產業遺構。「2016 WDC Taipei」政策將落實「以人為本的設計」，而我們在申辦世界設計之都發展計畫中也將積極推動文化路徑的都市再生；其實，臺北市在近年來除了松山菸廠轉化為松山文創園區這個成功的工業遺產案例之外，另外臺糖的臺北倉庫已經成為無形文化資產明華園進駐的糖廊園區、臺北酒廠也成為各式重要展演的華山文創園區、目前仍在生產啤酒的建國啤酒廠、以及工程正在進行的鐵道部，未來將巧妙的展現臺北鐵道的現代與過去，另外值得一提的還有臺北機廠，這個位於松山文創園區旁邊、見證臺北鐵道的重要工業遺產，未來臺北市也會針對此區域有更積極的作為。

未來，我們將更抱持樂觀與信心，互相觀摩與學習；在保存工業遺產領域上爭取更多民意的認同，形成政策措施，讓政府與民間共同努力實現工業文化資產之都的發展願景。適逢 TICCIH 大會在臺北舉辦年度大會，扮演著臺灣參與亞洲乃至於全世界工業遺產保存的啟航角色，任重而道遠，更是極值得慶賀的事，期待大家共同為保存臺灣與亞洲工業文化遺產而努力。

臺北市長　郝龍斌　謹識

TICCIH The International Committee for the Conservation of the Industrial Heritage

PREFACES

Note of TICCIH President

This collection of abstracts represents the full array of presentations and lectures offered at the 15th International Congress of The International Committee for the Conservation of the Industrial Heritage, held in Taipei, Taiwan in November 2012. The Congress theme, Post-Colonialism and Reinterpretation of Industrial Heritage, was particularly relevant in the context of this first full-scale TICCIH Congress to be held in Asia, recognizing the complexities inherent in the historical processes of globalization, colonization and long-term connections among industrial and industrializing nations. Both practical and philosophical questions abound when considering the interplay of industrial systems imposed during colonial regimes and just where the heritage values of the remnant landscapes and structures might reside; this Congress attempted to give voice to the full array of perspectives.

Presentations were solicited for major sections on Theory and Methodology, Planning and Design, Interpretations and Application, and Social and Economic Impacts. In addition, practical workshops were held on Nomination of Industrial Heritage for Inscription on the World Heritage List and an initiative underway by Historic Scotland and select partners called Digitising Industrial Heritage, aimed at creating a dynamic and accessible international database of industrial heritage resources under the TICCIH brand.

The organizers of the Congress and in particular Dr Hsiao-Wei Lin can be proud of their work in bringing together delegates from all over the world and publishing this wide-ranging volume, the latest in a fine series going back to the original Transactions of the First International Congress on the Conservation of Industrial Monuments, in 1973.

PATRICK MARTIN

TICCIH President 2009-2012

Note of Chairman of Organizing Committee

Having been a relatively junior member of The International Committee for the Conservation of the Industrial Heritage (TICCIH) since 2004, and an elected board member since 2009, I am honoured to take the challenge to be the chairman of the Organizing Committee to arrange the first full TICCIH Congress to be held in Asia, in Taipei, Taiwan. Firstly, I would like to express my gratitude to both Organizing and Academic Committee members for their support and encouragement to organize this congress. Without their long-term dedication and patience with the endless meetings, this congress would not have happened with such a rich program and wide range of perspectives. Secondly, I would like to thank all our funding sponsors. Thanks to their recognition of the importance of the conservation of the industrial heritage, not only does this congress exist but also much valuable industrial heritage has been preserved.

This Proceedings illustrates the congress theme, Post-Colonialism and Reinterpretation of Industrial Heritage, with more than 90 papers from 19 countries. It is a true demonstration of the international scale of TICCIH and the importance of this issue all over the world. Since 1978, TICCIH has provided the opportunities (through conferences, workshops, and site visits) for people to see how the industrial heritage has been approached, resolved and revitalized around the world. The Nizhny Tagil Charter in 2003 and the ICOMOS-TICCIH Principles for the Conservation of Industrial heritage Sites, Structures, Areas and Landscapes, which was approved in the General Assembly of ICOMOS in 2011, all show the effort and achievement of TICCIH and its increasing international role.

In the TICCIH Congress 2012 we also would like to announce a Taipei Declaration for Asian Industrial Heritage in order to emphasize the urgent situation of the rapidly disappearing industrial heritage due to the drastic urban development and global economy in Asia. In addition, establishing an Asia Industrial Heritage Network to enhance the conservation work of industrial heritage to an international standard and to play an active role in the development of industrial heritage in the world should be also a great step for this first TICCIH Congress to be held outside Europe and America, and will be an important step for the conservation of industrial heritage in this region. We hope this event will awaken more awareness and avoid further loss of our valuable industrial heritage in Asia.

Dr Hsiao-Wei Lin

Chairman of Organizing Committee of TICCIH Congress 2012

1. Introduction

The International Committee for the Conservation of the Industrial Heritage was established in 1978, in Sweden, during the 'Third International Conference on the Conservation of Industrial Monuments', previous conferences having been held in Ironbridge (England) 1973 and Bochum (Germany) 1975.

TICCIH's aim is to promote international cooperation in the preservation, conservation, investigation, documentation, research and presentation of our industrial heritage, and to promote education in these matters. This includes the physical remains of the industrial past, such as landscapes, sites, structures, plants, equipment, products, fixtures and fittings, as well as their documentation, consisting both of verbal and graphic material and of records of the memories and opinions of the people who have been involved.

TICCIH has extensive links with other international bodies. It has a particularly close tie with ICOMOS, recorded in an agreement signed in 2000 confirming TICCIH's position as a recognised adviser to ICOMOS on the industrial heritage.
For more details, please go to our website www.ticcih.org.
We hope you will join **TICCIH** to promote industrial preservation throughout the world.

1.1 About TICCIH Congress

TICCIH organises, every three years, a general conference in which a wide range of policies and issues are discussed, scientific papers presented, and elections for the leadership are held. Recent meetings were held in Russia in 2003, Italy in 2006 and Germany in 2009. **The XVth International TICCIH Congress 2012 in Taiwan** is the first one to be hosted in Asia. We hope through this Congress to promote conservation work and build up a closer network for the industrial heritage in Asia.

TICCIH also promotes the work of specialized sections such as hydropower, textiles, food production, mining, railways, historic mints, tourism, and global/local sections, which also hold their own focused conferences and meetings. Both national and regional TICCIH groups hold conferences all over the world, to provide a platform for exchanging professional knowledge, technology and related research, as well as to draw more public attention and awareness for conservation progress in the future.

1.2 Congress Theme, Program & Date

Post-colonialism & Reinterpretation of Industrial Heritage

We use the term 'post-colonial', to cover all the culture affected by the imperial process from the period of colonization to the present day. Since the beginning of industrialization the development of more and more new industries has changed the urban and rural landscapes all over the world. The process of birth, growth and decline of such industries is even more dramatic and fast-coursed by the colonization of the world. It is still visible in the remaining industrial monuments; it is also alive in the structure of a landscape which was formed over centuries by industrial activities and the development of technical infrastructure. Thus, as the first TICCIH congress held in Asia, we would like to explore the industrial heritage in relation to post-colonialism - to see the industrial heritage of others from various points of view and to seek the solution to the massive industrial impact on the landscape in the present day.

In the west, ‘regeneration through heritage’ has a long development since the 1960s. In Asia, it is a relatively new concept for urban and regional development. Different attitudes towards post-colonialism have also affected the life of industrial heritage and social development of society. In addition, there are some countries which just started their industrialization. Therefore, it is the time to review the industrial heritage development and to look for a dynamic and sustainable development of the industrial world in the future.

The congress theme ‘Post-colonialism & Reinterpretation of Industrial Heritage’ aims at these close connections between historical, political, racial, environmental, economic, technical, and social questions of industrial heritage in our modern world. It will be a forum for presentations and discussions on these issues and for realized, actual and planned projects as well as concepts for possible solutions of these problems. Therefore, the congress and its planned sessions will be open for participants from all scientific and administrative fields and institutions which are dealing with historical, political, ecological, economic and heritage problems of industrial monuments and industrial landscapes. The key-sessions and sub-sessions will be defined later.

The conference will begin with four keynote speakers from Europe, USA and Asia. They will give introductions and overviews on general topics about the main theme of the congress. Furthermore, the conference will be open for four sections and poster sessions for presentations on the results of new research and development projects in this field. The four sections for oral presentations are as below:

Section I: Theory and methodology

Section II Planning and design
Section III Interpretation and application
Section IV Social and economic impacts

A poster sections as well as a special exhibition: An Inch to World Heritage-TICCIH Congress 2012, Spark to Taiwan's Industrial Heritage, will be held during congress.

In addition to the conference, a pre-congress tour, a congress tour and 2 post-congress tours are provided. The pre-congress tour will visit Taiwan Railways Administration Workshop, Huashan 1914 Creative Park and Cultural and Creative Park. The congress tour will take participants to Taichung Cultural & Creative Industries Park and to visit Bureau of Cultural Heritage, Xihu Sugar Refinery and Changhua Fan-shaped Railway Workshop. The optional post-congress tours will bring participants either to the industrial heritage of southern Taiwan such as Cigu Salt Field, Wushantou Reservoir and Jianan Irrigation Waterways, Kaohsiung Port, or to the industrial heritage of northern Taiwan for Gold Ecological Park, Taiwan Coal Mine Museum, Chu-huang-keng Oil Mining Landscape, Taipei Water Park and railway workshop. Some social events are also arranged during the congress.

【Table-1】TICCIH Congress 2012 Theme & Sections

Theme: Post-Colonialism and Reinterpretation of Industrial Heritage							
Section I:		**Section II:**		**Section III:**		**Section IV:**	
Theory and methodology		Planning and design		Interpretation and application		Social and economic impacts	
S1-1	Industrial archaeology	S2-1	Brownfield treatment	S3-1	Post-colonialism & heritage policy	S4-1	Industrial tourism
S1-2	Conservation science and technology	S2-2	Regeneration of ecological environment	S3-2	Interpretation of exhibitions and museums	S4-2	Operation and management
S1-3	History of technology	S2-3	Landscape planning and management	S3-3	Colonial industrial heritage	S4-3	Laborer culture & community issues
S1-4	Industrial cultural landscape	S2-4	Reuse of industrial space	S3-4	Industrial Heritage in the Japanese World Heritage tentative list	S4-4	Community empowerment

S1-5	Industrial Archives and documentation	S2-5	Urban regeneration	S3-5	**Workshop A**：Nomination of Industrial Heritage for Inscription on the World Heritage List: Process and Practice	S4-5	Intangible industrial heritage
				S3-6	**Workshop B**：Digitising Industrial Heritage		

【Table-2】TICCIH Congress 2012 Conference Program and Date

Time	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
	4th Nov.	**5th Nov.**	**6th Nov.**	**7th Nov.**	**8th Nov.**	**9th Nov.**	**10th Nov.**	**11th Nov.**
	Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**	**Sun**
AM	TICCIH Board Meeting	Opening Ceremony	Congress Tour Taichung Broadcast Bureau	Keynote Lecture 3-4	Asian Industrial Heritage Cooperation Forum	Post-Congress Tours – 3 days 1. Industrial Heritage Tour to Southern Taiwan 2. Industrial Heritage Tour to Northern Taiwan		
		Keynote Lecture 1-2	Taichung Creative and Cultural Park	TICCIH Special Section				
PM	Registration Pre-congress Tour Taipei Industrial Heritage Tour	Sessions/ Workshop A	Changhua Railway Workshop/ Xihu Sugar Factory	Sessions/ Workshop B	TICCIH General Assembly/ Poster Sessions			
		National Representative Meeting						
EVE	Welcome Reception at Huashan1914 Creative Park	Social Program (optional)	Lugang Settlement (Back to Taipei)	Free night	Farewell Party at National Taiwan Museum			

1.3 Information of Congress Venues

1.3.1 Registration Information

Day 1: 04th Nov. 2012 (Sun)

- Pre Congress Tour- Taipei Industrial Heritage Tour

  Register at Venue 2: Huashan1914 Creative Park, a wooden kiosk beside the Information Centre

  Time: 13:00-14:00

- Welcome Reception

  Register at Venue 2: Huashan1914 Creative Park, a wooden kiosk beside the Information Centre

  Time: 17:00-18:00

Day 2: 05th Nov. 2012 (Mon)

- Conference / Opening Ceremony

  Register at Venue 1: National Taipei University of Technology

  Room A: International Conference Hall, B2 floor, Technology Building

  Time: 08:00-09:00

Day3: 06th Nov. 2012 (Tue)

- Congress Tour

  Register at Venue 2: Huashan1914 Creative Park, a wooden kiosk beside the Information Centre (for bus boarding)

  Time: 08:00-08:20

Day 4: 07th Nov. 2012 (Wed)

- Conference

  Register at Venue 1: National Taipei University of Technology

  Room A: International Conference Hall, B2 floor, Technology Building

  Time: 08:00-09:00

Day 5: 08th Nov. 2012 (Thu)

- Forum

  Register at Venue 1: National Taipei University of Technology

  Room A: International Conference Hall, B2 floor, Technology Building

  Time: 08:00-09:00

- TICCIH General Assembly

  Register at Venue 1: National Taipei University of Technology

  Room A: International Conference Hall, B2 floor, Technology Building

  Time: 12:30-13:00

- Farewell Party at National Taiwan Museum

  Register at Venue 2:Huashan1914 Creative Park, a wooden kiosk beside the Information Centre (for bus boarding)

  Time: 16:00-16:30

  Register at National Taiwan Museum

  Time: 17:30-18:00

Day6: 9th Nov. 2012 (Fri)

Post-Congress Tour

Register at Venue 2: Huashan1914 Creative Park, a wooden kiosk beside the Information Centre (for bus boarding)

Time: 08:00-08:20

1.3.2 Location of Congress Venues

Venue 1: National Taipei University of Technology (NTUT) 國立台北科技大學

Address: 1, Sec. 3, Zhong-Xiao E. Road, Taipei 106 忠孝東路三段1號

Website: http://www-en.ntut.edu.tw/bin/home.php

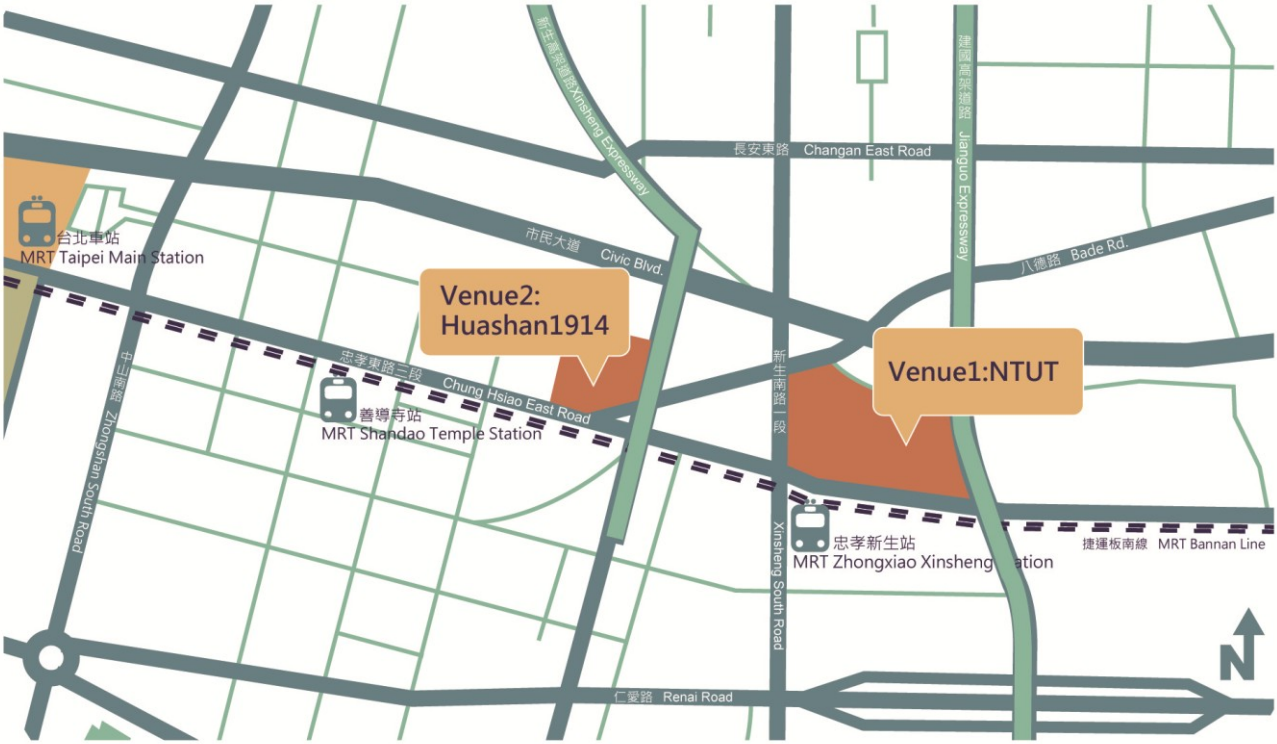
Tel: +886-2- 2771-2171 #6500

Venue 2: Huashan1914 Creative Park 華山1914文創園區

Address: 1, Sec. 1, Ba-de Road, Taipei 100 八德路一段1號

Website: http://www.huashan1914.com/en/index.html

Tel: +886-2-2358-1914



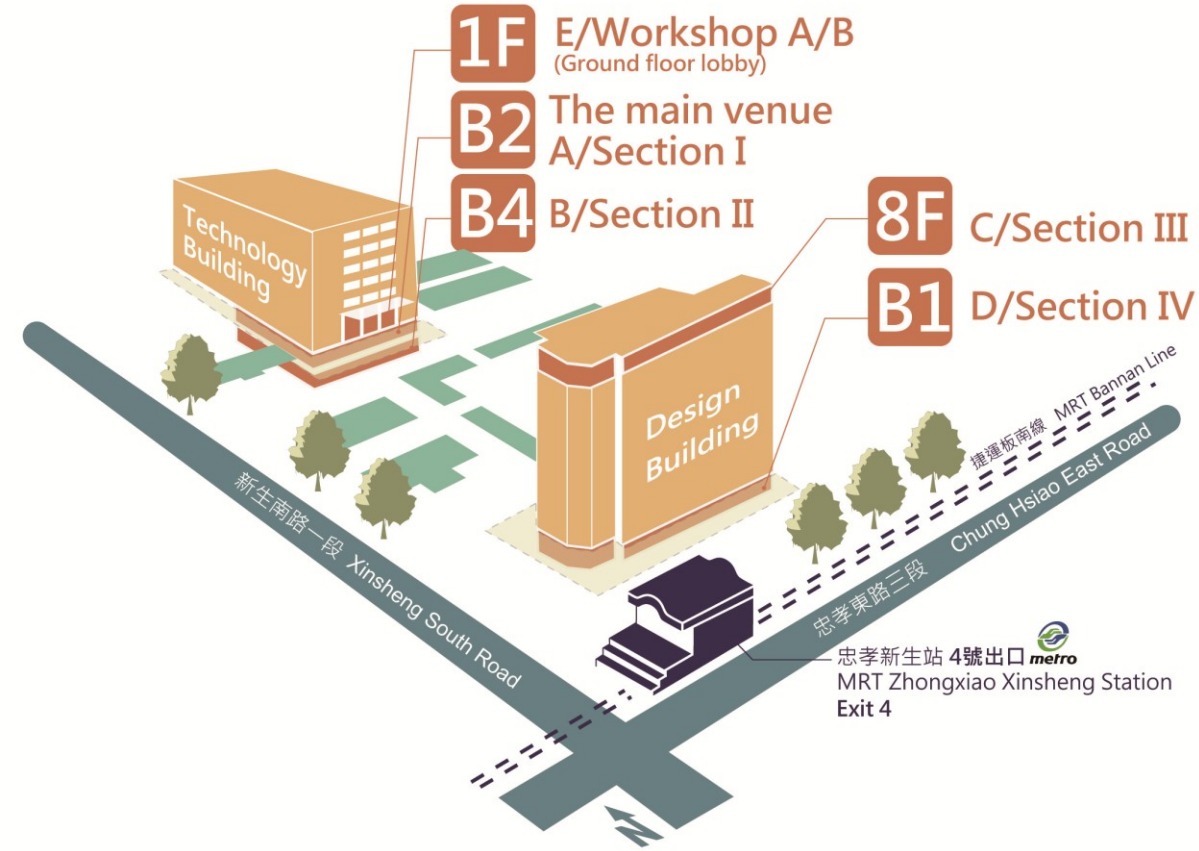
Location Map of Venues

To Venue 2: Huashan 1914 Creative Park

- ✓ **MRT Nangang/Blue Line** to **Zhong Xiao Xin Sheng Station** (忠孝新生).
- ✓ Take **Exit 1** and continue to walk straight for about a block until you see an underpass and a sculpture of red diamond.
- ✓ The Huashan1914 Creative Park is just across the street.

To Venue 1: National Taipei University of Technology（NTUT）

- ✓ **MRT Nangang/Blue Line** to **Zhong Xiao Xin Sheng Station** (忠孝新生).
- ✓ Take **Exit 4** and turn right.



Conference Rooms in Venue 1 NTUT

Conference Rooms Introduction

Room A：	**International Conference Hall, B2 floor, Technology Building**	**Section I**
Room B：	**B425 Lecture Hall, B4 Floor, The 6th Academic Building**	**Section II**
Room C：	**853 Audiovisual Classroom, 8 Floor, Design Building**	**Section III**
Room D：	**B01 Audio-Video Classroom, B1 Floor , Design Building**	**Section IV**
Room E：	**Ground floor lobby of Technology Building**	**Workshop A/B**

1.3.3 Registration Desk at Venue 1

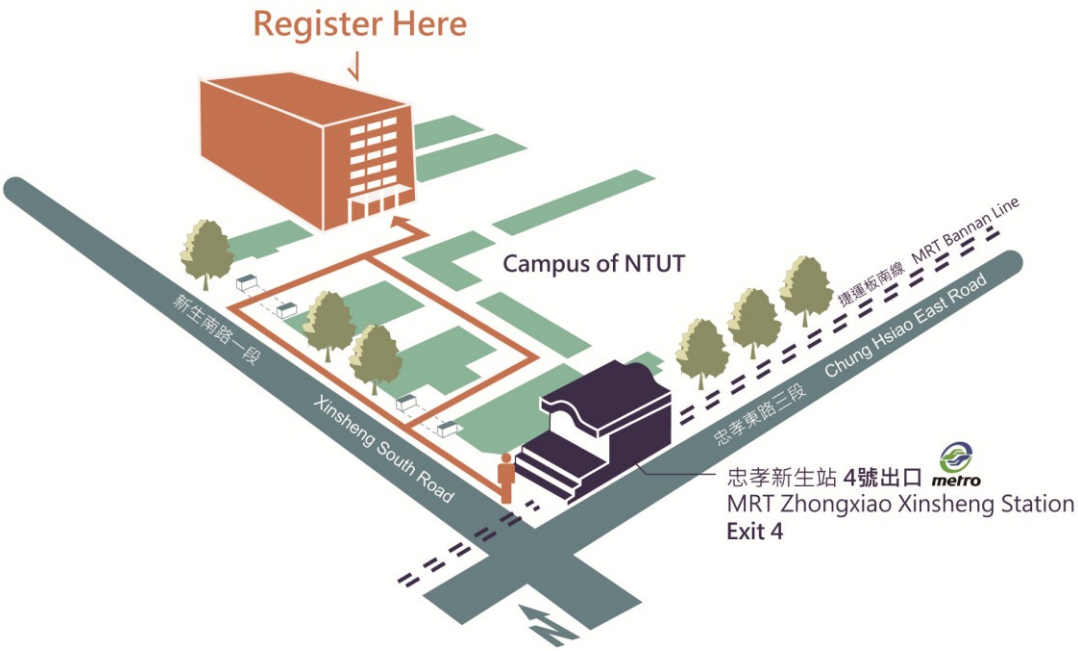
–Room A: International Conference Hall, B2 floor, Technology Building, NTUT

Open Hour:

5th Nov.	08:00 - 17:30
7 th Nov.	08:00 - 17:30
8 th Nov.	08:00 - 17:00

Registration Desk Instruction

1. Information / On-site Registration / Cashier
2. Interpretation Equipment Rental
3. Domestic Participants
4. International Participants
5. International Participants
6. Keynote Speakers/ TICCIH Board Members / Committee Members / Invited Guests



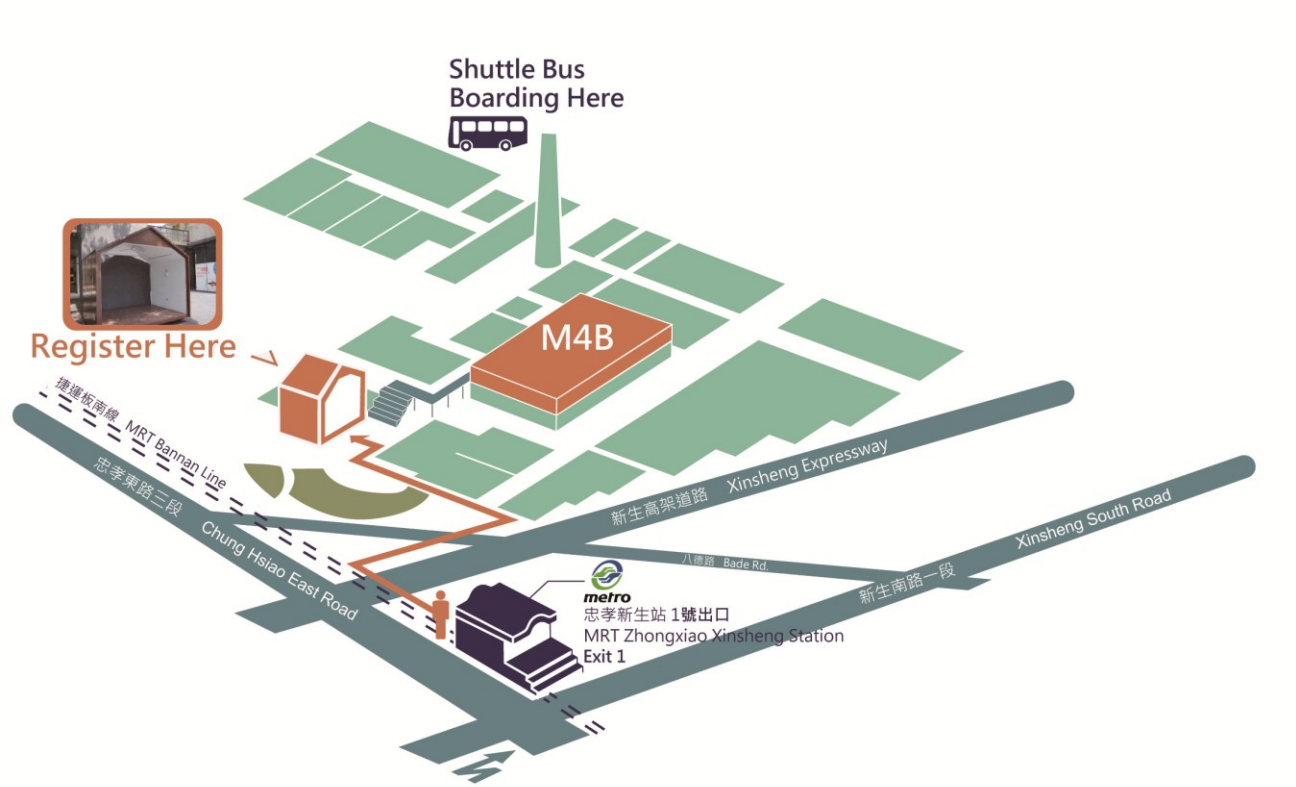
Registration Location at Venue 1：NTUT

1.3.4 Registration Desk at Venue 2

-TICCIH Registration Kiosk is in front of "Chuan Ching Stage", just beside the "Huashan Forum" and nearby the Information Centre of Huashan1914 Creative Park

Open Hour:

4th Nov.	13:00 - 21:00
6th Nov.	08:00 - 08:30
8th Nov.	15:30 - 17:00
9th Nov.	08:00 - 08:30



Registration Location at Venue 2：Huashan1914 Creative Park

2. Congress Schedule

2.1 Presentation Timetable

【Table-3】DAY 2: Nov. 5th (Mon) Conference

Time	Contents	Moderator
08:00-09:00	Registration (Room A)	
09:00-09:30	**Opening Ceremony**	
09:30-10:00	The Introduction of Taiwan Cultural Heritage	Bureau of Cultural Heritage Ministry of Culture
10:00-10:20	Coffee Break	
10:20-11:10	**Keynote Lecture 1：Sir Neil COSSONS** **Industrial Heritage: Treasure or Trash?**	
11:10-12:00	**Keynote Lecture 2：Professor Chao-Ching FU** **Enlightening the Spirit of Industrial Heritage in Taiwan**	
12:00-13:00	Lunch	

Time		A：Section I	B：Section II	C：Section III	D：Section IV	E	Moderator
		A1	B1	C1	D1		
13:00-13:20	1	S1	S53	S18	S3	Workshop A	A1：Jeng-Horng **CHEN** B1：Iain **STUART** C1：Hui-Cheng **LIN** D1：Miles **OGLETHORPE**
13:20-13:40	2	S71	S5	S60	S69		
13:40-14:00	3	S85	S7	S12	S37		
14:00-14:20	4	S89	S81	S11	S96		
14:20-14:40	5	S97	S34	S38	S58		
14:40-15:00	Session Discussion						
15:00-15:30	Coffee Break						
Time		A2	B2	C2	D2	Workshop A	A2：Chung-His **LIN** B2：Helmuth **ALBRECHT** C2：Eusebi **CASANELLES** D2：Györgyi **NÉMETH**
15:30-15:50	6	S46	S55	S48	S52		
15:50-16:10	7	S29	S75	S79	S65		
16:10-16:30	8	S8	S74	S94	S23		
16:30-16:50	9	S54	S64	S92	S33		
16:50-17:10	10	S31	S14	S42	S95		
17:10-17:30	Session Discussion						

17:30-18:30	TICCIH National representative Meeting (Room C)	TICCIH National representative

【Table-4】DAY 4: Nov. 7th (Wed) Conference

Time	Contents					Moderator
08:00-09:00	Registration (Room A)					
09:00-09:40	**Keynote Lecture 3：Professor Patrick MARTIN** **Remembering Marie Nisser: TICCIH's Past and Future**					
09:40-10:20	**Keynote Lecture 4：Professor Takashi ITOH** **The Conservation Movement of Historic Heritages in Japan-Past, Present and Future? (1960-2012, +α)-**					
10:20-10:40	Coffee Break					
10:40-12:00	**A:**		**B:**	**C: C3**	**D:**	
	TICCIH Special Section 1		**TICCIH Special Section 2**	**S68** **S44** **S47** **S45**	**TICCIH Special Section 3**	
12:00-13:00	Lunch					
Time	**A：Section I**		**B：Section II**	**C：Section III**	**D：Section IV**	**E** / **Moderator**
	A3		**B3**	**C4**	**D3**	
13:00-13:20	11	**S41**	**S15**	**S73**	**S43**	**Workshop B** / **A3：**Miguel **IWADARE IIJIMA** **B3：**James **DOUET** **C4：**Massimo **PREITE** **D3：**Xiao-Yun **XIE**
13:20-13:40	12	**S26**	**S10**	**S20**	**S61**	
13:40-14:00	13	**S2**	**S56**	**S19**	**S24**	
14:00-14:20	14	**S78**	**S83**	**S49**	**S70**	
14:20-14:40	15	**S76**	**S91**		**S36**	
14:40-15:00	Session Discussion					
15:00-15:30	Coffee Break					
Time	**A4**		**B4**	**C5**	**D4**	**Workshop B** / **A4：**Akira **OITA** **B4：**Dag **AVANGO** **C5：**Stephen **HUGHES** **D4：**Ajay **KHARE**
15:30-15:50	16	**S63**	**S86**	**S59**	**S82**	
15:50-16:10	17	**S13**	**S77**	**S9**	**S22**	
16:10-16:30	18	**S4**	**S21**	**S6**	**S80**	
16:30-16:50	19	**S67**	**S87**	**S50**	**S30**	
16:50-17:10	20	**S66**	**S28**	**S40**	**S72**	
17:10-17:30	Session Discussion					

【Table-5】DAY 5: Nov. 8th (Thu) Forum, General Assembly & Poster Presentation

Time	Content		Moderator / panelist
08:00-09:00	Registration (Room A)		
09:00-12:00	**Asia Industrial Heritage Cooperation Forum**		
12:00-13:30	Lunch Break（Lunch not provided）		
13:30-15:30	**TICCIH General Assembly**	**Poster Presentation**	TICCIH Members/ Poster Presenters
15:30-16:00	Free Time		

2.2 Oral Presentation List

【Table-6】Section I:Theory and Methodology

Room A Section I: Theory and Methodology					
S1-1 Industrial archaeology **S1-2 Conservation science and technology** **S1-3 History of technology** **S1-4 Industrial cultural landscape** **S1-5 Industrial Archives and documentation**			**Moderator** **A1：Jeng-Horng CHEN** **A2：Chung-His LIN** **A3：Miguel IWADARE IIJIMA** **A4：Akira OITA**		
Team	**No.**	**Author(s)**	**Title**	**Section**	**Page**
【DAY 2】5th Nov. (Mon)					
A1	S1	· ALBRECHT, Helmuth	Theory and Methodology of Industrial Archaeology in Germany	**S1-1**	
	S71	· WAKAMURA, Kunio	Evidence of Modernized Technology Transfer found on the Size, Structure, and Materials of Historic dry Socks in Europe and Japan	**S1-3**	
	S85	· OHASHI, Tadashi · TAMAGAWA, Kanji · HARADA, Takashi · UNO, Itsuko	The Heritage of the Sericultural Industry along Japan's Silk Road the Significant Role the Sericultural Industry has played for the Development of Capitalism in Japan	**S1-1**	
	S89	· SHIMIZU, Norikazu	The Industrialization as a Latecomer- the State-Owned Yawata Steel Works Comparing with Ham-yang and Tata	**S1-1**	
	S97	· QUE, Weimin	Research Significance and Conservation Perspective of Mining Heritage in China	**S1-2**	
A2	S46	· MICHEL, Alain P.	Reinterpreting an Industrial Conquest and Surrender. 3D Virtual Reconstruction to Measure the Impact of the Renault Plant on its Urban Landscape (1898-1992)	**S1-2**	
	S29	· ICHIHARA, Takeshi	Research on the Characteristics and Investigational Techniques of Industrial Heritage in Kyushu Area/ Japan	**S1-2**	
	S8	· CHEN, Jeng-Horng · HUANG, Patricia H.J.	Taiwan's Mixing Tracks of Shipbuilding Industry	**S1-3**	
	S54	· PEDERSEN, Morten	Building Asia's Cement Industry 1904-1939	**S1-3**	

	S31	· KRALOVA, Eva	The Copper Forge-house in Banská Bystrica – the Urbanity and Architectonic Document of the Evolvement of Historical Industrial Area	**S1-3**	
【DAY 4】7th Nov. (Wed)					
A3	S41	· MABUCHI, Koichi · KON, Naoyuki · HAYAKAWA, Wataru	Dam Project Documentary Films as Industrial Heritage	**S1-5**	
	S26	· HUGHES, Stephen	The TICCIH/ICOMOS Thematic World Heritage Studies & TICCIH Special Interest Sections	**S1-5**	
	S2	· AMANO, Takehiro · SATO, Masayuki · SAWAD, Atsuyuki · OSHIMA, Ichiro	A study of Classification of Industrial Heritage	**S1-5**	
	S78	· YE, Ping · XU, Su-Bin · AOKI, Nobuo	Research on the Current Status of Luoyang Industrial Heritage and Protection Pattern	**S1-2**	
	S76	· YANG, Kai-Cheng · MAA, Yaw-Huei	The Science and Technology of Taiwan Salt Production during the Meiji and Taishou Era (1895-1926)	**S1-3**	
A4	S63	· STUART, Iain	Identifying Industrial Landscapes	**S1-4**	
	S13	· RODRIGUES DA SILVA, Ronaldo Andre	Cultural Landscape and Industrial Heritage: Possibilities for the Brazilian Studies	**S1-4**	
	S4	· AVANGO, Dag	Heritage in Action- Industrial Remains in Polar Conflicts	**S1-4**	
	S67	· TSAI, Ming-Chih	On the Spatial Transformation of Luodong Township under the Influence of the Forestry Policy	**S1-4**	
	S66	· TRISCIUOGLIO, Marco · PIACENTINO, Lorenzo	Post- Agricultural Production- A Case Study of Productive Landscape in Aosta Valley	**S1-4**	

【Table-7】Section II: Planning and Design

Room B　Section II: Planning and Design					
S2-1 Brownfield treatment **S2-2 Regeneration of ecological environment** **S2-3 Landscape planning and management** **S2-4 Reuse of industrial space** **S2-5 Urban regeneration**			**Moderator** **B1：Iain STUART** **B2：Helmuth ALBRECHT** **B3：James DOUET** **B4：Dag AVANGO**		
Team	**No.**	**Author(s)**	**Title**	**Section**	**Page**
【DAY 2】5th Nov. (Mon)					
B1	S53	· OKADA, Masaaki	Purification Plant as Landscape Heritage- Synergy of Functional Form and Landscaping	**S2-1**	
	S5	· SERGIO, Baragaño	Industrial Romanticism	**S1-4**	
	S7	· CHEN, Chie-Peng	A Study of the Hydraulic Landscape in Taoyuan Tableland: the Past, Present and Future	**S2-3**	
	S81	· ZHANG, Yu · XIA, Lili	Shaping New Life: Regeneration through Industrial Heritage of Dujiangyan Paper Mill after Great Earthquake	**S2-4**	
	S34	· LIN, Hui-Wen	Sustainable Strategies of Reuse Design on Colonised Industrial Heritage for Cultural Industrial Park	**S2-4**	
B2	S55	· PREITE, Massimo	Industrial Heritage and Urban Regeneration in Italy: the Formation of New Urban Landscapes	**S2-5**	
	S75	· YANG, Hong-Siang	A Study on Preservation, Restoration and Reuse of the Industrial Heritage in Taiwan: The Case of Taichung Creative Cultural Park	**S2-4**	
	S74	· YAN, Mi · AOKI, Nobuo · XU, Su-Bin	The Study of Tianjin Binhai New Area Industrial Heritages	**S2-5**	
	S64	· TEMPEL, Norbert · BRUEGGERHOFF, Stefan · GOETZ ,Kornelius	Industrial Monument Action Planning – Creating a Transfer Platform (Wiki) for the Preservation of Industrial Monuments	**S2-4**	
	S14	· DONG, Yi-Ping · HOU, Bin-Chao	Industrial Heritage in Booming Cities- Contextual Study on Yangtzepu Industrial Area Conservation, Shanghai	**S2-5**	

【DAY 4】7th Nov. (Wed)					
B3	S15	· FAN, Xiao-jun · XU, Honggang	Selective Interpretation of Chinese Industrial Heritage Case study of Shenyang Tiexi District	S2-5	
	S10	· CHEN, Yi	Industrial Heritage Conservation Practice in the Historic District Renovation: Some Modern Industrial Heritage Conservation Cases in Zhejiang Province	S2-4	
	S56	· RADACH, Rasmus	LOST IN TRANSITION? Revisiting the Preservation Process of the Blast Furnace Plant PHOENIX West in Dortmund, Germany	S2-5	
	S83	· CHO, Mihye · SHIN, Sunghee	Economization or Heritagization of Industrial Remains? Coupling of Conservation and Urban Regeneration in Incheon, South Korea	S2-5	
	S91	· GANOBJAK, Michal · KRALOVA, Eva	New Life of Former Mining Settlement, Spania Dolina-Piesky	S2-5	
B4	S86	· WANG, Huey-Jiun	Conversion of an Abandoned Winery: a Rregeneration Case of Hua-shan 1914 Creative Park, Taipei	S2-4	
	S77	· JENQ, Shean-Ming · YANG, Min-Chih	The Study of German Cultural Brewery Space Conservation and Reutilization	S2-4	
	S21	· KARDOS, Peter · KRALOVA, Eva · HANACEK, Tomáš · HAIN, Vladimír · GANOBJAK, Michal	Water Park Nitra- Valorization of Industrial Space in Contact with the River	S2-5	
	S87	· YU, Yi-Fan · LI, Kong-San · SHU, Sheng-Lan	Preservation and Reuse of Industrial Heritage along the Banks of the Huangpu River in Shanghai	S2-5	
	S28	· IAMANDESCU, Ioana Irina	The City of Bucharest - Urban Regeneration through Industrial Heritage	S2-5	

【Table-8】Section III: Interpretation and Application

Room C　Section III: Interpretation and Application	
S3-1 Post-colonialism & heritage policy **S3-2 Interpretation of exhibitions and museums** **S3-3 Colonial industrial heritage** **S3-4 Industrial Heritage in the Japanese World Heritage tentative list**	**Moderator** **C1**：Chung-His **LIN** **C2**：Eusebi **CASANELLES** **C3**：Special **Sessions** **C4**：Massimo **PREITE** **C5**：Stephen **HUGHES**

Team	No.	Author(s)	Title	Section	Page
【DAY 2】5th Nov. (Mon)					
C1	S18	· AF GEIJERSTAM, Jan · LAGERQVIST, Bosse	Industrial Heritage Practices – the Colonialism of Thought?	S3-1	
	S60	· SMITH, Stuart Brian	The Japanese Colonial Empire and its Industrial Legacy	S3-1	
	S12	· LOPES CORDEIRO, José Manuel	Nova Oeiras: an Eighteenth Century Ironworks in Angola its History and Preservation in the Post-colonial Era	S3-1	
	S11	· CHIANG, Min-Chin	Revisiting Modernity: Heritagizing Japanese Industrial Sites in Taiwan	S3-1	
	S38	· LIU, Bo-Ying	Modern Industrial Construction and Industrial Heritage in Mainland China: a View from the Concepts of "Colonial" and "Post-colonial"	S3-1	
C2	S48	· MIZUTA, Susumu	A Study on the Amami Oshima Sugar Mill: its Restoration and Social Background of Establishment	S3-1	
	S79	· YEH, Shang-Ching · HUANG, Jun-Fu	Science and Technology Museums Play Active Roles in the Preservation and Utilization of Industrial Heritage: the National Science and Technology Museum in Taiwan as an example	S3-2	
	S94	· OVIEDO GAMEZ, Belem · HERNANDEZ BADILLO, Marco · IWADARE IIJIMA, Miguell · HERNANDEZ IBAR, Ivan · TORRES, Eugenio Martín	“La Dificultad” Mine. A Site Museum and Interpretation Center in the Mining District of Real del Monte and Pachuca.	S3-2	
	S92	· HAIN, Vladimír	Education by Industrial Heritage – Old Power Plant of Piešťany "Elektrárňa Piešťany"	S3-2	

	S42	· STEINER, Marion	Tracing the Invisible - Electropolis Berlin	**S3-2**	
【DAY 4】7th Nov. (Wed)					
C3	S68	· USAMI, Ryo	The Sado Mining Complex	**S3-4**	
	S44	· MATSUURA, Toshitaka	The Tomioka Silk Mill and Related Heritage Sites	**S3-4**	
	S47	· MIYAMOTO, Yuji · HAGIHARA, Koji · TERAHARA, Toru	The Summary of "the Modern Industrial Heritage Sites in Kyushu – Yamaguchi" and Comparative Analysis Coal Mines	**S3-4**	
	S45	· MEGURO, Takayuki	Technologies Depicted in Sado Mine Picture Scrolls	**S3-4**	
C4	S73	· YAMADA, Hirotaka	History of Coalmining Industry and Nowadays State of Heritage in Hokkaido in Japan	**S3-1**	
	S20	· HACHAZ-LEROY, Florence	The Industrial Heritage of Aluminum Industry in Post-colonialism	**S3-1**	
	S19	· GENOVESE, Paolo Vincenzo · FACINET, Bangoura	Tangible and Intangible Restoration of the Historical District of Bhaktapur in Kathmandu- Investigation, Mapping and Management Project of Conservation of the Human Settlements According with the Low-Scale Approach Theory	**S3-2**	
	S49	· MORALES MORENO, Humberto	The First Company Town in Latin America. La Constancia Mexicana: 1835-1991	**S3-3**	
C5	S59	· SIMONCICOVA, Katarína	Development of Energy Buildings in Slovakia	**S3-3**	
	S9	· CHENG, Min-Tsung · FU, Chao-Ching	After the Preservation of the Factory - the Possibility and Impasse of the Conservation of Industrial Heritage in Taiwan	**S3-1**	
	S6	· CASANELLES, Eusebi	Transnational Heritage in Europe	**S3-2**	
	S50	· NEMETH, Györgyi	The Memory of Soviet-type Industrialisation and Industrial Heritage Preservation in Hungary	**S3-3**	
	S40	· LIU, Zhen-Hui	Rethinking Ecomuseum: a Tool for the Redevelopment of the Post-industrial Region, Hou-Tong	**S3-2**	

【Table-9】Section IV: Social and Economic Impacts

Room D Section IV: Social and Economic Impacts	
S4-1 Industrial tourism **S4-2 Operation and management** **S4-3 Laborer culture & community issues** **S4-4 Community empowerment** **S4-5 Intangible industrial heritage**	**Moderator** **D1**：Miles **OGLETHORPE** **D2**：Györgyi **NÉMETH** **D3**：Xiao-Yun **XIE** **D4**：Ajay **KHARE**

Team	No.	Author(s)	Title	Section	Page
【DAY 2】5th Nov. (Mon)					
D1	S3	· AMBRUSOVA, Petra	Historic Town of Banská Štiavnica and the Technical Monuments in Its Vicinity	S4-1	
	S69	· UTAKA, Yushi	Reinventing the Historic Silver Mine Carriageway Gin-no-Bashamichi in Hyogo Prefecture, Japan- Renaming and Reconnecting Forgotten Mining Heritages—	S4-1	
	S37	· LING, Tzen-Ying · HUANG, Kuei-Mei	Planning of Tourism Destination Cluster in Central Taiwan	S4-1	
	S96	· KARABAIC, Milena	Organizing Industrial Heritage in North Rhine-Westphalia(NRW),Germany. Perspectives and Chances for a "Charter Industrial Heritage NRW 2020"	S4-1	
	S58	· ROUX, Alain	Industrial Heritage: Some French Examples of Set off in cultural Opening	S4-1	
D2	S52	· OHSHIMA, Ichiro	A More Effective Way to Conservation and Practical Use of Industrial Heritage- Macro Approach	S4-2	
	S65	· TERAZAWA, Yasumasa	Ohigawa Railway & the Development of Hydro power Stations	S4-1	
	S23	· HONG, Wen-Ling · WANG, Jr-Ping	The Transition of Shipbuilding Industry on Cijin Island in Kaohsiung Harbor - from Post-war Wooden Fishing Boats to Modern Fiberglass-Reinforced-Plastic Mega Yachts	S4-2	
	S33	· LEE, Yu-Hsuan	Naked Kaohsiung: Rethinking Cultural Tourism of Industrial Culture in a Post-industrial Era	S4-1	

	S95	· ZAPARIY, Vladimir	Russia and Urals: Industrial Heritage and Industrial Tourism	**S4-1**	
【DAY 4】7th Nov. (Wed)					
D3	S43	· MASPOLI, Rossella	Preservation and Enhancement of the Image of Post-industrial Heritage	**S4-2**	
	S61	· SOYEZ, Dietrich	Our Pasts are in Foreign Countries- and Their Pasts are in Ours: The Challenge of Transnationalising Industrial Heritage	**S4-3**	
	S24	· HU, Shan · LI, Jun · CLEMENT-NOEL, Douady	The Conservation Values of "Workers' New Village" of Iron and Steel Factory, Wuhan China	**S4-3**	
	S70	· VIAENE, Patrick	Saving and Valorising Industrial Heritage with Local Organisations and Volunteers in Belgium	**S4-4**	
	S36	· LIN, Szu-Ling	Using Contingent Valuation to Design an Industrial Heritage-Preserving Non-profit organization: A Case of Pingtung Tobacco Factory	**S4-4**	
D4	S82	· ZHUANG, Wei · YAO, Yan-Bin	Public Participation as the Access to Understanding and Reinterpretation of Industrial Heritage in the Urban Regeneration in China	**S4-4**	
	S22	· HO, Tai-Wen	An Expectation of Resocialization in Industrial Heritage- the Case of Taipei Jianguo Beer Factory	**S4-2**	
	S80	· YOUNG, C. J.	The Fool Push a Train- a Sweet Journey Story from the Xihu Sugar Factory Transition	**S4-4**	
	S30	· KALB, Christiane Heloisa · CARELLI, Mariluci Neis	Memories of Toolmakers in Joinville- Brazil	**S4-5**	
	S72	· WANG, Sin-Heng · NISHIMURA, Yukio	Study on the Reuse of Sugar Railway Network in Chiayi County	**S4-4**	

2.3 Poster Presentation Information

Exhibition Area: Lobby of International Conference Hall, B2 Floor, Technology Building, TNTU

Open Hour : Posters will be displayed from 08:00 to 17:30 on 5th ~ 8th Nov. 2012

Presentation Time: 13:30 - 15:00, 8th Nov. 2012

【Table-10】Poster Presentation List

NO.	Author(s)	Title
P1	· CHANG, Chih-Yuan	The conservation of industrial and cultural landscapes： A study on foreign company storage facilities and sites in Tamsui, Taiwan
P2	· RODRIGUES DA SILVA, Ronaldo Andre	Landscape Archaeology and Industrial Heritage: Origins of the Mining Industry in Minas Gerais (Brazil)
P3	· FENG, Jian · YANG, Chen · JI, QinQin · LI, Guo	Discussions about the Technology History of Chinese Traditional Liquor Brewing
P4	· GANOBJAK, Michal · KRALOVA, Eva	Spania Dolina – Piesky, Revitalization of Early- Industrial Mining Environment Through Tourism Facilities
P6	· HWANG, Ti-Chang · HUANG, Yu-Hsin · CHEN, Li-Yu	The Regeneration Ideal for the Xihu Sugar Refinery
P7	· JIANG, Bo · JIN, Wen-Yan · BAO, Yan	The Modern Industrial Architecture Heritage and Protection in Shandong Province
P8	· KRALOVA, Eva · HAIN, Vladimír · GANOBJAK, Michal	Old power plant of Piešťany – Preservation and conservation in progress
P9	· LI, Guo-Yo · LIU, Da-Ping	The Industrial Cultural Heritage of the Chinese Eastern Railway—An unique cultural wealth in need of urgent research and protection
P10	· LIU, Song-Fu · CHEN, Si	Research on the Technique Features of Harbin General Factory for the Chinese Eastern Railway
P11	· LIU, Tong · LIU, Da-Ping · Wu, Guo-Qing	An Analysis on the Existing Water Towers in Dependency of Chinese Eastern Railway
P12	· MA, Hang · DUAN, Chong · LI, Jinyao · ZHAO, Jinlong · FAN, Limei	Regeneration of derelict industrial sites in Guangzhou and Shenzhen

P14	· QU, Meng · LIU, Da-Ping	Primary Analysis of Existing Modern Industrial Architectural Heritages
P16	· SIMONCIOVA, Katarína	Former Heat plants of Bratislava - Slovakia
P17	· SUN, Zhi-Ming · HU, Jian-Guo	Analysis Of Industrial Landscape Nodes Of Daqing —Take The Pumping Unit as Example
P18	· TRISCIUOGLIO, Marco · YAO, Yan-Bin	Rethinking the “Reuse” of Industrial Heritage in Shanghai with the comparison of Industrial Heritage in Italy
P20	· WEI, Xiao-Yu · LIU, Song-Fu	A Memory of Forest — A Preliminary Study on Conservation and Usage of Forest Industrial Landscape in Yichun, PR China
P22	· YU, Hui-Ting · HUANG, Chun-Ming	Research on the Industrial Technology of Railway and the Working Life of the Labors of Taipei Railway Workshop- take the Forge and Spring shop as an example
P23	· ZHU, Xiao-Ming · REN, Zhen	The Coal Capital in China –Fushun Coal Industrial Heritage and Its Value System
P24	· WEI, Kwang-Yi · CHEN, Chie-Peng	The Regeneration plan of the traditional industrial heritage: by the case of Judong Irrigation Canal, Hsinchu County, Taiwan
P25	· NIAVARANI, Elham · ALIKHANI, Somayeh · BEHBAHANI, Homa Irani	Postindustrial Areas Reclamation: A Paradigm for Abandoned Industrial Areas
P26	· JIANG, Nan	Developing Creative Industry by Adaptive Reuse of Industrial Heritage: Take Nanjing for Example
P27	· TENORIO, Luciene	Documentation of Modern Architecture within Pernambuco, 1930-1980: A Railway Station Caruaru.

2.4 Workshops

Workshop A: Nomination of Industrial Heritage for Inscription on the World Heritage List: Process and Practice.

- **Date: 5th Nov. (Mon)**
- **Time: 13:00-17:30**
- **Instructor: Mr. Barry Gamble** (Main Author of Nomination Book for Cornwall and West Devon Mining Landscape, World Heritage Site)
- **Translator: Dr. Patricia H. C. Huang**
- **Presenters of Taiwan projects: Dr. Alex Yen & Representitive from Golden Museum, New Taipei City.**
- **Participants: max. 30 people with related working experience**
- **Schedule:**

Time	Duration	Contents
13:00-13:15	15min.	Brief introduction to the range of industrial heritage on the WH list (and State party Tentative lists) and their significance
13:15-13:30	15min.	Outstanding Universal Value and a brief overview of the process of candidate site selection
13:30-14:00	30min.	The nomination framework and process- some case studies of serial sites
14:00-15:00	60min	**Exercise in groups 1 -** A systematic approach to World Heritage Criteria and Comparative Analysis: Evaluating a site's potential for World Heritage inscription (Taiwan projects)
15:00-15:30	30min	Coffee Break
15:30-16:45	75min	**Exercise in groups 2 -** A systematic approach to World Heritage Criteria and Comparative Analysis: Evaluating a site's potential for World Heritage inscription
16:45-17:30	45min	Feedback and discussion of results. Issues and questions.

Workshop Co-organizer:英國文化協會

Workshop B: Digitising Industrial Heritage

- **Date: 7th Nov. (Wed)**
- **Time: 13:00-17:30**
- **Instructor: Mr. David Fleetwood / Dr. Miles Oglethorpe**

(David and Miles work for Historic Scotland, the national government agency for the historic environment in Scotland. David is the lead for Historic Scotland on the Digitising Heritage project. Miles is Head of Industrial Heritage)

- **Translator: Dr. HSIE, Tung-Shen**
- **Presenter of Taiwan project: Dr. Jui-Mao Huang**
- **Participants: max. 30 people with related working experience**
- **Schedule:**

Time	Duration	Contents
13:00-14:00	60 min.	**Part 1** – Background to Digitising Industrial Heritage 1. Introduction to the Digitising Industrial Heritage Project: What is it? 2. Why does international collaboration matter and why should I take part: Why do it? 3.How it can help TICCIH – the role of the Specialist Sections 4. Digitising Industrial Heritage as a hub for knowledge exchange, education and business co-operation: What are the benefits? 5. The wider global context – rolling it out beyond industrial heritage
14:00-15:00	60min.	**Part 2** – Practical Demonstration of the Project 1. How to browse the site for data 2. How to add data to an existing theme 3. Establishing a new theme
15:00-15:30	30min	Coffee Break
15:30-16:00	30min	**Part 3** – Presentations of Taiwan Projects: Fort San Domingo and Surrounding Historical Buildings, Tamsui, etc.
16:00-17:00	60min	**Part 4** – Discussion Session in world café format I Discussion Group 1: Data standards Discussion Group 2: Recording standards Discussion Group 3: Dissemination of Data
17:00-17:30	30min	**Part 5** – Concluding remarks 1. Summary of session discussions from discussion leaders 2. Digitising Industrial Heritage: The way forward 3. Closing questions

BRITISH COUNCIL

Workshop Co-organizer::英國文化協會

3. Keynote Lectures & Abstracts

3.1 Introduction of Keynote Speakers

Sir Neil Cossons

Sir Neil Cossons has been active in the fields of industrial archaeology and heritage since the early 1960s. As Director of the Ironbridge Gorge Museum from 1971 to 1983, he was the initiator of the First International Congress on the Conservation of Industrial Monuments held at Ironbridge in 1973 and out of which TICCIH evolved three years later.

From 1983 to 1986 Neil Cossons was the Director of the National Maritime Museum, Greenwich, and for fourteen years Director of the Science Museum, London. He has served as a non-executive director of British Waterways Board.

From 2000 until 2007 he was Chairman of English Heritage, the United Kingdom Government's principal adviser on the historic environment of England. English Heritage opens some 400 properties each year to 5.5 million visitors and has a membership of 780,000. He was involved in the preparation of the United Kingdom Government's Tentative List of World Heritage sites, published in 1999, and has contributed to several World Heritage nominations. Since 2008 he has been Chairman of the Expert Committee of the Kyushu Yamaguchi World Heritage Nomination in Japan.

A chairman, chief executive and board member of standing he has advised governments, museums and heritage agencies in a number of countries, conducted peer reviews of scholarship and research, chaired architectural selection panels, and published and broadcast widely.

- He is currently Pro-Provost and Chairman of Council of the Royal College of Art.
- He was knighted in 1994 for his contributions in museums and heritage.

Professor Chao-Ching Fu

Position：Distinguished Professor
Affiliation：National Cheng Kung University, Tainan, Taiwan
Address：No. 1, University Road, Department of Architecture, National Cheng Kung University, Tainan, Taiwan
e-mail：ccfu@mail.ncku.edu.tw

Educational Backgrounds:
B.S. in Architecture, National Cheng Kung University (1979)
M.Arch Degree, University of Washington at Seattle, USA (1983)
Ph.D., University of Edinburgh, UK (1990)

Professor Fu is a leading architectural historian and expert on heritage conservation. He has published hundreds of research papers and books since 1983. Among the most important books are: New Chinese Architecture in Classical Styles: Historical Studies in the Institutionalization of New Chinese Architecture of the 20th Century. (Taipei: Nantien Books, 1993) ,.Architecture in Taiwan Japanese Period, (Taipei: The Earth, 1999), History of Western Architecture. (Tainan: Taiwan Architecture and Cultural Property Press, 2003), Culture, History and Architecture – Essays on Architecture in Taiwan (Tainan: Taiwan Architecture and Cultural Property Press, 2004) and Reading Tainan – A Historic City of Cultural Heritage (Tainan: Taiwan Architecture and Cultural Property Press, 2009), The Architectural Heritage of Taiwan in the Japanese Period (Tainan: Taiwan Architecture and Cultural Property Press, 2009) and Culture, Heritage and Architecture – Essays on Architecture in Taiwan (Tainan: Taiwan Architecture and Cultural Property Press, 2010) He received Architectural Award in Culture and Arts, Alberti Award for Teaching and Research on History of Western Architecture and NCKU Distinguished Professor Award in 2009.

Professor Patrick Martin

PROFESSIONAL ORGANIZATIONS

President of TICCIH f2009-2012

Society for American Archaeology Society for Historical Archaeology (Committee on Inter-Society Relations; Ethics Committee)

Conference on Michigan Archaeology (Board of Directors, 1982-1986; President 1997-2000)

Society for Archaeological Sciences (Bulletin Editor, 1986-1991, President- 1995-1997)

Society of Professional Archaeologists (Executive Board, 1990-1993, 1996-1998)

Australasian Society for Historical Archaeology

The International Committee for the Conservation of the Industrial Heritage (US Representative 2001-2009, Board of Directors 2003-2009)

Society for Industrial Archeology: Editor IA, Journal of the Society for Industrial Archeology, 1995-2010; Executive Secretary, 1998-2010

The International Committee for the Conservation of the Industrial Heritage (UNESCO-affiliated international body), US Representative 2001-2007, Board of Directors 2003-2009, President 2009-2012.

PROFESSIONAL EMPLOYMENT

Michigan Technological University, Assistant Professor, Associate Professor and Professor of Anthropology and Archaeology, 1977-present.

Director of Graduate Studies in Industrial Archaeology 1990-2009, Department Chair 2008-present.

Primary teaching and research interests are in historical archaeology, industrial archaeology, archaeological science, public archaeology, and technology/society interactions. Courses developed and taught include: Cultural Anthropology; Introduction to Archaeology; Archaeology and Prehistory; Archaeology of the New World; Human Origins; Archaeological Methods; The Archaeology of Industry; and Science, Technology and Society -Impacts and Interrelationships.

PUBLICATIONS

2009 “Industrial Archaeology”, in The International Handbook of Historical Archaeology, Teresita Majewski and David Gaimster, Editors (Springer, New York).

2008 “The TICCIH Bulletin and Industrial Heritage,” TICCIH Bulletin, Number 40, Spring 2008, Barcelona, Spain.

2008 IA, Journal of the Society for Industrial Archeology, Volume 32, Number 1, 100pp.; Volume 32, Number 2, 80pp. (Editor).

Professor Takashi Itoh

Position: Professor, Department of Transportation Engineering & Socio-Technology
Affiliation: College of Science & Technology, Nihon University, Japan
E-mail: bridge3890@yahoo.co.jp

EDUCATION

Doctoral Course of City Planning, Tokyo University, 1976
Master of Civil Engineering, Tokyo Metropolitan University, 1972
Bachelor of Civil Engineering, Tokyo Metropolitan University, 1970

PROFESSIONAL EMPLOYMENT

Nihon University, Professor, Department of Transportation Engineering & Socio-Technology, College of Science & Technology 1996-2011. Professor, Research Institute, College of Science & Technology 1994-1996

OTHER PROFESSIONAL EXPERIENCE

NPO Leader of “Let’s Open Kachidoki Bridge”, 1970-Current
http://homepage3.nifty.com/kachidokibashi/index.html
NGO President of the Technology Commission of Japan ICOMOS, 2009-Current
Academy President of Japan Industrial Archaeology Society (JIAS), 2011-Current
http://jias.o.oo7.jp/
President, Small Commission in Civil Engineering History Commission of Japan Society of Civil Engineers (JSCE), 2018-Current
Government Member of Cultural Heritage Commission of the Agency for Cultural Affairs, 2000-2010 Local Member of Cultural Heritage Commission of Saitama Prefecture, 1995-Current
Government Member of Cultural Heritage Commission of Toyama Prefecture, 1998-Current
Member of Cultural Heritage Commission of Tokyo Metropolitan Government, 2005-Current
Member of World Heritage Advancing Commission for Kintai Bridge of Iwakuni City, 2006-Current
Member of World Heritage Advancing Commission for Sado Gold Mine Ruins of Sado City, 2007-Current

3.2 Keynote Abstracts

3.2.1 Sir Neil Cossons's Abstract

Industrial Heritage: Treasure or Trash?

COSSONS, Neil

Pro-Provost and Chairman of Council of the Royal College of Art.

Knighted in 1994 for his work in museums and heritage.

Abstract

As the industrial world expands and its epicentre moves inexorably east so the industrial heritage – the physical evidence of past industrial cultures - expands exponentially. And, each nation views its industrial heritage through distinctively different eyes: a vital part of a common inheritance, a symbol of national identity, a nuisance to be swept away, or a resource for regeneration. Neil Cossons reflects on the opportunities afforded in a post-colonial, globalised world for the industrial heritage to reinforce individuality in the face of homogenisation, and to take its place as a vivid expression of a shared past – not only in what is preserved but also through the numerous and ingenious mechanisms for how and by whom.

3.2.2 Professor Chao-Ching Fu's Abstract

Enlightening the Spirit of Industrial Heritage in Taiwan

FU, Chao-Ching

Distinguished Professor, National Cheng Kung University, Taiwan

Abstract

On November 28, 2011, the 17th general assembly of ICOMOS adopted the Joint ICOMOS-TICCIH Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes, re-addressing and reconfirming the importance of the industrial heritage to the human society. The new declaration is the second international document devoted to the industrial heritage followed by the Nizhny Tagil Charter for the Industrial Heritage in 2003. Recognizing the significance of the industry to the history of Taiwan, the government of Taiwan has started to pay attention to the industrial heritage and an effort to preserve them has been implemented since late 1990s. However, most of industrial heritage in Taiwan are conserved and preserved in a conventional manner similar to heritage of other building types. The core value of industrial heritage is always neglected consciously or unconsciously. The policy of the industrial heritage conservation was executed without considering their uniqueness. Consequently, some important components of the industrial heritage were removed, destroyed or demolished. This paper will discuss the essential elements in which the spirit of industrial heritage in Taiwan is embodied and review their preservation and conservation in the historical context. The paper will also argue that the enlightenment of the spirit of industrial heritage in Taiwan can contribute to the development of Taiwan's society and the built environment.
Keywords: industrial heritage, Taiwan

3.2.3 Professor Patrick Martin's Abstract

Remembering Marie Nisser: TICCIH's Past & Future

MARTIN, Patrick [1] **AVANGO**, Dag[2]

[1] Michigan Technological University, Professor of Anthropology and Archaeology

[2] Div. of History of Science & Technology Royal Institute of Technology Stockholm Sweden

The untimely passing of Professor Marie Nisser has left a substantial void in the community of scholars who study and preserve elements of the industrial heritage. At the same time, her rich personal and professional life has helped to define the history of our field and to establish the trajectory for the field into the future. We take this opportunity to pay homage to Marie, to explore her contributions, to commemorate her accomplishments, to recognize her leadership role in defining the future of industrial heritage conservation, and to remember her as a dear friend and colleague. We will review the landmarks of her career and examine the impacts she made on a national and global scale, especially in research, advocacy, education and the establishment of our organization, The International Committee for the Conservation of the Industrial Heritage.

3.2.4 Professor Takashi Itoh's Abstract

The Conservation Movement of Historic Heritage in Japan

― Past, Present and Future? (1960-2012) ―

ITOH, Takashi

Position: Professor, Department of Transportation Engineering & Socio-Technology

Affiliation: College of Science & Technology, Nihon University, Japan

Abstract

I would like to explore some of the issues and problems associated with industrial heritage while epitomizing the past 50-year history of historic heritage in Japan.

First of all, I will sort out the revisions made to Japan's Act on Protection of Cultural Properties. While the origin of Japan's law for the protection of cultural properties dates back to the Meiji period, the current Act on Protection of Cultural Properties was enacted in 1950 after the war and has since undergone some revisions.

Secondly, I will examine the reasons why it was revised in light of residents' or citizens' movement. In Japan, the industrial heritage conservation movement has evolved from the historic cityscape conservation movement.

Since the cultural background and historical development vary from country to country, how people view historic and industrial heritage and what shape these legacies take also vary with the country. I will limit my talk to the Japanese case.

The big development of the industrial heritage conservation movement is affected greatly by residents' or citizens' movements and by researchers and the media that support the movements and that these movements have given rise to the revision of laws related to cultural properties down to this day.

Thirdly, I will talk about the biased industrial heritage conservation in Japan and the foresight of the Japan Industrial Archaeology Society (JIAS) "recommended industrial heritage" system while introducing the system.

Since 1985, JIAS has selected and announced the JIAS recommended industrial heritage on an annual basis. The criteria and purpose of recommendation are as follows: "JIAS selects and recommends important industrial legacies, which need to be preserved, but have not been designated as cultural properties by the central or local government, to promote their preservation by appealing to public opinion and related institutions." JIAS was the first to establish the industrial heritage commendation system in Japan.

Fourthly, as one of key points for the Congress, I will introduce the issues facing Japan through "intangible technical heritage."

There is a wooden arch bridge, Kintai-kyo, in Iwakuni City located in the western region of Japan, which has maintained its arch form for 340 years. It is a 193.3-meter-long five-span bridge and the central three wooden spans are arched. It was built in 1673 and the length of one span is 35.1m, the longest span among wooden-framework rib arch bridges in the world. It is, however, not designated as a national important cultural property due to the reason that it lacks material authenticity as it has been rebuilt nearly every 20 years. On the other hand, Iwakuni City that manages the bridge and the committee of the city think that the bridge is eligible for being designated as a World Heritage.

Taking this opportunity, I would like you to consider how the construction technology and the maintenance and management technology have developed in this climate or how they should be, and so on.

4. Abstracts

4.1 Oral Presentation Abstracts

4.1.1 Section I: Theory and Methodology

S1. Theory and Methodology of Industrial Archaeology in Germany

ALBRECHT, Helmuth

Prof. Dr., Director of the Institute for Industrial Archaeology, History of Science and Technology; Technical University Mining Academy of Freiberg, Germany

Abstract

Industrial archaeology is a quite young and until today not very well established scientific discipline in Germany. Its roots are going back to the early 1970s when under the influence of the development in Great Britain the German Mining Museum in Bochum started its first research programs under this title about the documentation of industrial heritage in Germany. The first and until today the only German university chair for industrial archaeology was established in 1992 at the Technical University Mining Academy of Freiberg in Saxony. The Freiberg Institute for Industrial Archaeology, History of Science and Technology established in 2001 the first and only German academic study program in industrial archaeology. Both, the German Mining Museum in Bochum (1975) and the Institute for Industrial Archaeology, History of Science and Technology in Freiberg (2009) had been hosts and organizers of International TICCIH Congresses.

Nevertheless the research about technological and industrial heritage in Germany has a much longer tradition than the establishment and institutionalization of industrial archaeology since the 1970s and 1990s. Beginning at the turn from the 19th to the 20th century the monuments of technology were discovered by engineers and architects interested in the history of technology. The age of the “cultural monuments of technology” in Germany lasted until the 1950s when it was step by step displaced by the new developed concepts of industrial archaeology and industrial culture. The division of Germany after World War II into the communist East German state of the German Democratic Republic and the West German state of the Federal Republic of Germany played a major role within the development of different theoretical and methodological approaches towards industrial heritage. The German reunification in 1991 opened the way to review and rethink these approaches and to find new ways for the theory and the methodology of industrial archaeology in Germany.

The paper will not only give a short abstract of the historical background of the German development of industrial archaeology and industrial heritage studies but also outline the present standards, trends and problems in the theory and methodology of industrial archaeology in Germany.

S71. Evidence of Modernized Technology Transfer found on the Size, Structure, and Materials of Historic dry Socks in Europe and Japan

WAKAMURA, Kunio

Professor Dr., Department of Applied Science, Okayama Science University

Abstract

In 15 century England, dry docks were devised to repair sailing vessels. Those dry docks had dramatically improved by the mid-19th century, and became a vital part of the shipping industry for not only Europe but as far east as Japan. This study will examine several of these historic shipyards and focus on important aspects of dry docks such as the size, structure, materials, history, and overall design. In addition, substantial improvements including the secular change of ratio, the width to the depth, as well the soil bricks used primary in the Netherlands and transferred to Germany and Japan, are examined. As a result, its influence and transfer of technology can be seen in the major shipyards of Japan even though several of these Japanese dry docks include marked difference compared to their European counterparts. Based on these results, we point out the significant role of the history of transferred technology and how its influence can be seen as a testament to the harmonization of technology with everyday life in the so-called transferred countries. To prove this point, we focus on issues such as the simultaneous conservation projects of historic dry docks in Europe, the United States, Japan, etc. For this purpose, we propose effective procedure that is the announcement of typical examples about the technology transfer containing historic shipyards by The International Committee for the Conservation of the Industrial Heritage (TICCIH).

Keywords: dry dock; technology transfer; Europe; Japan; shipyard

S85. The Heritage of the Sericultural Industry along Japan's Silk Road the Significant Role the Sericultural Industry has played for the Development of Capitalism in Japan

OHASHI, Tadashi[1] **TAMAGAWA**, Kanji [2] **HARADA** ,Takashi [3] **UNO**, Itsuko [4]

[1] Trustee of Japan Industrial Archaeology Society (JIAS)

[2] Former President of JIAS

[3] Director of JIAS

[4] Translator, Member of JIAS

Abstract

In 2004, a working group was set up within Japan Industrial Archaeology Society (JIAS) to survey the remaining heritage sites of the sericultural industry in Japan. The group identified the route which joins the main producers of cocoons and raw silk- the prefectures of Gunma, Saitama, Nagano and the Tama region in Tokyo- with the main exporter of raw silk, Yokohama.[1] We have been studying the sericultural heritage along this route and in our presentation we will report the result of our survey.

Keywords: Japan Industrial Archaeology Society (JIAS); sericultural industry; silk

S89. The Industrialization as a Latecomer the State-Owned Yawata Steel Works comparing with Ham-yang and Tata

SHIMIZU, Norikazu

Professor. Kyushu International University

Abstract

Prior to World War Ⅰ, as far as the construction of modern integrated mills of iron and steel industry in Asiawas concerned, the Han-yang Iron and steel works, the first blow-in, was established in China in 1894, several years earlier than the Yawata, and the Tata iron and steel Co. in India started in 1911, ten years after the Yawata. Comparing with these three Works, we clearly recognize two unique and superior features of the Yawata Works. They are the following points: (1) technology transfer with autonomy, and (2) contribution to progress in national industrialization. According to these, the historical significance of the Yawata site which is nominated as one of "Emergence of Industrial Japan: Kyushu and Yamaguchi" could be confirmed.

Each of the historical process of these three Works is summarized from the above two points.

The development after starting was different each other. The Han-Yeh-P'ing kung-ssu had collapsed in reason of sustained financial shortage and depending on huge amount of loans from Japan, and not being free from deficits. The kung-ssu was forced to send raw materials, iron ore and pig iron, to Japan in exchange of loans. As a result, the kung-ssu could not respond to domestic steel demand. Some of reasons could be blamed on the railway companies being controlled by foreign capitals, to which the kung-ssu supplied rails of staple products.

The Tata iron and steel Co. grew steadily, especially rapid extension in the late 1920s. But its success depended on operating of foreign engineers. The Tata could not be free from them. In addition, its influence was limited to support the industrialization of India. Many products, particularly pig iron, were exported.

When it comes to the question of “eventual independence from supervision by foreign engineers, thus establishing autonomy”, however, it was only the Yawata Works that succeeded in doing so. The Yawata contributed to progress in national industrialization with its purpose for the military as well as economic requirements as the State-Owned Works.

Keywords: Yawata; Han-Yeh-P'ing; Tata; technological transfer; industrialization; Latecomer

TICCIH The International Committee for the Conservation of the Industrial Heritage

S97. Research Significance and Conservation Perspective of Mining Heritage in China

QUE, Weimin

College of Urban and Environment Sciences, Peking University, 100871, Beijing, P.R.China

Abstract

Mining heritage in China (MHC), especially traditional MHC, with wealthy heritage resources, is the special property among cultural heritage in China, material carry of classic document of mining in China, main content of industrial heritage in China. It is the management foundation of MHC and reality requirement of protection China environment to research MHC. Basing on analysis of research significance of MHC, this paper studies on conservation perspective of MHC, including management authority, property name, academic norms and plan for reuse etc.

Key words: traditional industry heritage, mining heritage, conservation

S46. Reinterpreting an Industrial Conquest and Surrender 3D Virtual Reconstruction to Measure the Impact of the Renault Plant on its Urban Landscape (1898-1992)

MICHEL, Alain P.

Assistant professor, Evry University, FRANCE

Abstract

This paper presents a case study of the Virtual Factories research program (*Usines3D*) developed by the History department of the Evry University (LHEST-UEVE, France). The purpose of this program is to produce digital models of significant technological buildings and installations to help document the history of working processes and reinterpret industrial heritage.

This program has produced an interactive computer model of the Renault automobile Plant of Billancourt located in the close suburbs of Paris (France) and now almost totally demolished. The aim of this modelization is not to make up for the disappearance of some old industrial buildings. It is to create a new means of informing the history of a relatively unknown practical process, to help understand what is left of industrial vestiges and to display the scientific results of this research.

This visualization of the development and decrease of the industrial buildings in their urban suburbs gives a radically new documented interpretation of the industrial past. The greater part of the plant was conceived by an internal service of the firm. The car factory is the outcome of entrepreneurs and engineers rather than architects. It is a functional projection of practical needs. Are those buildings consequently without "Arché", nought-architectural, that is without beginning or command? I show how a historical micro-analytical study, based on the firm archives and visual sources (photographs, films, plans, etc.), using computer tools, brings new understanding to this specific form of industrial architecture, landscape and heritage.

In an historical perspective, computer technologies are a tool to take advantage of the original, unedited information brought by series of local images which show things that no writing talks about. It is an illustration of the way multimedia and computer techniques can produce new types of constructed historical documentation from scattered (and often discredited) historical sources. This type of virtual historical model can be used as a bridge between the research fields of technology historians and heritage architects.

Keywords: virtual Factories program (*Usines3D*); digital model; Renault automobile plant; automobile industry; micro history, visual source

TICCIH The International Committee for the Conservation of the Industrial Heritage

S29. Research on the Characteristics and Investigational Techniques of Industrial Heritage in Kyushu Area / Japan

ICHIHARA, Takeshi

Visiting scholar, Kyushu International University / Technical support staff, Kyushu University Archives

Abstract

Industrial heritage is a term that describes especially, buildings, engineering works, and machines that have contributed to Japanese industrial modernization since the end of the Edo era in Japan. This research aims to describe the meaning of the term industrial heritage in Japan. The purpose of this research is the following: to define Industrial Heritage from the report and the characteristics of the heritage of each place in Kyushu, and to realize an investigational technique to understand Industrial heritage sites. The process of this research is stated in the following. First, each element of Kyushu heritage is extracted independently and analyzed. The characteristics of the Industrial heritage are understood from this analysis. Next, Industrial heritage is compared with other investigational techniques. Then, the problems regarding industrial heritage's investigation and a solution are presented.

In this research a generation range and definition of the term industrial heritage are confirmed. Second, this research considers the characteristics of industrial heritage which exists in Kyushu from the data on the construction age and the structure of "the modern heritage Comprehensive Report". Then, the related foundational investigation data is examined. Finally, this research explores how to investigate industrial heritage sites chosen by their structure and completion age in Japan.

Keywords: using buildings; Kyushu area; city planning fundamental investigation; way for investigation

S8. Taiwan's Mixing Tracks of Shipbuilding Industry

CHEN, Jeng-Horng[1] **HUANG**, Patricia H.J.[2]

[1] Associate Professor, Department of Systems and Naval Mechatronic Engineering; also Deputy Director & Chief of Collection Division, NCKU Museum, National Cheng Kung University. chenjh@mail.ncku.edu.tw

[2] Assistant Professor, Graduate Institute of Conservation of Cultural Relics and Museology, Tainan National University of the Arts.

Abstract

As a late developed country in industrialization, many of Taiwan's modern industries have absorbed technologies from several possible foreign source, and resulted in technology-mixing. Amongst various modern industries, Taiwan's shipbuilding demonstrates two special characteristics of technology transfer, the well-mixing with traditional technology and the two parallel existing tracks of modern technologies. Taiwan, given its pre-industrialized background with rich and highly developed traditional technology, was firstly a good and important test area for Japan. Even after WWII, it was still a strategic site during the Cold War and received plenty of foreign resources. Considering the circumstances, these two special characteristics of technology transfer are not too surprising but still very rare and interesting.

The shipbuilding industry heritages that have been preserved and studied help us to understand the development of Taiwan's early shipbuilding, the technology transfer from Japanese, American, and European sources, as well as how local engineers and technicians blended them to create a local style. Meanwhile, different shipbuilding scale evolved differently in the means of technology transfer. Boats, fishing vessels, and yachts are usually built by smaller civilian shipyards and share the same path of technology learning and mixing, including the use and the blending of traditional technology. On the other hand, merchant ships and naval vessels are usually built by state-owned enterprises which follow a more stringent technology transferring and learning process without any traditional elements. More interestingly, the inter-changes of these two tracks seem to restrict only on management experience and personnel, and only extend to include technology after the recent development of rising middle size civil shipyards.

In the future, it will be necessary to compare these experiences with other colonial development, especially those with mixed technology transfer. Meanwhile, the roles of middle size shipyard shall be closely monitored to track the process of technology and experience inter-changes between these two tracks.

Keyword : shipbuilding; technology transfer; colony; Taiwan; industrial heritage

S54. Building Asia's Cement Industry 1904-1939

PEDERSEN, Morten

Senior Researcher, PhD, Museum of Northern Jutland, Denmark.

Abstract

Denmark did not take part in the 19 and 20 century colonization from the West and since the loss of the southern provinces to Germany in the war of 1864 Danish historians have traditionally described Denmark as a miniature nation of little international significance. At the same time historians – in Denmark and elsewhere – have tended to describe Denmark as an agricultural nation until 1960 and perceived Danish industry as an almost invasive species. It was therefore striking that The Heritage Agency of Denmark in 2007 referred to "*a Danish industrial adventure on a global scale*" as the basis for selecting the cement plant Aalborg Portland as a national heritage site.

It has for decades been unquestioned among Danish historians that the Copenhagen engineering firm F.L. Smidth & Co. since the 1890's has delivered the main part of the machinery used for cement production around the globe. In 1950 about 50% of the worlds cement thus came from FLS-manufactured kilns. Knowledge of the fact has, however, been drawn from the company's jubilee presentations laconically counting the number of sold rotary kilns. So far a more detailed picture has not been presented and it has therefore been left unresolved whether the Danish technology transfer exceeded the mere physical movement of machinery in a way that applied the Danes with a more extensive role usually described by historians of technology as *social carriers of technology* causing comprehensive societal impacts. If that was the case research on the subject will not only shed new light on core aspects of the formation of the global cement industry but also modify the perception of Danish society and industry – and consequently of Danish industrial heritage.

Focusing on the Danish role in the building of Asia's cement industry until the outbreak of World War II this paper will present the first research results on the theme.

The starting point will be the Danish contribution to the formation of a cement industry in Siam in from 1913 to 1925. In this period machinery from Copenhagen were used for building Siam Cement Co.'s first plant at Bangsue under the management of the Dane Oscar Schultz. Using company archives and methods of industrial archaeology it will be analyzed how Denmark's position as a small scale state paved the way for king Vajiravudh's commission of a cement industry in 1913 and accordingly caused a technology transfer with enclave like characteristics close to establishing a Danish domain. Finally it will be discussed whether the circumstances in Siam can be perceived as representative of the Danish contribution to the founding of Asia's cement industry in general. Based on the commission of 89 rotary kilns from 1904 to 1936 F.L. Smidth & Co. delivered the backbone of cement production in China, India, Burma, Vietnam, Indonesia and Siam and strongly supplemented the industry in Japan. The Danes had to act under politically tense and dramatic circumstances and the origins in a neutrality seeking small scale state turned out as a clear advantage.

Keywords: Denmark; Asia's Cement Industry

S31. The Copper Forge-house in Banská Bystrica- the Urbanity and Architectonic Document of the Evolvement of Historical Industrial Area

KRALOVA, Eva

Assoc. professor, Slovak University of Technology in Bratislava

Abstract

The emplacement of producing buildings was always connected with local geomorphologic, hydrological and climatic conditions. Not far from Banská Bystrica (middle of Slovakia today), there are known as early as from 14th century the smelting-houses for copper ore processing. From the year 1496 there also the comprehensive forge-house was built.

Beginning of Hungarian Copper Company is connected with bank's family of Fugger from Augsburg (Germany) and with the family of Jan Thurzo Cracow burgess living-in Levotcha in north Slovakia. The company had the ore mining only in rentals for the prime 10 years. After 1505, it took all the controls from the mining to final processing over.

The intensive deep-mine excavation was the headstone of enterprise. The newly build mining workings were connected by shafts and adits and they reached the top-level of that time world (besides the deep-mine excavation, also powerful winding machines, detailed mining maps, etc.). The excavated ore was processed in the smelting-houses and forge-houses that were different according to processing technology. The Copper Forge-house was the unique centralized manufacture for to produce the finished pieces from the ore excavated in large surrounding. Among the particular working places, there were build up the roads and well organized continual cargo transport worked there. The enterprise had all the signs of the today's modern industrial enterprise, already in that time and it gone the massive profits.

The area of Copper Forge-house was several times rebuilt. The substantial expansion in 1496, another milestone was the year the 1761st. It is then stretched around the village consisting of independent residential and administrative buildings - employee colony. Another modification was associated with the introduction of electrolysis in the late 19th century, in the first half of the 20th century with new technologies and new administrators.

Keywords: industry settlement; forge-house; copper; Banska Bystrica

S41. Dam Project Documentary Films as Industrial Heritage

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Abstract

The object of my presentation is to provide some suggestions about the conservation of Japanese dam project documentary films dating from the 1950's.

In the late 1950's, Japan entered a period of rapid economic growth, and to provide the necessary power, hydro-electric schemes were started. Specifically, 14 concrete dams over 100 meters high were constructed from 1953 to 1969, including the Sakuma, Ikawa and Kurobe dams. The latest US technology was used in order to speed construction. Civil engineers designed not only the conventional gravity style (Sakuma) but also the hollow gravity style (Ikawa) and arch style (Kurobe). During the period, electric power companies and construction contractors commissioned the production of 34 documentary films in order not only to record the project and the technology, but also to promote public understanding of electric power development. In addition, some films were regarded as presentation tools to secure funding for future projects. Thus the films record both technical and human aspects of the dams.

Our research showed that the electric power companies, construction contractors and film production companies have preserved at least 26 of these dam project documentary films. However, many companies plan to dispose of the films, because they cannot afford to keep them in a time of recession. Though the films record both technical and human aspects of a major part of our national industrial heritage, there are problems to be addressed with respect to their conservation.

Keywords: documentary film; dam; hydro-electric power plant; civil engineering; energy

S26. The TICCIH/ICOMOS Thematic World Heritage Studies & TICCIH Special Interest Sections

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Abstract

The International Council on Monuments and Sites is one of three Advisory Bodies named in the Convention Concerning the Protection of the World Cultural and Natural Heritage to advise the Intergovernmental World Heritage Committee on the inscription of properties on World Heritage List. To fulfill its obligations concerning cultural properties, ICOMOS undertakes comparative thematic studies, often with partner organizations, in different subject area in order to provide a context for its evaluation.

Keyword : TICCIH; ICOMOS

TICCIH The International Committee for the Conservation of the Industrial Heritage

S2. A study of Classification of Industrial Heritage

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[3] Assistant professor, SAWADA Atsuyuki Aichi University (Faculty of Regional Policy)

[4] OSHIMA Ichiro

Abstract

In this paper, we propose that is the study of the classification method using a database of industrial heritage in Japan.

In recent years, news scope and definition of industrial heritage have been presented by "Joint ICOMOS – TICCIH Principles" and "Nizhny Tagil Charter". It is also the underlying guidelines of this study. And while this basis, we are thinking about the guidelines which appropriate to diverse circumstances in each country.

When considering the concept of Japan's industrial heritage, we need to build up a classification method and data accumulation. However, in Japan, classification and establishment of database on industrial heritage are still on the way.

The database of classification on industrial heritage in Japan has been studied in three years from 1990 for the first time. This result has been released by website. About 7,000 article numbers and about 20,000 image data could be found in website by searching keywords and regional map. However, in the amount of information which has been released, it is difficult to classify. Also, detailed classification method has not been studied till now. Therefore, the study of classification method of industrial heritage is important.

From the above points, we will establish a database and classification on industrial heritage. The classification of industrial heritage in Japan, first of all, it would be necessary to accumulate a diverse meaning contained in the various industrial heritages. So, not only traditional static database, also using Semantic Network, we will accumulate the data. We aim to establish the classification method on industrial heritage based on new standpoint.

Keywords: classification method; industrial heritage; dynamic database; graph of triples; semantic representations; Chain of relationships

S78. Research on the Current Status of Luoyang Industrial Heritage and Protection Pattern

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Abstract

This essay provides a focused analysis on historical and social value to industry heritages in Louyang through a detailed category. Specific methods and philosophies for protection to industry heritage still in operation under a background of urban development and upgrading of industries were explored and discussed.

Keywords: Luoyang, industrial legacy, value evaluate, protect pattern

S76. The Science and Technology of Taiwan Salt Production during the Meiji and Taishou Era (1895-1926)

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[2] Associate Professor Department of Japanese Tamkang University

Abstract

The Taiwan salt industry began in the first half of 17th century when the first solar saltworks were established by the colonists of the Dutch East India Company on the Island. During the first half of 19th century the technology of salt producing made a big progress when the first successive ponds were developed and the brine was fully concentrated and salt crystallized on the floor of the crystallizing ponds. In 1895 Japan colonized Taiwan, and 2 years later in 1897 the Ministry of Agriculture and Commerce designated the technician official Hayasi Yousuke to do the first research about Taiwan Salt industry. In 1898 the technician Official Kamada Yajuurou, appointed from the colonial Taiwan Governor- General Office, started his research at Hsinchu and Taichung. His study topics included geographical location, soil texture, meteorology, tide range, construction and costs of saltworks, production appliances, amounts of production, distribution channels, transport, labor and their living condition. These researches can be seen as the best observational reports about the salt industry during the Ching Dynasty. During the first decade of 20th century under the japanese colonial power the Salt industry on Taiwan experienced its rapidest expansion accompanying with the induction of scientific experiments and Industrialization. In this paper we want to study historically the science and technology knowledge of salt production during the late-Meiji and Taishou era, and understand how such knowledge are constructed and then implemented in the planning and production of the modernest industrialized saltworks at that time.

S63. Identifying Industrial Landscapes

STUART, Iain

TICCIH Board / JCIS Consultants

Abstract

One of the important tasks of TICCIH in undertaking its role of protecting our industrial heritage must surely be to encourage the development of techniques for the identification of industrial heritage so that its heritage values can be identified and ultimately protected.

There are two methodologies currently used for identifying cultural landscapes – The North American approach used in the USA, Canada and Australia and Historical Landscape Characterisation which is used mostly in the England and Scotland. This paper outlines the key elements of both methodologies and looks at their strengths and weaknesses in indentifying in Industrial landscapes.

TICCIH The International Committee for the Conservation of the Industrial Heritage

S13. Cultural Landscape and Industrial Heritage: Possibilities for the Brazilian Studies

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Abstract

The paper presents the industrial heritage and cultural heritage concepts from the relationships established between the social and economic life from the perspective of the industrial landscape and the development of organizational landscapes. The cultural landscape is conceived from an integrated view of society and business from an endless web of interconnections that converge in the heritage and culture concepts. The relations established fall aspects of cultural and social memory and approach these concepts, providing them with an interdisciplinary characteristics.

It is necessary to highlight a "specific" social-industrial landscape that determines its own identity and makes possible to know a region, a geographic space and time experienced from their surroundings and helps us understand the transformations and reflections of the conditions of life and work of individuals.

Moreover, its describe factors particular of the construction of memory, identity and culture to explain social issues, expectations and limitations of a particular contemporary society. The intertwining of the history, memory and culture concepts and organization is a possibility of understanding the work relationships and society, intertwined by the socio-economic and cultural consequences.

Social life, buildings and urban development of cities and society can not be seen independence and disconnected. The various relationships established between society and industry organizations (or you could say firms) determine prospects for (re)construct the concepts of heritage and culture that are beyond the general concepts and issues addressed to the culture. Social memory and national culture, the same regional or local, are determined by the relations between business and society. The social imaginary is often understood by the perception of social groups, individuals and presents as his identity and personal and social memory.

The development of the central business around influences the formation and development of cities and is understood as one of the main factors of social aggregation and cultural training centers in establishing company-community relations. Search for share of social needs determines peculiarities and special relations between employees, companies, between individual and society. With them are triggered by various social elements: the villas operators, leisure facilities (cinemas, theaters, radios, sports clubs and others) or any social activities that constitute the life of employees and their families. The development of cities will determine the growth and accelerating urbanization, cultural and social education from the perspective of the company that can reconstruct and rebuild part of social memory and identity in society.

Keyword : cultural landscape; cultural heritage; industrial heritage; Brazilian heritage; industrial archaeology

S4. Heritage in Action- Industrial Remains in Polar Conflicts

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Abstract

The objective of this paper is to analyze the role of cultural heritage in international disputes over polar areas, through the lens of heritage sites in the Arctic and Antarctic.

Over the last centuries, entrepreneurs and states have competed for control over territories and resources in the Arctic and Antarctic. Previous research has analyzed this struggle on different arenas – in diplomacy and in the Polar landscapes, where scientific research and resource utilization has served as bases for claims to political influence or exclusive extraction rights. Less is known about the role of the historical remains of these activities, in current sovereignty controversies in the Arctic and Antarctic. What is the role of heritage sites in the competition for influence and resources in the Polar Regions?

The paper analyzes industrial heritage sites in two contested areas in the Polar Regions – the Antarctic Peninsula and South Georgia in the Antarctic, and Svalbard in the Arctic – sites remaining from large scale whaling and mining in the 20th century. The analysis is based on extensive industrial archaeological field research conducted in the Arctic and Antarctic within the framework of the International Polar Year project LASHIPA (Large Scale Historical Exploitation of Polar Areas).

The cases analyzed shows that industry heritage sites have been used in the struggle between the main competitors for sovereignty in those regions, through practical re-use, by narration and through heritage management. The results show that industrial heritage sites in the Polar Regions can play a significant role in competitions for political influence and resources there. By enrolling the heritage sites into actor networks, competing stakeholders populate sparsely populated places with allied actors and actants. In these networks, the heritage sites can play different roles, defending national prestige, attracting tourists, creating a sense connectedness to distant polar places, as well as legitimizing claims for influence over territories and natural resources.

S67. On the Spatial Transformation of Luodong Township under the Influence of the Forest Policy

TSAI, Ming-Chih

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Abstract

Luodong was a small-scale commercial settlement before 1920. Because of the relocation of the local office of Forest Service of Taiwan Government General Office at Luodong (Luodong Log Yard) as the administration, storage, selling and transportation center of Taipingshan logging industry, Luodong expanded quickly in its socio-economic aspects and urban space, and became the most prosperous business town in Yilan County. Spatial development and landscape features in modern Luodong were under the influence of Taipinshan forestry policy.

Most of the researches about forestry cultural landscape and settlements paid more attention on the forest in the mountains than the distribution center settlements in the plains. Forestry settlements in the mountains were configured by adjusting the natural woods and formed a self-sufficient industrial settlement. Otherwise, the distribution center settlement was transformed from an existed settlement into a unique urban landscape with green enclave, log pond and wooded sawmills which was very different the forestry settlement in the mountain.

Therefore, this paper will focus on the development of Taipingshan forestry in its distribution town in the plains, Luodong, since 1921 to 1982 on its transformation of urban spatial structure and landscape features.

Keywords: forestry; Luodong; Taipingshan; sawmill; spatial transformation

S66. Post- Agricultural Production. A Case Study of Productive Landscape in Aosta Valley

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[1] Associate Professor, Politecnico di Torino
[2] Researcher, Politecnico di Torino

Abstract

Arvier is a tiny wine town surrounded by steep rocky vineyards facing Dora river, in the extreme north west of Italy. Vine cultivation in this area evolved from an exceedingly fractioned property condition to a cooperative production system that permits easier economical payback and agriculture maintenance to professional standards. Consequently it keeps productive - with many improvement in real estate organization- an heritage landscape that otherwise would rapidly disappear for high production costs.

Beside considering rural development issues and economical endurance of food companies the research focus on the link between spacial arrangement (geographical condition, property ownership, production system, etc.) and productive settlement. The proposal made to public administration and winery executive works on two levels: the renovation of cooperative statute by the integration of free market and competition elements, and the design of a productive settlement for emancipated wine makers that reflect the new “political” resolution.

Keywords: agricultural, cooperative, landscape, production

S53. Purification Plant as Landscape Heritage Synergy of Functional Form and Landscaping

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Abstract

Function and Landscaping.
Harmony of these two different directions results in marvelous landscape design. In the process of pursuing efficiency of function, characteristic form emerges, such as symmetric forms, right angles, or rectangles. Water purification process is not the exception. Water purification facilities, such as Slow Filtration Basins or Collecting Wells, form symmetric and rectangular plan and incidentally generates fascinating landscape, which can be called “Technoscape”, landscape of technology.
Author exemplifies some case studies found in Asian and European countries, including Sue Water-Purification Plant in Kanazawa, Japan, for which author’s discovery led to its national designation as “national place of scenic beauty” by Japan National Agency for Cultural Affairs in February 2010. It was constructed in 1930 as one of the earliest modern purification plants in Japan, with geometrically-formed garden (called “Front Garden” by local people) whose plan corresponds to symmetric and rectangular form generated by functional process of water purification. This garden is located at the intersection of two major axes in space which are formed in the process of purification efficiency; axis of raw water conveyance and the one of water transmission from sedimentation basins to 6 filtering basins. At the intersection, there is concrete-made object locally called “arbor”, which takes on the fountain-like form.
Author attempts to reveal the landscape design and history of public access to this site through collection of historic data and hearing survey to old local people, taking notice at so-called “arbor” and fountain from the pond for water quality management in the garden. Furthermore, several exhibitions are proposed to prove that this “arbor” used to be used as a real arbor for visitors to take rest, and also as a plinth of fountain and took role of major point to emphasize the landscape of the site. In addition, author found out that axis of raw water conveyance once formed a boulevard with lines of cherry blossoms, forming VISTA landscape with “arbor” as eye-stop.
In addition, author made field survey on Taipei Purification Plant in Taiwan (1909), or Nishiya Purification Plant in Japan (1915), that has similar symmetric structure of space formed by functional process in common, and summarized properties of each formation as Landscape Heritage.

Keywords: purification; landscape heritage

S5. Industrial Romanticism

BARAGANO, Sergio

Founder and Director in [baragaño] architects

Abstract

A little bit by chance, like things use to happen, a little bit looping for it, we develop our working line in the limits of the industry. Building in Port, industrial and postindustrial areas, in the limits with the city, with the sea. There is where we feel comfortable, in the ZAL, near of the containers, of the train rails, of the cranes, pipes…

In this time of technology, we should escape from this constructive labyrinth, were we are in and bet for a lighter architecture. Recover the spirit of a quality construction, linked to steel, started in the first part of the last Century, when the mirror to look at, was automotive, Aeronautic and the arms industry [study houses in California, Charles and Ray Eames, Mies Van Der Rohe, Prouvé, Fuller,etc…] We try to export this idea of construction model much closer of the avant-garde industrial.

We think in steel regeneration of a building of course, as the study cases we will focus later, but we want to go deeper in terms of urban regeneration with steel, trying always to think our building as a city-building, going far way in the scale and trying to link with the urbanism, and with the citizens of the place. It´s interesting the way that a building can active or reactive a forgotten place of area. Here, steel has also an important role, as material from the industry, sustainable, recyclable, etc…

Keywords: Industrilitation; steel; ports; sustainability; architecture

S7. A Study of the Hydraulic Landscape in Taoyuan Tableland: the Past, Present and Future

CHEN, Chie-Peng

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Abstract

In retrospect the development in Taiwanese history, the various political regimes all had managed some major hydraulic construction projects in Taoyuan County respectively. In Qing's regime, some major local irrigation channel had been constructed, Taoyuan irrigation channel system had been fully developed in Japanese's period, and lastly, Shihmen Dam and Shihmen irrigation channel system constructed in Nationalist regime. These major irrigation constructions had eventually made some dramatic changes in rural and urban landscape, as the result of irrigation construction, new aspects of landscape appeared with new meanings, thus, transformed as the hydraulic landscape. A detailed interpretation of those hydraulic landscape are become the main part of the research.

In Karl A. Wittfogel's book "Oriental Despotism", he had studied "hydraulic civilization" in the traditional societies and indicated the prime influences by irrigation, in which the governments dominated people in terms of the irrigation technology. Recently, English Scholar Erik Swyngedouw used the notion "to irrigate is to govern "to describe the modernization process of Spain. In other words, hydraulic politics would become a strong factor in developing hydraulic landscape.

Ironically, some Taiwanese researchers, even in the post-colonial era, still followed the Japanese colonist's framing techniques to interpret the Taiwanese cultural landscape. Unfortunately, they forgot the side-effects, mostly negative, which may come along with their findings.

The numerous ponds located in Taoyuan alluvial plain have been treated as the unique hydraulic landscape and presented as the precious cultural heritage in Taiwan. With various historical, cultural, social, ecological and technological viewpoints, the ponds could be presented as the spatial texts that recorded valuable information. The findings of the research could allow people to correctly and broadly interpret the social and cultural meanings. As people acknowledge and discover the precious value of the ponds, they would cherish and protect those valuable resources. This research would be a preliminary study that could be applied for further development.

Keywords: hydraulic landscape; post-colonialism; Taoyuan County

S81. Shaping New Life: Regeneration through Industrial Heritage of Dujiangyan Paper Mill after Great Earthquake

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[2] Independent researcher, Social activist

Abstract

This paper examines the post-disaster regeneration of a factory called "Qingcheng paper mill," in Dujiangyan, Sichuan province, China. On May 2008, a great earthquake struck Sichuan province. Fortunately, buildings in the paper mill were largely survived, with their frame structures almost intact. Sooner, in the very site of the paper mill began a large redevelopment project – Uni-block, as an integrated commercial and residential community. The design emphasized the regeneration through industrial heritage, and the existing factory plants were retained and re-used.

However, this paper would like to point out some problems about the reconstruction. On one hand, not all the area of the paper mill was included in the redevelopment project, e.g. the former factory dorms in which many people still live today, in poor living conditions. On the other hand, new residents in Uni-block might know not much about the historical information of the industrial past. This requires a bottom-up strategy to complement the top-down reconstruction. There is a need for regeneration not only through industrial objects, but also through the relationship between people and the changing environment they are facing.

Keywords: post-disaster; Dujiangyan; paper mill; bottom-up strategy; regeneration; storyteller

S34. Sustainable Strategies of Reuse Design Regarding Colonial Industrial Heritage for Cultural Creative Industries Parks

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Abstract

The “Creative Taiwan- Strategy of Development on Cultural Creative Industry” report was submitted successfully by Executive Yuan in 14th, May, 2009 with the main goal of forming Taiwan as a central hub for the creative industries of Asia. To this end the design approaches toward the reuse of Creative Cultural Parks were differentiated from the spatial design in conventional buildings. This research examines the techniques whereby industrial heritage is reused as Creative Cultural Park, and the adaptive reuse following the consideration of the value of cultural heritage. It analyses the examples of legislated (official) and non-legislated (unofficial) cultural heritage to investigate the principles and approaches underlying converted space in order to categorize embedded design mechanisms. The final result will include three sections; first, the construction of industrial heritage spatial theory following the consideration of its core concept and sustainable value, to clarify the historical position and role; second, discussion and analysis of industrial heritage revitalization and design techniques will be brought into this research; third, to establish a hierarchy of design techniques of creative design adaptive reuse strategies for Cultural Creative Industries Parks converted from industrial heritage.

Keywords: industrial heritage; reuse; Cultural Creative Park; spatial design; sustainability

S55. Industrial Heritage and Urban Regeneration in Italy: the Formation of New Urban Landscapes

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Abstract

Experiences of urban regeneration in Europe and in Italy have involved large-scale areas that have led to new urban landscapes.

In the beginning, regeneration plans were not interested in the reuse of former industrial structures, because of their negative image: public authorities and local communities did not pay any attention to the conservation of industrial remains. More recently, during the 1990s, a new perception of manufacturing buildings and mills emerged, as examples of the cultural heritage arose. Industrial sites ceased to be obstacles to be erased, and began to be seen as opportunities to be exploited, in order to increase the quality and value of projects.

While the industrial heritage has become a resource in the regeneration of towns and cities, there are several questions as regards the criteria for its protection: To what extent have certain values of the former manufacturing landscape been conserved? What have been the fragile elements whose destruction it has not been possible to prevent? Have the new architectural interventions been conceived in line with what remains of the image of the industrial town, or do they exist in visual and/or functional conflict with the former surviving structures?

To answer these questions, we will look at four Italian towns and cities where the rehabilitation of the manufacturing heritage has played a fundamental role in the creation of a new urban landscape: Sesto S. Giovanni, Rome-Ostiense, Carbonia and Ivrea represent exemplary case studies to compare the following:

- the different combination between conservation and transformation which has been applied to reconversion projects which are to be the subject of our analysis;
- the degree of consistency between the new functions assigned, and the kind of former manufacturing spaces that have taken them on;
- the role of town planning in the development of the new urban landscapes which came into being from the reuse of former industrial territories.

Keywords: industrial heritage; industrial landscape; urban regeneration

S75. A Study on Preservation, Restoration and Reuse of the Industrial Heritage in Taiwan: The Case of Taichung Creative Cultural Park

YANG, Hong-Siang

Abstract

Taiwan's former industries, such as sugar, alcohol and tobacco factories, have been forced out of production due to changes in the business model or from the impact of globalization and now these industrial complexes lie idle. This industrial heritage is very different from the generally understood traditional cultural heritage and monuments. Currently in Taiwan the question of how to preserve, reuse and transfer old industrial buildings into a base for cultural and creative industries is an extremely relevant concern for government, academics and local organizations. In this article, we explore some overseas cases that concern the issue of industrial heritage and then further discuss a case history from Taiwan, namely the preservation, restoration, reuse, and management of Taichung Creative Cultural Park. In conclusion, the article considers the interpretation of cultural connotation and the inner values of a pluralist society by means of the recent achievements in Taichung Creative Cultural Park.

Keywords: industrial heritage; restoration and reuse; Taichung Creative Cultural Park

S74. The Study of Tianjin Binhai New Area Industrial Heritages

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Abstract

Although China is generally in the middle age of industrialization, some essential changes are happening in economic and social structure of coastal cities. In the circumstances of rapid transformation and turbulent change, how to bring more industrial heritages into the proper protection becomes an important and urgent new subject in our Cultural heritage protection career. In 2006, the exploration of Binhai New Area in Tianjin, was involved into the national Eleventh Five-Year Planning authorized by State Council. Yujiapu peninsula lying in the center of Tianjin Binhai New Area where construction activities are in full swing.

There is a common saying that Tianjin shows recent 100 years history of China and Tanggu shows recent 100 years history of Tianjin. Tianjin is one of the pioneers of the China's modern industry. Its important modern industries is mainly distributed in the Tanggu area as the main body in the Binhai new area inside. At present the preservation situation of Binhai industrial heritages are more complete. From the war industry in Late Qing Dynasty to the nationalization chemical industrial during the period of the Republic, to the new port construction in the period of the Japanese Occupation, to the manufacturing industry after the establishment of the new China. For instance, the Northern navy dockyard Dagu is the earliest manifestation of Westernization Movement in northern China; Yongli Soda factory and Huanghai Chemical Industry Research Institute were set by the national industrialist Fan Xudong and scientist Hou Debang which are the earliest national chemical companies and research institutions of our country in modern times; China's first telegraph line which is the starting point of earliest sea postal line; The Tanggu station on Tangxu Railway which is the China's first standard railway constructed by Chinese. The Binhai new area of Tianjin which is a miniature of china's industrial development process records nearly 100 years history of the industrial development in Tianjin.

Based on the analysis of industrial heritages development vein in Tianjin Binhai Nea Area and detailed investigation of industrial heritage remains, this paper will sketch a description of the industrial heritage present situations. And on the basis of that, analyze the process of social change associated with industrialization brought Changes to the people. At the same time, the important value of industrial heritage is confirmed and some protective advices about the industrial heritages are raised in Tianjin Binhai New Area.

Keywords: Tianjin Binhai New Area; industrial heritage; value

S64. Industrial Monument Action Planning – Creating a transfer platform (Wiki) for the preservation of Industrial Monuments

TEMPEL, Norbert **BRUEGGERHOFF**, Stefan **GOETZ**, Kornelius

Abstract

This paper presents background and actual state of an ongoing project creating a general guideline for the handling of industrial heritage on the basis of experiences made in Germany. Interaction of players in the heritage network as well as strategies for the technical proceeding will be analyzed in the so-called 'Action Plan for Sustainable Handling of Industrial Heritage'.
Best-practice-recommendations will be derived from several single examples.
Industrial sites, which are highly valued today as monuments, were however never seen and planned to survive permanently. Because of this reason many approaches of traditional monument protection are exceeded in kind and extend here. Operators and preservation authorities have to face new challenges. Dealing with industrial monuments one has to consider some problematic features:

- complex material and structural characteristics,
- large spatial dimensions,
- high level of pollution resulting from former production process
- the special character as 'an object just for production lifetime'

Owners of industrial sites, which shall be turned into monuments, often felt confronted with a nearly unsolvable task. Industrial heritage preservation is not comparable with standard maintenance procedures in normal production life nor with periodical inspection and repair applied to traffic constructions. All economical principles are not valid in the former way.
An interdisciplinary project was set up in Germany in 2010. A number of selected examples will be used to develop general guidelines for different steps in the preservation process. A manual will occur which will contain guidelines and checklists. As much as possible information and experiences from former activities in the field of industrial monument preservation will be collected, evaluated and edited. Experts from different disciplines will be brought together to create a widespread interdisciplinary approach. Single components of the guideline may be used afterwards also for training of inspectors or for instruction of stuff working at the objects. The Action Plan, as it is called, will be a very useful tool for persons responsible for the monuments as it will help them to find a guided way through the complex task in dealing with the different steps of preservation of industrial heritage. The Action Plan will deliver decision support and examples to be able to estimate different solutions offered just to choose the best specific measure for their individual object.
The Action Plan is not just looking at the technical procedures of the preservation process but is also taking into account the interaction of participants. So it is necessary to give also best practice examples for the personal management strategy.
The technical proceeding within the preservation process is given the main space in the Action Plan. A toolbox with standards, technical rules and standard procedures will round the explanations in the different chapters.
Fundamental and more general statements in the Action Plan will be relined by a large number of different examples giving advice for special situations. The Action Plan is set up as a web site, which is under construction right now. We started with a German version but an English one is seen to follow in the future. The platform is performed as a Web 2.0 tool. Industrial heritage community will be asked to comment on starting information and to generate further knowledge on the page by themselves. Thus we hope to generate a growing system which will develop to a strong knowledge transfer and sharing tool.

Keywords: Industrial monument Preservation; action planning; guidelines; best practice; interdisciplinary approach; Web 2.0 toolbox

S14. Industrial Heritage in Booming Cities- Contextual Study on Yangtzepu Industrial Area Conservation, Shanghai

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Abstract

When the industrial archeology and industrial heritage conservation emerged in western countries during 1950s-60s, the urbanization process of these areas have almost stepped over the peak level, which could be regard as shrinking cities, such as Liverpool, Manchester or Ruhr Area. However, in most Asian areas urbanization process accompanied by industrialization is still on its way, which is booming rapidly.

Shanghai, as a typical booming city in Asia, is one of the biggest metropolises and the eldest city under the industrialization process in China. And during the last 30 years open policy, Shanghai has become the most vitality metropolis again. The city is booming constantly while the manufacturing industries have been upgraded.

Yangtzepu industrial area is the most important origin of the industrialization of Shanghai, which witnesses the history of the modern industry development of Shanghai. Containing the most typical industrial heritage from that period, however, this area is declining with the awful environment and worse living conditions. The industrial heritage and its' value are ignored until 2002. There are 6 projects has taken place in the past ten years since then, and most notable practice is lead by a Taiwan architect, Teng Kun-yan, whose practice has been stopped in the end unfortunately.

Analyzing the local policies on Industries, Real Estate, Housing, Social Security System, Urban Planning Codes and etc. under the booming cities context, this paper is going to clarify the stages of understanding on term of "industrial heritage" in china through the practical cases in Yangtzepu industrial area, which is totally different to its' European pioneers. Finally, rethink the applicability of conservation and regeneration theory from Western context in such booming cities.

Keyword : Industrial Heritage, booming cities, Yangtzepu Industrial Area, The paper is on SII-4: Planning and Design: Reuse of industrial space

S15. Selective Interpretation of Chinese Industrial Heritage Case study of Shenyang Tiexi District

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Abstract

The meaning of heritage is multi-explained by selective interpretation. The representation and interpretation of industrial heritage are usually partial and selective due to its special nature. Through the emotion selection and power discourse, the dark or shameful parts are removed while only clean and manageable versions for contemporary purpose are left. This paper takes a typical Chinese industrial region – Tiexi district in Shenyang city as a study case, by analysis of second hand data and interviews, to explore the selective representation of Chinese industrial history. It has been showed that as an old industrial district, the industrial past in Tiexi is rich but complicated. The beginning of modern Chinese national industry can be traced back to the aggression and colonial history of Russia and Japanese imperialism. After the Mukden Incident in 1931, Shenyang became a colony of Japanese invaders for 14 years. During this period, Japanese aggressors plundered Chinese resources to support the war but also left industrial development base at the same time. Shenyang's industrial heritage is marked by distinctive colonial imprint and becomes evil witness of economic resources predatory in Northeast of Chinese by Japanese imperialism. However, this colonial history is ignored emotionally and deliberately in the industrial heritage representation. Instead the national and glorious aspects are illustrated. In addition, as a heavy industrial base, Tiexi district was also regarded as bad environmental and poor living condition region because of industrial pollution for almost half century. But the city underwent great changes in the early 2000s when all industrial enterprises were moved out. Tiexi was transformed from industrial production into commercial and residential use. Furthermore, in 2008 Tiexi won an international award of Habitable City District and an official 'China Habitat Environment Award' in 2011. In this rapid development and urbanization context, the dark sides of industrial heritage are confronted with the desired vision of a better future and therefore were diluted and erased. However, the significance of industrial heritage is to leave an objective and complete industrial past to later generations. From this perspective, in the interpretation of industrial heritage, an open attitude towards the history should be developed and the dark sides be intertwined and in parallel with industrialization should be carefully but clearly presented.

Keywords: representation; dark heritage; China

S10. Industrial Heritage Conservation Practice in the Historic District Renovation: Some Modern Industrial Heritage Conservation Cases in Zhejiang Province

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Abstract

Zhejiang Province was the pioneer in the national industry modernization since the late Qing period. The main industrial development in Zhejiang was the textile industry with private capital and the industrial buildings were combined with city districts closely. In this paper, some features are summarized with three cases of industrial heritage conservation in Zhejiang in recent years:

1. the symbiotic relationship between industrial heritages and the historic districts;
2. the special status of industrial heritage conservation in the historic district renovation;
3. the common methods of industrial heritage conservation and utilization ;
4. the difficulty and confusion in the industrial heritage conservation and utilization practice.

   case 1：Tongyi Public Spinning Factory, Honglei Weaving Factory and Gongchenqiao West District

   case 2：Dadoulu Historic District and the restoration of silk warehouses

   case 3：Industry Pavilion of West Lake Expo in 1929 and Beisan Street

Keywords: Zhejiang Province; Modern Industrial Heritage; Cases; Historic District Renovation

S56. LOST IN TRANSITION? Revisiting the preservation process of the blast furnace plant PHOENIX West in Dortmund, Germany

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Abstract
In 2001, the urban development project PHOENIX West in Dortmund, Germany, began to explore a strategy to preserve a large industrial heritage site in times of decreasing public funding by preparing it for a sale to a private sector investor.
With development funding for the promotion of trade and industry from the European Union, large areas of the plant were cleared to create marketable building sites for a new business location, while essential parts of the blast furnace plant were gradually safeguarded as a monument to provide the new quarter with an unmistakable identity.
In order to attract investments, one remaining furnace was partly disassembled to encourage new constructions for suitable re-uses into the core area, while the implementation of a visitors‘ pathway through the heritage paced the preservation process and served as a major instrument for the promotion of the development project.
After several years of huge advances, the development process slowed down significantly in recent years. While the infrastructure and the public spaces of the new location were completed, the safeguarded heritage remained unused and inaccessible to the public, leaving the site in an apparent state of neglect that raised questions about the validity of the chosen strategy.
Sharply contrasting to this impression, a second phase of construction has quietly begun last year to link the blast furnace group to the surrounding public spaces by reusing a former gas pipeline as an extension of the visitors pathway. High above the ground level, the new pathway offers a spectacular entrance to the monument as well as a renewed promise regarding the future of the project.
The paper examines in detail the characteristic dynamics of a heritage site in transition by outlining the objectives, merits and challenges of a preservation strategy that was created to conciliate the conflicting interests of limited financial risk for investors, minimal public funding for safeguarding and sustainable monument protection. By tracing the further development of the visitors‘ pathway through the heritage as a major instrument for the safeguarding and promotion of the plant, the paper discusses the upcoming sales process and addresses it‘s risks and chances by evaluating the results of the first and second construction phases.

Keywords : Planning and design, Development / Reuse of industrial space,Sustainable safeguarding strategies, Pathways through heritage

S83. Economization or Heritagization of Industrial Remains? Coupling of Conservation and Urban Regeneration in Incheon, South Korea

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Abstract

By looking at the heritagization of the old town in Incheon, South Korea, this paper investigates firstly, how the notion of 'modern industrial heritage' has been integrated into the discourse of urban regeneration. Secondly, it examines whether such integration has turned a heritage project into an implicit economic policy. Specifically, it scrutinizes the relationship between the urban regeneration discourses of Incheon in the last 10 years and the process of making the Treaty Port Cultural District (CD), which was enforced in 2011. Thereby, the paper seeks to elucidate a conceptual mechanism that has converted a heuristic attempt to industrial heritage into a development project. Based upon the analysis of the Incheon's experiences, this research proposes that political commitment to decide what values to be evaluated and what rules to be established should be seriously accounted to stabilize a new field of industrial heritage.

Keywords: heritagization; economization; urban regeneration; Incheon; South Korea; conservation

S91. New life of former mining settlement, Spania Dolina- Piesky

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Abstract

The historic mining settlement Piesky („sands“) is located near the village Spania dolina, narrow distance around 1.5 km. The village is connected with the Spania dolina by several forest roads and foot paths, the real available distance depending on the path reaches 3-5 km. On the territory of the Land there are also two underground tunnels connecting the valley of Piesky with the village Spania dolina. The tunnels are closed because reasons of safety. Geomorphology of terrain is pretty mountainous, with dramatically wrinkled surface, which is mainly covered with forests. Other parts are covered by processed copper ore at tens of terraces. This is a typical mining landscape shaped by mining activities.

Settlement Piesky is now only a geographic name. After the WWII, the dwelling has not been renewed. From the original settlement, there is still preserved an original miner's house, chapel, ruins of 4 residential houses, miners' cemetery, underground mining system of tunnels and shafts, and two mining-train tunnels. The proposed regulatory to development of "Nove Piesky - New sands" was chose in ground-plan of the original track and volume in the central zone of valley of Piesky. In the first stage, proposed is the - Enviropark, consisting of several buildings.

Revitalization of Piesky environment requires phased construction of new development. Due to the gradual rise of revitalization activities in this environment are proposed the following stages. In the first stage of the proposed campus is educational "Enviropark", pavements, roads and treatment of public spaces. Enviropark will be used for tourism purposes as year-round education and sub regional help center for youth and the public in the environmental field. It consists of building the Environmental Education Center - hands-on science exhibitions, and classes for tourists. Butterfly house is building with Slovak butterflies and Geo-montanic park building for presentation of mining activities in the environment. Public areas are also in ruins of former mining houses. Proposal in aim of social sustainability is using existing structures of former buildings and terrain morphology.

The proposed revitalization interventions do not attempt to invade into this "forgotten valley" of mining colonies a strong architectural element. Conversely, minimalist forms of architecture are given to emphasize the surrounding natural environment. Proposed energy management uses locally available resources. Heat pumps use the air-water system and water-water, other energy-producing field of photovoltaic panels on a nearby hillside. "Solar field" is located in a position which allows good efficiency, but is hidden from view from the many touristic paths. The idea is analogous to the local history. Philosophy is simple transformation of raw materials from local sources to achievement their premeditated usage in order to preserve place for future generations.

Keywords: settlement; material; copper mining; mine; park; ecology; environment

S86. Conversion of an Abandoned Winery: a Regeneration Case of Hua-shan 1914 Creative Park, Taipei

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Abstract

In recent years, there are more and more cases of revitalizing industrial buildings as art and culture centers, which have successfully created new economy and formed local characteristics. The revitalization of industrial buildings has be seen as a effective way for local revitalization. Hua-shan 1914 Creative Park in Taipei is a representative case of regenerating industrial heritage to a creative park in Taiwan. This paper probes the development process of Hua-shan 1914 in order to make clear the roles of related parties, including government departments, artists, citizen and private sectors in revitalizing the industrial heritage, as well as their expectations and real actions in this process, and analyzes the contribution of current operational conditions and the portions that are worthy of discussion. On the whole, the case of revitalizing industrial heritage as a creative industrial park has encountered many conflicting issues that must be addressed. The key to success could be concluded as finding a delicate balance between various controversial consequences.

Keywords: industrial heritage; revitalization; creative industry; Winery; Hua-shan1914; Taipei

S77. The Study of German Cultural Brewery Space Conservation and Revitalization

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Abstract

With rapid scientific progress, the issues of industrial heritage conservation and reutilization have been taken seriously. Some factories have not met the needs of a new era due to the ever-changing technology after the industrial revolution, whereas, some have gradually removed because of the limitations of urban plans. It has been forced to make important choices and emerged as urgent and unavoidable practical dilemma for most industrial heritages. Therefore, it has drawn global attentions and concerns. Hopefully, by combining the industrial, official, and academic efforts, joint policies about preservation and revitalization of industrial heritages will be drawn up. By focusing on the development pattern of German cultural brewery, major interests of this paper are to analyze how these sites create miracles steadily by designs and schemes of industrial heritages, to stimulate the rapid development in economy and finally to establish the contemporary concepts and trends in conservation of world heritages.

Keywords: industrial heritage; conservation; revitalization; German cultural brewery

S21. Water Park Nitra- Valorization of Industrial Space in Contact with the River

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Abstract

Nitra is a city located in the Nitra region situated about 80 km northeast of Bratislava. Through the city flows the river Nitra. From the northern side of the city is towering the mountain Zobor. Nitra is the oldest town in Slovakia. The first confirmed historical references dating back to the beginning of the ninth century.

Nitra Rendering plant was the first such undertaking sanitation not only in the city but also in Slovakia. For almost 80 years of its existence Nitra Rendering plant has undergone an interesting evolution through the processing of all kinds corpses arising from agriculture-food sector and the production of products intended for livestock to the current specialization in hazardous waste disposal of animal origin. Since 2010 it is closed and there is an effort to find the new use of the area.

Nitra the river is connected with the city by the name and history, making it the one of the main elements of the city identity. Yet undiscovered potential of the river hides a unique combination of natural elements of water and the viability of the urban environment.

Location at the river Nitra offers its use as an alternative transport route to the city centre. But it also provides connection with a swimming pool and municipal recreation area in the city park not only on the riverside promenade, but also directly on the river by river urban transport. Greater use of alternative sources of transport to the car would also help to reduce carbon dioxide emissions by 20 percent by 2020, which the city of Nitra undertook in 2009 in Brussels.

Specific river odour and fresh air flow create a unique microclimate and attract residents to the river, but also visitors. Revitalized riverside areas offer safe cycle routes, recreational and sporting areas, urban beach, as well as ports connecting urban neighbour-hoods by functioning system of urban shipping.

Vision of the water park complex in N-adova area provides sufficient spatial possibilities and extraordinary atmosphere of the new entertainment and sport in a unique industrial environment. With its location outside the city centre it does not cause any competition to the city swimming pool on the contrary it adds decentralizing services and allows easy access with parking for residents of the city of Nitra and also external visitors. Activation of damaged areas brings solution in urban shipping, new cycle routes and recreational areas, creation of public space and social integration of rendering plant area for the city.

Keywords: urban shipping; reuse; industrial; public spaces; riverbanks; Water park Nitra

S87. Preservation and Reuse of Industrial Heritage along the Banks of the Huangpu River in Shanghai

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Abstract

The Huangpu River is known as Shanghai's mother river. The extensive distribution of industrial heritage sites along both banks of the river has not only great significance in the history of the city's industrial development, but also a profound impact on its urban landscape and cultural character. This paper provides an overview of the evolution and characteristics of industrial heritage along the river and measures adopted in Shanghai for their preservation and reuse.

Keywords: industrial heritage, preservation, reuse, Huangpu River, Shanghai

S28. The City of Bucharest Urban Regeneration through Industrial Heritage

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Abstract

In the second half of the XIX-th century, Bucharest, the capital city of Romania, started to develop as a complex industrial city. Industrial development was one of the essential goals of the new modern state of Romania who encouraged it through several laws. The new capital city gave the way for the implementation of new industries of either foreign or national initiatives. This came together with the development of the railways network that connected the city to the Danube and the Black Sea. The result of this unprecedented development is the creation of a first industrial belt of the city in connection with the main railway stations. These important industrial areas grew through the XX-st century. Very different industrial sites, from flour mills to tobacco factories, from breweries to electrical plants, from matches factories to the national mint, from the slaughterhouse to big metallurgical sites, survived and are waiting now for new destinations. In time of de-industrialization and under the pressure of new urban developments this industrial heritage of the XIX-XXth century city is endangered. Only some of the sites are recognized as law protected monuments while many are seen as brownfields ready to receive new destination regardless to their history and heritage value. Their importance for the cultural identity of the city and their contribution to the urban development through new factory neighborhoods or road networks are reasons enough for their reconsideration in the sustainable development of the city. The recent strategic plan for Bucharest roughly includes the urban regeneration of these areas through industrial heritage conversion and rehabilitation. However such operations are often slowed down by ownership problems as well as lack of vision and resources.

The paper gives a broad image of this reality presenting several industrial sites in Bucharest, the threats that endanger them and what is their conversion potential, trying to offer a more tangible vision on how they could be reintegrated in the urban fabric and put back on the map of the city.

Keywords: industrial heritage; conversion; urban regeneration; Bucharest

S18. Industrial Heritage Practices – the Colonialism of Thought?

AF GEIJERSTAM, Jan **LAGERQVIST**, Bosse

Abstract

The concept industrialization describes a societal transformation of global impact, emerging from the western hemisphere and successively affecting the non-western areas to a yet larger degree. From the 1960s and onwards we find an increasing enhancement of industries located in non-western countries, resulting in a growing number of derelict industrial sites in e.g. Europe where at the same time we see the birth of industrial archaeology and the development of professional heritage practices based on academic principles.

This paper aims at a critical discussion of heritage practices applied in the management of industrial remains and heritage sites. Based on experiences from industrial heritage practice in India and Indonesia, but also Sweden, the key question in the paper is whether the idea of a common universal set of (best) practices to be applied in all kinds of diversified cultural settings, are analogous with a continued colonial discourse giving priority to concepts, models and methods developed in a western context, creating new relationships of power and control/production of knowledge (postcolonialism). A discussion is needed whether the notion of a universal best practice, is possible or even wanted. The paper suggest instead that focus should be given to reflection and thought on how local conditions for understanding and working with concepts such as “history”, “heritage”, “memory”, “materiality” and “intangibility”, are essential for the ability to cooperate in industrial heritage practice on a global scale. The paper concludes that a concept such as “best practice” might be possible, if it is understood as a process unique for each case.

Keywords: heritage practice, best practice, colonialism, postcolonialism, local conditions, global conflicts

S60. The Japanese Colonial Empire and its Industrial Legacy

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Abstract

When I first met Hsiao-Wei Lin I asked her when industrialisation started in Taiwan and she said 'when the Japanese arrived'. Whilst this is not entirely true because there was some industrialisation in Taiwan whilst under Chinese control, the blossoming of industrialisation throughout what became the Japanese Empire really started in Taiwan when it was gifted to Japan in 1895 by the Chinese Government.

For over 200 years Japan had been a completely closed society until the 1850s when visits from Commodore Perry from the USA forced Japan to open its borders, create Treaty Ports and engage in a fantastic sixty-year period of industrialisation. Much of it was done with the importation of foreign experts, mainly from Europe, who developed Japan's coal, iron, shipbuilding and railway industries, together with silk and textile manufacture and communications. Subsequent disputes with China and Russia gave Japan territories in Taiwan, Manchuria and Korea, which were largely undeveloped. As the Japanese had no history of developing a colonial empire, they largely followed the British model and Japan was often referred to at the time as 'the England of the East'. Thus whilst they constructed the infrastructure of their new colonies, they also developed education, law and order, museums and commercial activity, as well as the transport infrastructure.

After several visits to Taiwan and Korea, and with many illustrations of sites in China, I hope to develop the theme that the Japanese colonial empire, modelled on British ideas, succeeded well until militarism overcame moderate thought in Japan.

Keywords: Britain; industrialization; Japan, Korea; Manchuria; Taiwan

S12. Nova Oeiras: an Eighteenth Century Ironworks in Angola its History and Preservation in the Post-colonial Era

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Abstract

The ironworks of Nova Oeiras was established in Angola in 1767-1772. It was the largest industrial enterprise at the time in Africa, both in the tropical zone and in the entire African continent. It aimed to exploit iron, the restructure the economy of Angola in order to dispense with the slave trade, creating means of local employment and income. It was an ambitious initiative for the time, when technical and scientific resources and material and human resources were still too incipient. Although the initiative failed, many of its material structures are preserved. It was classified as a historic monument by the Portuguese government as early as May 28, 1925, one of the first industrial structures to be placed under such protection. In this paper the author will describe the main historical features of Nova Oeiras Ironworks as well as the measures taken for its preservation.

Keywords: Corridor of Kwanza (Angola); industrial heritage; metallurgical industry; Portuguese colonial empire; preservation; transfer of technology

S11. Revisiting Modernity: Heritagizing Japanese Industrial Sites in Taiwan

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Abstract

It is not surprising that the image of colonial modernity is salient in the oral records collected in the neighbourhoods surrounding former industrial sites. Strong attachment to memories of modernization within postcolonial communities cannot be simply explained by the colonizer's appropriation of the land, living environment and spatial fabric. The complete alteration of the perception of time and of bodily experiences under colonial rule also needs to be considered. For instance, the daily lives of local residents in former sugar and mining industrial areas in Taiwan were rearranged according to Western standards of time in an effort to boost the efficiency of industrial production. The creation of new time-space perceptions, the embedding of rational ideology in knowledge systems and controlling mechanisms together comprised the colonial modernization project. It is important to bear in mind that this project was based on a hierarchical social structure, and the power relations within this structure were sustained by the postwar authoritarian regime in Taiwan. Modernity in this regard is inseparable from coloniality.

This image of modernity was paradoxically incorporated into the localization programme in Taiwan in the post-authoritarian period (1990s-2000s) by both autonomous grassroots' activists and the state. Japanese sites served a unique role in this Taiwan-centred identity-making programme. All sorts of colonial industrial sites with symbolic elements such as high chimneys, factory buildings, modern machines, rail tracks *et al* became *heritage*, and many became sites for local pride and identity for postcolonial communities. The industrial landscape became a *site of memory* for local communities, which triggered preservation initiatives when faced with the threat of destruction that often accompanies development projects. In this regard, colonial modernity has been transformed into another facet of modernity, contributing to the formation of a collective image of a better future through negotiation and inclusive heritage practices. However, this facet of modernity is continuously challenged by the developmentist drive and global consumerism nurtured by modernization rhetoric.

Hence, three dimensions of modernity in relation to the representation of colonial industrial heritage will be discussed in this paper: modernity as a colonial project, the role of modernity in locality-building, and modernity in connection to global consumerism. Through selected case studies of Taiwan's industrial sites, particularly those constructed during the Japanese colonial period, this paper examines how the conceptualization of modernity has become interwoven with the representation of Japanese industrial heritage in Taiwan. This paper aims to clarify the impact of modernity discourses on colonial heritage interpretation, and to examine the possibilities of decolonization through an alternative re-interpretation of modernity.

Keywords: revisiting modernity; Japanese industrial sites

S38. Modern Industrial Construction and Industrial Heritage in Mainland China: a View from the Concepts of "Colonial" and "Post-colonial"

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Abstract

The development of modern industrial construction in Mainland China started later than that in Europe. It has experienced six types and key periods of development: 1) “the semi-feudal period,” i.e. Self-Strengthening Movement in the late Qing dynasty, so as to "learn from foreigners to compete foreigners", featured by enterprises invested by Westerners, Chinese government and individuals under official supervision; 2) “the semi-colonial period” after the Sino-Japanese war in 1895, when foreign investment on industrial construction penetrated into mainland China; 3) Nationalist industrial construction in Republic period; 4) the industrial construction period with assistances from Soviet Union and Eastern European countries in socialist camp after the establishment of the P.R.C; 5) the independent industrial construction period, claiming "self-reliance" under the "closed-door policy" during the Cold War; and 6) the period of “Reform and Open-door policy”, developing industry by the introduction of foreign capital and technology. However, from the concepts of "colonial" and "post-colonial", the industrial heritages in mainland China have cultural connotation and rich diversity because of their individual differences under their different construction backgrounds.

Keywords: colonial; post-colonial; industrial construction; industrial heritage

S48. A Study on the Amami Oshima Sugar Mill: its Restoration and Social Background of Establishment

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Abstract

The main points of this paper are as follows:

1. The background of establishment of some factories which producing white sugar at Amami Oshima island in 1865 were analyzed by a Japanese typescript, 'Keio Nenkan Oshima Gun ni Okeru Hakutou No Seizo (White sugar production at Oshima district at Keio years)'.
2. Several British engineers and British firms helped construction of these factories.
3. Irish born engineer Thomas J Waters, who contributed for these factories, seems to be concerned with Scottish merchants Glover & Co.
4. The description and the plate of 'Sugar: a handbook for planters and refiners' of 1888 suggested a plan and structure of one building of those factories.
5. These factories would have been built to bring a British merchant's profit, instead of merely bringing a profit to the Satsuma.

Keywords: Amami Oshima Sugar Mill; Satsuma; Thomas J. Waters; sugar cane industry; Glover & Co.

S79. Science and Technology Museums Play Active Roles in the Preservation and Utilization of Industrial Heritage: the National Science and Technology Museum in Taiwan as an example

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Abstract

Science and technology museums, dealing with scientific, technological and industrial objects, play an important role in the field of preserving industrial heritage. The National Science and Technology Museum (NSTM) in Taiwan is taken as an example to illustrate its works in the preservation and utilization of industrial heritage. When preserving, the NSTM collected objects of science, technology and industry, worked in partnership with the industries, and digitalized various industrial objects from individuals and companies. When utilizing, the NSTM completed research, made publications from industrial heritage and produced physical and virtual exhibitions to communicate industrial heritage to the public. With these achievements, the authors suggest that, conceivably, the NSTM could undertake the management of the industrial heritage of buildings, sites or places in the future.

Keywords: museum; science and technology museum; industrial heritage; National Science and Technology Museum (NSTM)

S94. “La Dificultad” Mine. A site Museum and Interpretation Center in the Mining District of Real del Monte and Pachuca

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Abstract

“La Dificultad” mine is located in Real del Monte, Mexico, and is the most emblematic mine for its architecture and history. By the end of the 19th century a Wolf steam pump from Saxony was installed, being the most powerful pump -580hp- in Mexico at the time. A few years later electricity was introduced to the mine, and both systems (steam and electricity) were used. At the beginning of the 20th century an electric plant that still works was installed in the mine.

The site comprises almost 11,000 square meters and its 15 buildings and structures are in good state of conservation (80%). Among them, the chimney and the machine house are outstanding, due to their architecture and proportion.

There has been a minimal intervention: Substitution of roof panels, wall plaster and doors and windows fixtures, demolition of modern structures, consolidation of structures already in ruins, cleaning of open spaces and the conditioning of spaces and circulations according to the museographic guide.

A steam winch, the only one in the zone and an electric winch from the beginning of the 20th century still survive almost complete in the mine. They have been cleaned and repaired.

The project comprised an archaeological registry of each working area in order to understand its function inside the mine. The first step was the elaboration of a three-dimensional topographic plan. Then archaeological exploration has been conducted in the boiler and machine rooms and some artifacts and tools have been recovered. With this, we can know the historic and technological context of the mine.

The purpose of the Site Museum and Interpretation Center is to spread the knowledge of the historical, technological and cultural heritage originated with the development of mining in the region from colonial times till now. The use of images, models and interactive panels help the visitor to acquire a background about the origin and importance of this district and its mines.

Keywords: mining heritage; museums; cultural tourism; restoration

S92. Education by Industrial Heritage- Old Power Plant of Piešťany"Elektrárňa Piešťany"

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Abstract

Understanding the needs of the presentation of industrial sites in situ for the general public in Slovakia is still complicated. The recognition and preservation of the variety within this heritage has already partly risen, especially in the case of reusing the former municipal power station in the spa town of Piešťany (80km NE from the Slovak capital of Bratislava).

Most of the exhibited technologies usually are not more present in the way young people thing and often they are not interested in the industrial past. Out of a sheer will of a few activists and forthcoming approach of the property owner a vision was born – give the site a whole new life. Provide the youths and general public with an opportunity to learn about the history of technology energy and environmental impact of its generation and transformation in a new creative way.

The goal of the "*Eureka centrum"* project is to develop a model and operational tools to enhance attractiveness, and thus also the visit rates of science & technology museums. The project will be developed and tested as a pilot set of activities accopmanying the launch of a new hands-on science centre and power generation museum in Piešťany (Slovakia). An institution of this kind has been missing in Slovakia so far, in spite of the fact that the country´s territory gave rise to a number of technical inventions in preserved in the old technologies, which contributed to the advancement of human civilization in a technically fundamental way. On the other hand – it has become almost a selfulfiling prophecy that young people are losing interest in studies of natural and technical sciences; these are, however, the essential prerequisite for any further technical and technological development, and thereafter also for the improvement of socio-economic conditions.

The basic purpose is to stimulate the general public´s interest in the protection of this cultural heritage. The cognizance that cultural heritage is the best protected by people themselves was the guideline. Rumour has it that every citizen of Piešťany used to have his or her own brick in the building. This fact has been the primary motivation in our proposal to "return" the place back to the city and its people, but with a different function - a function that will protect its "mental potential".

The number of participants included in the preparation of the Elektrárňa Pieštany is therefore increasing from year to year and lot of research work is already done. In archives were discovered interesting old documents clarifying not only construction but also the context of the object itself which of course will be presented. Several kinds of activities were already developed in order to meet the ambitious goal open the museum next year.

This will be an example of a new trend which can help to bring people closer to the industrial heritage which is not just a group of old buildings for demolition, but part of their own history and a library full of knowledge necessary to preserve for future generations.

Keywords: industrial heritage; energy; electricity; hands on science; eureka centrum

S42. Tracing the Invisible- Electropolis Berlin

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Abstract

The “Berlin Center for Industrial Heritage” (BZI) is a project jointly developed by the University of Applied Sciences Berlin (HTW) and the Foundation of the German Museum for Technology in Berlin (SDTB). Since autumn 2011, the initial budget is provided by a programme to promote the innovative potential of culture in Berlin which is financed by the European Regional Development Fund. The HTW has been engaged in the broad topic of industrial culture for more than 20 years and has developed its own Competence Centre for Regional Industrial Heritage (KRIK) three years ago to arouse public awareness in relation to industrial culture. It was also the KRIK where the idea to found the BZI was born.

One of the many missions of the BZI is to develop an intelligent and visionary tourism concept for Berlin’s industrial heritage. Instead of collecting all data and references of all industrial sites in Berlin and then do a selection based on worn-out criteria from existing touristic concepts, we first of all started thinking: What’s special about Berlin’s industrial heritage when compared to other places? What’s the story it stands for in human history? Why should people – and especially younger generations – be at all interested in listening to this story? Which message could be drawn from Berlin’s industrial experience that is useful for the global society of tomorrow? These are the questions that will be answered in the following chapters.

Keywords: technological infrastructures; intangible heritage; universal cultural values; scale-jumping in landscape interpretation; regional messages; participative approach

S68. The Sado Mining Complex

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Abstract

During the Edo period (1603~1867), as the largest gold and silver mining operation in the nation, Sado Gold and Silver Mine provided the resources to support a monetary economy in Japan. During the Meiji Restoration, which started in 1868, Sado Mine was owned by the Japanese Government and cutting-edge technology was introduced by engineers from Europe and the United States. In 1877, the Odate Shaft, the first Western-style shaft in Japan, was completed, and from then on, advanced smelting technologies such as stamp amalgamation process and pan amalgamation process, as well as a variety of foreign equipment such as blast furnaces, coke ovens, and silver separation ovens were implemented on a trial basis. Under the government's leadership, Sado Mine played an important role in leading private mines in Japan.

Sado Mine was added to the property of the imperial household in 1889. From around this time, the Japanese Government began to implement Japanese technology and equipment instead of Western-based technology and equipment. OSHIMA Takato and WATANABE Wataru were the key engineers who implemented the KISS process in the Sado Mine and constructed newer types of shafts, mills, stamp amalgamation mills and ports.

Sado Mine was sold off to the private sector in 1896 and run by Mitsubishi after that. Mitsubishi inherited and further developed the mining and smelting technology from the government-owned period, and updated facilities with the implementation of cyanide process and electric power. Flotation process, which had been studied to be applied to gold extraction from 1918, was implemented in 1932. The Kitazawa Cyanidation and Flotation Plant and the Kitazawa Thermal Power Plant exemplify the facility renewal done in this period.

After 1937, a system for greatly increasing the production of gold was announced as a national policy. To meet the production goal, facility renovation continued, and flotation process for low-grade ore such as coastal stones was developed and put into practical use. As a result, the Kitazawa Flotation and Dressing Plant and a 50-meter thickener were completed, and in 1940, Sado Mine recorded the yearly highest amount of gold production since the Meiji era.

After World War II, the resources in Sado Mine ran out due to the haphazard production enhancement during the war, and operations were downsized severely in 1952. From then, no high-grade ore veins were discovered and the meager resources dried up. Sado Mine was finally closed in 1989.

The history of Sado Mine represents the history of modernization in Japan. Sado Mine contributed to the development of technology in other dressing plants and non-ferrous smelteries in Japan, since most of the technologies and facilities on Sado, which were introduced from the West under the government's leadership soon after Meiji Restoration, were pioneers in mining and smelting. In addition, Sado Mine played a central role in the field of research and development, as well as in training Japanese engineers after the late 19th century.

Mining is a system which consists of the processes of mining, dressing, and smelting, the supplying of power to each process, and the transportation and shipment of goods. Facilities related to those elements are well preserved in Sado Mine, and one can see all of the process there. The remains of the Sado Mine complex are considered extremely valuable since they represent the modernization of mining technology in Japan through the transition of the whole system.

Keywords: Sado Mine; mining and smelting technology

S44. The Tomioka Silk Mill and Related Sites

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Abstract

“The Tomioka Silk Mill and Related Heritage” is a technological ensemble of raw silk production sites in JAPAN. It is listed Japan tentative list of UNESCO world heritage from 2007. Many people already heard the historic significance of Tomioka silk mill several times. In this paper I will show the outline of this ensemble and introduce individual site and history.

“Tomioka silk mill and related heritage” comprised of four components depicting development of modern sericulture and silk-reeling. The main theme is "a mass production of high quality raw silk” that was made possible in modern Japan, in which the Tomioka silk mill played a central role. This ensemble portrays a series of historical events successfully contributed not only to the modernization of Japan, but also to the prosperity of Asian as well as the World silk industry in the modern age.

Keywords: Tomioka Silk Mill; related heritage

S47. The Summary of "The Modern Industrial Heritage Sites in Kyushu – Yamaguchi" and Comparative Analysis Coal Mines

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Abstract

"The Modern Industrial Heritage Sites in Kyushu and Yamaguchi" is a unique serial national property clustered within, or related to, the Kyushu-Yamaguchi region, Japan. This was entered on Japan's tentative list for nomination to the World Heritage List in January 2009. There are three main industrial typologies presented in the serial nomination: Iron and Steel, Shipbuilding and Coal Mining. These are the principal heavy industries that are the mainstay of the Emergence of Industrial Japan 1850-1910, each directly, or indirectly, dependent on the other. 'Pioneer' and 'growth' sites of each typology characterize the transfer and diffusion of Western technology through a highly distinctive social network.

According to "the Operational Guidelines for the Implementation of the World Heritage Convention: 3.2 Comparative Analysis", it is required that component parts should be compared and examined with similar heritages. In this paper, the summary of the "The Modern Industrial Heritage Sites in Kyushu and Yamaguchi" is told, and the domestic comparative analysis of the coal mine outlined.

Keywords: coal mine; iron and steel works; shipyard; operational sites

S45. Technologies Depicted in Sado Mine Picture Scrolls

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Abstract

There are a lot of historic documents which illustrate the gold and silver mines of Sado. Particularly, more than a hundred mining picture scrolls, including duplicates, which illustrate Sado Mine in the Edo period (1603~1867) remain both domestically and internationally. This fact makes Sado Mine outstanding among the mines in Japan. Mainly, a series of processes such as mining, smelting, and manufacturing oval gold coins in the Aikawa Gold and Silver Mine are drawn in detail in these picture scrolls.

Picture scrolls from other mines pale in comparison to those from Sado Mine in both number and content, which shows how significant Sado Mine was at that time. They served as an example for making picture scrolls of other mines and they are now valuable historical materials for studying mining technology and culture in the pre-modern period (18th~19th century) of Japan.

It is believed that they commenced drawing these scrolls by order of the eighth Shogun, Tokugawa Yoshimune, around the middle of 18th century. They are supposed to have been of some help in understanding the conditions of Sado Mine, which fell into stagnation at that time. From the middle of 18th century until the middle of 19th century, these picture scrolls were drawn by scroll artists and were submitted to the Magistrate Office to illustrate the complex mining process to the new incumbent when the Sado Magistrate or Assistant Magistrate changed.

The picture scrolls were drawn repeatedly for ages with a same basic composition. However, partial modifications were made according to developments in mining, such as the implementation of new technology or the renovation of the management system. We can understand the transitions of mining technology and the management system over a hundred some years by comparing scrolls from different periods. They certainly are outstanding historical documents which back up other existing remains and documents.

Since most of the documents about mining in Europe show the technology level from the 16th century, it is difficult to identify the development of mining technology before then. Therefore, it may be said that the Sado Gold and Silver Mine picture scrolls work as a missing link through which we can thoroughly understand historical documents and excavated archeological articles. Additionally, the picture scrolls are considered to have played an important role in spreading technology throughout Japan in place of mining schools, which they had in Europe.

In addition to gold and silver production technology, the Sado Mine picture scrolls depict mine workers' clothes and hairstyles, as well as buildings and townscapes, so they are also valuable materials for understanding pre-modern social life as well as mining history in Japan. We will continue to study the picture scrolls to learn more about the transition of technology in Sado Mine.

Keywords: gold and silver mines; Sado; picture scrolls

S73. History of Coalmining Industry and Nowadays State of Heritages in Hokkaido, in Japan

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Abstract

1) Historical State of Hokkaido in Modern Japan
Hokkaido island is located in northern part of Japan, in the subfrigid of zone in the earth. Hokkaido has 6 prefectures of Tohoku district area adding 4 prefectures of Shikoku in total. In its exploitation, in Pre-Meiji era, they had restricted in coast regions of Hokkaido, after 1870 year(Meiji 2),Kaitakushi, one part of Meiji-Government, made a large scale finance from the big companies, Mitui, Mitubishi, Sumitomo, and introduced the big technology(colonial exploitation technology) from USA, and succeeded a rapid development of Hokkaido.
2) Making of Master development plan by the occupied foreign engineers from USA
In case of making master development plan of Hokkaido, H.Capron, the head man of Kaitakushi advisor, used his many partner engineers from USA for several years and made the full master report(1875). Main contains of his report consists of two parts, one is military plan of Hokkaido region ,the other is exploiting of natural resources in Hokkaido. They had fruitful one in Hokkido, fishery, mining (coal, gold, quick silver, sulfur, lime stone), forestry, agriculture and diary, especially coal resources was underlined. Speaking of coalmining, they had a large amount of resources in Mikasa, Yubari district in Hokkaido (uncovered by B.Lyman and his successors). Its underlying reasons were Kaitakushi necessity for a supply to foreign steamships at Hakodate harbour after Trade-Economy Treaty between Japan and USA (1856), and a coke supply to Yahata Iron Works to make steel for a performance of modernization of Japan.
3) Hokkaido coalmines under the continuous development for 100years
By means of coalmine technology introduced by Lyman, Mikasa-Horonai coalmine was opened in 1881,and Horonai-line iron road started in same year(3rd opening in Japan) to carry coal from Mikasa-Horonai coalmine to Otaru-Temiya coal pier, in 1890,Yubari coalmine was opened(2nd scale in Japan).After that, Akabira Bibai, Sunagawa, Ashibetu(center region of Hokkaido), Nisso(northern), Yuubetu, Kushiro-Taiheiyo (eastern) coalmine were opened respectively. Their technological characteristics were the large scale production(2mil.ton per year),deep shaft(1000m under surface),high power winding motor(3000hp),water purifying machine, full electric system, by using of big finance (Mitui etc) and USA and Germany coal mining imported and regional enlarged technology. Annual production share of Hokkaido coalmines was 30% of Japan (before world war II), according to technological developments, 60% (after), and high performance of coalmine technology in Japan (world rebel). But under the policy of the energy exchange by Japan government after 1970, many coalmines (over 900 coalmines) were closed except Kushiro-Taiheiyo coalmine and many equipments were demolished rapidly.
5) Coalmine industrial heritages and museums as highest rebel one in Japanese Technology
In Hokkaido, Yubari coalmine museum exists as the famous highest coalmining museum of Japan, as the monument of Hokkaido coalmining technology. In 2000, Taipei coalmine museum was opened after Yubari museum as a typical model in the world. Since 2006,Yubari city finance was broken and many Yubari coalmine industrial heritages may be demolished pretty soon now.
As a conclusion, to maintain these heritages, ex. Yubari, Haboro, Mikasa-Ponbetu, Akabira coalmine as a system heritages, a necessary preservation method as Taipei coalmine museum and establishing of the national collaboration system among study society, government (national, regional), preservation group, sightseeing company is necessary.
Keywords: history of coalmining; industrial heritages; eco museum; TICCIH; UNESCO

S20. The Industrial Heritage of Aluminium Industry in Post-colonialism

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Abstract

The topic of the TICCIH congress offers the rare opportunity to examine the question of the Industrial Heritage from the point of view of the colonial world. The challenge is to understand the expansion of the aluminium industry after World War 2, in the decolonization context. These also gives the opportunity to (i) develop a global approach to industrial heritage, and (ii) consider the incorporation of aluminium in Africa's heritage (heritagization), and in particular, highlight the objects of this heritage.

Keywords: industrial heritage; aluminium; post-colonialism

S19. Tangible and intangible restoration of the historical district of Bhaktapur in Kathmandu. Investigation, mapping and management project of conservation of the human settlements according with the Low-Scale Approach theory

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Abstract

Bhaktapur is an historical district in Kathmandu, Nepal. It's an example of sustainable community, a perfect balance between history, small economy, religious value, traditional doctrine. Bhaktapur has a continuous tradition in life, belief and art. This balanced system start to have pressure from the tourism which is extremely demanding. Bhaktapur still maintain what it is called “living tradition”: life style, doctrine, culture, handicraft, architecture, building activities and technologies.

In Bhaktapur most of the buildings, houses, temples, are original, without any sign of modern intervention. But recently the building activities are going to be deviated on the modern architecture and what is called “Post-Modern Architecture”, changing the traditional meaning of the architecture, form, materials and technologies. The progressive increasing of the tourism will inevitably destroy the traditional balance between local economy, life, religious issues, life, art. In Bhaktapur most of the buildings are extremely old and in many cases they are damaged by the age and the negligence. This aspect in conjunction with the progressive construction of the modern building will destroy the integrity and the identity of Bhaktapur. Very soon the living-tradition of the local people and the traditional thinking and skills will be completely forget as direct consequence of the modernization. This will effect the life and all the system of relationship inside Bhaktapur.

We propose an integrated approach of investigation and studying of the district of Bhaktapur, using the concept of Multi-Scale Approach, include in a Geo-politic system. This point of view will generate a local scale of intervention but concerning a much bigger scale of understanding, in terms of geography, economy, society, history, tradition, culture, etc., include architecture, art and building technologies. The general goal of our proposal is to protect both the tangible and intangible heritage within the historical districts and help local people to recover the ability to self-construct and the consciousness to protect the ancient culture. Since 2012, we start a cooperation with the local school of engineering in our investigation and planning of intervention. The project itself will endure for many years and it will be concentrate on:

Study on the urban scale of the traditional district of Bhaktapur;
study on the traditional architecture in Bhaktapur;
investigation on the typology, technology and materials;
investigation on site and recording the architecture case-by-case;
mapping of the state of degradation of the single building;
generation of a “management plan” and “time-planning” for the priority of intervention of restoration;
introduction of some general approach from western countries about the restoration's technologies, and feasibility on this process on the study on the urban scale, especially in terms of “suitable technologies” according with the local economy;
use a scientific diagram and table to express the damage of the single building;
proposal of restoration of the traditional life and activities, which is called “sustainable restoration” of the human settlements, which include not only the tangible part but also the intangible issue.

S49.The First Company Town in Latin America La Constancia Mexicana: 1835-1991

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Abstract

This paper highlights the first research results of historic and archaeological evidence of the Mexican early industrial past in the case of “La Constancia Mexicana”. This textile cotton mill was founded in 1835 by Estevan de Antuñano, a businessman settled down in Puebla, central plateau of the Mexican Republic. This company town influenced by utopian ideas coming from Europe was the future model of industrial landscapes in Mexico in the long run between 1835-1940, especially for textile, mining and oil industries. This classical postcolonial way to the factory had many original branches based upon the Hacienda productive units and defined the Mexican early attempts to the take off in the Americas.

Keywords: Mexican industrial system; textile cotton mills, Hacienda system; Calpanerías and workers houses; Puebla 19th Century, museology and curatorship.

S59. Development of Energetic Buildings in Slovakia

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Abstract

In Slovakia, the results of previous generations from industrial production are unnoticed and neglected. The term "industrial heritage" - as a cultural phenomenon - is in the public and among professionals rather new. The worst situation is in Bratislava region, where some valuable sites already disappeared. Usually, problems are in the difficulties of a thorough research and insufficient specification of values. Poor interpretation of values towards the public and local governments leads to the fact that we are losing important pieces. Solution can be a continuous change of society's perceptions of cultural heritage, its promotion and positive interpretation.

This article deals with research of industrial buildings and areas of Bratislava's region, more precisely of its energetic sector. This field was a driving force of development of the country. Progress of energetic sector was referring to overall level of industry. Electrical power plants were built at the beginning of the 20th century by industrial companies for their own needs. They were used for production and in case of overproduction for worker colonies. After this example, cities began to realize the need of electricity. They started to build their own plants to supply important public buildings. Electrical system worked at the local level and its unification was difficult. The development of electricity sector was one of the priorities of the country. 60% of the cost of construction of power facilities was funded by government and a variety of benefits was provided for operators of power plants.

In addition to electricity, heat was produced for propulsion purposes. Question of the central heating industry began to occur in the 30s and experimental power plant Klinger was used for heating of important buildings in the city center. Because of the crises, the experiment was economically inefficient and the question of central heating was abandoned. The year 1951 is considered as a beginning of the heating industry, when nationalization took place. Strategic energy objects had fallen under the control of regional energetic company which in that way obtained sufficient production capacity to launch the city heating. Between the strategic companies, three heating plants of Bratislava were included. First two were built in the 20s as private factory power plants. Later on, after the increase of their capacity, they were connected to the city. In the 50s after the nationalization, the third heating plant started to function. All of them are unique. On the first one we can observe different layers of architecture created by enlarging the production since 1919 until today. The second building is preserved in authentic form. The author of the third is apparently Dušan Jurkovič, prominent Slovak architect. It is specific for its functionalist architecture and for first-cycle gas turbines in Central Europe.

Despite the significant demolition of the whole industrial areas of the town, these three power plants are still standing. As in the past they contributed to raising living standards of the population, nowadays they can satisfy current needs, e.g., by a suitable conversion with cultural and social use.

Keywords: Energetics, power plant, Bratislava region – Slovakia, electricity

S9. After the Preservation of the Factory the Possibility and Impasse of the Conservation of Industrial Heritage in Taiwan

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Abstract

In the middle of 19 century, the light industry was firstly founded in Taiwan due to the permission of trade in some ports. In 1886, the modernization of industry was planned and implemented under the order of first Governor of Taiwan of Ching Dynasty. Although it was almost 40 years later than "Industrial Revolution" which started from United Kingdom in 1850s, the power, railway, factories, and other modern industrial facilities have been introduced in Taiwan since then.

Since Taiwan was colonized by Japan in 1895, the infrastructure such as the roads, railway, power plants, tap-water systems, was developed rapidly. Other industries, e.g. sugar factories, breweries, rice husking factories, cement factories, can factories, etc., were also founded in many places. With the end of World War II and the surrender of Japan, Taiwan was governed by KMT government. Most of the industrial facilities were also received and still used. Until now, some new facilities have been added in these factories, while some have been abandoned.

The Cultural Heritage Preservation Act of Taiwan was adopted in 1982, and the industrial heritage was not mentioned in the Act originally. However the importance of industrial heritage has not been noticed until recent years. 89 sites have been designated or registered as industrial cultural heritage under the Act. However, in most cases only the "shell" is preserved, and other aspects of the industrial heritage, such as the technologies, machines, history, and spirits of specific industry, are mostly ignored or abandoned.

In this research, the industrial history of Taiwan will be firstly reviewed. Some industrial heritage cases and their criteria for designation or registration will be analyzed, and the buildings, machines, even the technologies still preserved in these cases will also be discussed. At the end, the core value and meanings within the conservation will be explored, and the policies for the conservation of industrial heritage in Taiwan will be criticized.

Keywords: cultural heritage; industrial heritage; industrial policy

TICCIH The International Committee for the Conservation of the Industrial Heritage

S6. Transnational Heritage in Europe

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Director Mnactec. Former TICCIH President.

Abstract

The industrial colonial heritage is a Transnational Heritage. Transnational Industrial Heritage is the one built by a foreign company or person according to aesthetic designs and shapes that are used in other countries, either by a company or by a person. Transnational heritage has not always been built with a colonial mentality, at least in Europe. In this continent, there are many examples of Transnational Heritage due to different causes. A very quite common one is the change of borders in certain periods of the history. Therefore, the industrial constructions made during this time become part of the new nation. Sometimes the new nation conceals the national origin of the construction. In others, they despise it and tend to destroy it.

That kind of heritage has not been widely studied. Even so, knowing part of the relationships among industrialised countries is very relevant.

The most common cause that produces Transnational Heritage occurs when a company or person decides to work in a foreign country to enlarge its market. This can be done by simply moving the production centre to the other country or by creating a new company in the new place to be able to take advantage of the opportunities that exist there. A third type of Transnational Heritage in Europe is the colonial one. That happened most often in non-industrialized regions. In that case, the goal of the company was to create an industrial site to extract raw material, to produce or store goods, or to create communication lines for the sole purpose of making a business. In Spain, the most emblematic case is the exploitation of Riotinto cooper mines in Andalusia from the British company Rio Tinto Company Limited in 1873. In this case, the technical body of the metropolis was completely separated from the nation's workers in addition to the company not being involved in the economic development of the area.

In Catalonia, there are several examples of transnational architecture due to the second cause, which occurred when certain people or companies decided to create an industry in Catalonia to take advantage of the business opportunities.

In the presentation, several Catalan sites will be discussed:

- The industrial colony in Sant Vicens de Torelló and the textile factory in Barcelona built by the Scottish company Coats.
- The textile Colony Salou in “Masies de Voltregà” (1862) and the Baurier factory in Barcelona created by the French Baurier family in 1910.
- The Electrochemistry of Flix created by the German company Chemische Fabrik Elektron i Elektrizitäts AG in 1897
- The Hispano Olivetti company created by the Italian company Olivetti in 1942
- The AEG factory in Terrassa created in 1941 by this German company.
- The Siemens factory in Cornellà created by Siemens Schuckert Industria Eléctrica S.A. in 1910.

The fate of the industrial heritage in those companies has been varied. Even though in some cases it has disappeared, most of it still exists. Part of it is still operational and another part has been rescued for other uses.

Keywords: transnational heritage; post-colonial heritage; industrial heritage; Europe

S50. The Memory of Soviet-type Industrialisation and Industrial heritage Preservation in Hungary

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Abstract

Relating to the main theme of the conference, Post-colonialism and re-interpretation of industrial heritage, this paper aims to investigate what memory has been preserved locally related to past industrial activity if industry was developed according to interests outside the country's boundaries. However, instead of post-colonialist states, the European countries of the former Soviet Bloc, especially Hungary will be put in the focus facing a similar dilemma.

Through the analysis of various sources, the presentation intends to drive attention to the difficulties of the evaluation of the recent past including its industrial features for the national community. The feelings of uneasiness, rejection, as well as the lack of interest and identity problems create an ambivalent attitude to the industrial heritage of the era resulting in its neglect. Preservation, on the contrary, could facilitate the proper understanding of the past.

S40. Rethinking Ecomuseum: a Tool for the Redevelopment of the Post-industrial Region, HouTong

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Abstract

Taiwan was once an important place for the gold mining and coal mining. RuiFang District in New Taipei City was one of the most important mining regions in Taiwan. JinGuaShi and JiuFen regions were well-known for the mining history and nostalgic atmosphere. Similarly situated in RuiFang District and highly related to the previous regions in the context of geography and history, HouTong region was the most productive site for the coal mining after the Second World War in Taiwan.

Although the coal mining industry had been stopped in 1990, the mining landscapes over one hundred year, including the pits, the bridge and railroads for the transportation of coal ores, the factory and offices of the mining industry, the activity center, welfare shop and restaurant for the workers, the dormitories and the spatial disposition of the mining village still survive in this area, almost completely.

In the late of 1990', Taipei County Government planned to build a coal mining museum, which then was adjusted to be an ecomuseum program by using the cultural resources and the characteristic of the environment in this area to promote the integrated redevelopment for the region. This ecomuseum was formally named HouTong Coal-Mining Ecological Park, called HouTong Ecomuseum for short, and was opened on July 24, 2010.

Comparing with other ecomuseums or ecomuseum-like facilities in Taiwan, HouTong Ecomuseum is quite conforming to the definition of ecomuseum. Although, the key facilities were managed by Tourism and Travel Department, New Taipei City Government, not to institute a dependent museum organization but to entrust private sectors for the works of maintenance, security, cleaning and providing light meals for tourists.

Obviously, in this way, HouTong Ecomuseum can only satisfy the basic museum function, mainly in the aspects of exhibition and education. However, HouTong Ecomuseum should not be restricted in the facilities only and it should cover the whole region of HouTong. If it can be released from the restriction of the "Core and Satellite" system and try to choose the decentralized model, maybe we can establish a better ecomuseum model in HouTong region.

Except New Taipei City Government and its entrusting units, there are three elected heads and three individual associations for each village and an integrated organization comprising the whole region of HouTong. Besides, there are two voluntary groups to devote themselves in the issues of wild cats and the environmental education. These different units have different visions and different working mechanisms. If we can use the decentralized model to build up a network between all of them, then we can relief from the expectation for a professional core museum to be established. Escaping from the limit of hierarchy, every HouTong resident and each unit involving in this region all have the right and responsibility to support and promote the sustainable development of HouTong Ecomuseum. Under this mechanism, HouTong Ecomuseum may not be recognized as a conventional ecomuseum but it can become a useful tool for resolving the conflicts and encouraging the cooperation between local residents, community organizations, voluntary groups, related governments, even other professional institutions or enterprises. If it can fit the original mission for establishing an ecomuseum in HouTong region, it's not so important to be a professional ecomuseum or just an ecomuseum-like facility, is it?

Keywords: mining Industry; ecomuseum; HouTong region; decentralized model, redevelopment

S3. Historic Town of Banská Štiavnica and the Technical Monuments in its Vicinity

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Abstract

The town of Banská Štiavnica is one of the highly visited places in Slovakia. It is the oldest mining town in the country that played an important role in history. The richness of ore deposits was the main reason for inhabitation of this hilly area and its development dating back to the late Bronze Age. In the Middle Ages a document of 1156 refers to it as a "terra banesium" - land of miners. Banská Štiavnica obtained town and mining privileges in 13th century, in 15th century began immense prosperity of the area. Because of troubles with pumping water from the mines there was a slow decline at this time, but technological progress continued. Later Banská Štiavnica become the most important centre for precious-metal mining in Habsburg Empire and European centre of mining education. Today is more or less centre for tourism which is connected mainly to its mining history and traditions, even it offers also various other possibilities in fields of culture or sport facilities.

Area around Banská Štiavnica represents organic growth from the Middle Ages to the present day. In 1993 was inscribed in UNESCO World Heritage List under the title "Historic Town of Banská Štiavnica and the Technical Monument in its Vicinity". This includes a wide territory surrounding the town itself, territory in the centre of Štiavnica Hills, large volcanic mountain. Nevertheless the inscribed area encompasses 7 more villages, the main propagation and presentation from the point of view of cultural and historical values and industrial heritage are still set mainly on the town of Banská Štiavnica. The town was a centre for this area, also unique Openair Mining Museum, with high potential of lifting up the significance of the whole area, lies on its territory. Unfortunately, former cooperation and unity of the whole area is no longer visible even in the field of presentation of common industrial history. The aim of the paper is to present experiences, results and reserves in presentation of industrial heritage of this UNESCO site.

Keywords: Banska Stiavnica; mining town; industrial tourism

S69. Reinventing the Historic Silver Mine Carriageway Gin-no-Bashamichi in Hyogo Prefecture, Japan —Renaming and Reconnecting Forgotten Mining Heritages

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Abstract

At the start of Japan's social modernization during the early Meiji period, there arose a need to implement the latest technology and adopt new techniques in mining engineering. Gin-no-Bashamichi: the historic silver mine carriageway, is believed to be the first Japanese "highway" that connects the Japanese prime silver mine in Ikuno and the Shikama port in Himeji, two sites separated by a distance of 50 km. The carriageway was constructed under the guidance of French engineers, and the silver mine is the most prominent example of Mitsubishi Combine's influence on the Japanese mining industry. The towns along this historic carriageway produced many prominent social leaders who went on to drive the modernization of Japanese society. Despite its significance, this carriageway was utilized for only about 10 years before the construction of new railways and it gradually lost visibility in the context of regional development.

After many years of being disconnected, the carriageway is gaining prominence with the local communities and governments recently showing an interest in rediscovering its historic significance and using it to inspire their socio-cultural development efforts in the face of the regional aging trend and a shrinking economy.

Needless to say, the preservation of this historic carriageway faces technical challenges since numerous stakeholders are involved and the road itself is still functioning. This case could be considered as experimental attempt to define living industrial heritage sites that have previously been treated outside of the conventional legal protection system. Additionally, these linkages and connections have not been previously addressed because of the limitations of existing domestic policy frameworks and administrative processes.

This paper will discuss and analyze how to connect heritage sites such as these and establish a new protocol for preserving mines, roadways, and other relics of the past.

Keywords: silver mine; carriageway; modernization; Hyogo Prefecture; Japan

S37.Planning of Tourism Destination Cluster in Central Taiwan

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ABSTRACT

From 1980 onward, Taiwan has entered to an era of Service Economy. Taiwan has restructured from an industrial to post-industrial economy, and sparked policy emphasis toward the development of tourism industry. The driving force for this new industrial development lay in the governmental intervention thru policies implemented after the 2000's.

Traditional tourism resources, comparative advantages (climate, culture, etc.) become less important as compared to recent tourism factors of competitiveness. Information (or rather the strategic management of information), the intelligence (the ability of teams innovation in an enterprise) and knowledge (know-how, or a culture) have become vital resources and key factors in tourism competitiveness. As every tourist destination represents an integral tourism product, and tourism is regarded as a sector that has been highlighted as one of the activities with greatest potential for expansion on a global magnitude, therefore, tourism development strategy aims in terms of maximizing its positive effects on regional economic increase. This implies that economic value is defined thru finite geographical entities, as defined by geographical reasons, and economic increase is centrally cumulated and valued accordingly.

The dual urbanization and industrialization process in Taiwan has resulted in positive economic growth as State-led forces of comparative advantage within the urban core induced labour-market pooling and sectoral clustering towards tertiary industry. While maintaining a competitive advantage in the traditional industries, the increasing trade between Taiwan and Mainland China coupled with the rise of service industries impacted on the development course of Taiwan's industries. It is in this context that this research empirically analyzed the tourism destination cluster effect in Taiwan, taking special attention to the government led destination cluster planning in the central region of Taiwan. This study concludes that tourism industry clustering affects the development of the areas' spatial clustering pattern. The productivity and employment concentration are directly proportional to the specialization coefficient, forming multiple cores and slowly converging towards the northern region. This result challenges the current State planning regime since the reality is divergent from the State-led geographical division and development policies. This study argues that the public authorities should investigate the preconditions for new economic activities, mainly, the tourism destination clustering and re-take the economic and institutional context as a reference to allow "new combinations" that would combine the area's particularities within the structural change trend with the emergence of knowledge-based tourism economy dominance in Taiwan.

Keywords: Tourism destination cluster; industry spatial clustering; specialization coefficient, Taiwan.

S96. Organizing Industrial Heritage in North Rhine-Westphalia (NRW), Germany

KARABAIC, Milena

Abstract

1.Perspectives and Chances for a "Charter Industrial Heritage NRW 2020"
Industrialisation has shaped the face and identity of North Rhine Westphalia, its landscapes and its mentalities in a characteristic manner to a greater extent than in almost any other region in Europe. Industrial heritage sites of varying qualities and of different scales are to be found in every part of the state. Over the past decades, numerous protagonists have, through their activities to preserve industrial heritage, contributed in creating a unique industrial landscape in North Rhine Westphalia comprising industrial museums, listed sites cornmernorating = ist commemorate = erinnern gemeint? industry, labour and technology, symbols of structural change and venues for present-day culture. Industrial heritage is the feature unique to the entire state of North Rhine-Westphalia and it is therefore also an important part of national heritage.

2.Sustainable factors of continuous success
Industrial heritage offers an essential starting point for sustainable development processes in the towns and regions. Key fields of these activities are preservation of historical monuments, urban regeneration, landscape management, cultural development and tourism. But in the face of new competitors and with the experience that the limits of growth haveobviously been reached, questions of consolidation, budget cuts and sharing visitors' attention become more important. rising. The industrial heritage protagonists in NRW consequently set up a "Working Group Industrial heritage NRW" appointed by the federal state to draw a concept to maintain and consolidate the leading position of industrial heritage in NRW on the international platform in the future.

3.Advantage of alliance: Positions and Visions for NRW
As a result of the efforts a "Charter Industrial Heritage NRW 2020" has been formulated. Thecharter and its conclusions were presented to the public in November 2011 on a conference in Dortmund, Germany. In order to achieve resp. to realize the strategy several key areas connected to particular measures had been defined. Based on the commitments of these recommendations the charter gives the guidelines for the participants and all those involved and holding a stake in future of industrial heritage in NRW.

4.Presentation and the first experiences with the "Charter Industrial Heritage NRW 2020"
How is the state of discussion and participation (nearly one year after publishing in November 2011)? Is there a perceptible movement or structural change in organizing and maintaining industrial heritage in NRW? Review and outlook concerning the implementation of the main topics of the charter will be given.

S58. Industrial Heritage: Some French Examples of Set Off in Cultural Opening

ROUX, Alain

Abstract

Knowing some examples of Industrial heritage in Taiwan, I'll try to formulate a new grid of interrogation about contrasted apprehension of French industrial heritage; Indeed if some people want like English example to preserve all kind of industrial heritage, many people dislike the pictures linked: paternalism, over exploitation, old fashion, all that not a good face for export industrial image of today.
So, it seem judicious to see what is a part of almost colonialism in French industrial heritage througt examples of some factories or equipments (wall paper Leroy, for example), how the conservation was delimitated, what kind of presupposed judgement has happened.

And then when the time of valorization happens, how to leave the monosemic language to examine positives anchors, starting new networks to catch again old benefits, and convert them to go far away, pass from the state of industrial plan to cultural polysemic objectives.

Keywords: industrial heritage; French

S52. A more Effective Way to Conservation and Practical Use of Industrial Heritage- Macro Approach

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Abstract

This paper will explore how we can establish a more effective way for conservation and practical use of industrial heritage. I propose a new management model-Macro Approach. It is based on close collaboration among industrial heritages; industrial archaeology and business administration are “married”. To deal with complicated external environment, Macro Approach offers a great advantage.

Keywords: Macro Approach; horizontal/vertical/time series/compound collaboration; Deming (PDCA) cycle; knowledge management; Collaborative World/Universe of Industrial Heritage

S65. Ohigawa Railway & the Development of Hydro Power Stations

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Abstract

Ohigawa River, namely, Ohi-River, runs 168 kilometers in Shizuoka Prefecture which has the highest mountain in Japan called Mt. Fuji. The river flows through the deep V-shaped valleys of Japan Southern Alps (elevation: 2,000~3,000 meters) and empties into Suruga Bay in the Pacific Ocean. During the Edo period, nobody was allowed to build a bridge over the Ohi-River in order to defend the Tokugawa Castle in Edo Capital.

The potential of the Ohi-River for hydroelectric power development was realized by the Anglo-Japanese Hydroelectric Company (Nichiei Suiryoku Denki) was established as a join venture of Japan and Great Britain. In 1910 the first hydro power station called the Koyama Hydro Power Station with an output of 1,400 kilowatts was constructed, and then many dam-typed hydro power stations were built at Ohi-River. Now the river water is utilized for agricultural water supply, waterworks, water for industrial use, hydroelectric generation, etc.

As the projects of hydro power stations were developed, Ohigawa Railway Company was founded in 1925. After the construction of hydro power stations finished, Ohigawa Railway started a revival activity of locomotives in order to get involved in the sightseeing tour business in 1954. The Abt rack railway system was introduced in 1990.

Ohigawa Railway Company tied up with Brienz Rothorn Bahn in 1977 and Alishan Forest Railway in 1986. As these three companies preserve the restored steam locomotives, they have “sister-railway” agreements.

Keywords: hydro power station; steam locomotive; Abt rack rail way; turntable; suspension bridge

S23. The Transition of Shipbuilding Industry on Cijin Island in Kaohsiung Harbor- from Post-war Wooden Fishing Boats to Modern Fiberglass-Reinforced-Plastic Mega Yachts

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Abstract

Kaohsiung, a harbor city situated in southern Taiwan, was the origin of industrialization of Taiwan when the first modern sugar factory established in the vicinity during the Japanese occupation (1895-1945). Cijin, a sandbar peninsula-turned island of only 400 meter wide and 8.5 kilometer long, is the outer side of Kaohsiung harbor. Ciho, locates on the northern tip, was the first documented settlement of Mainland Chinese at the 17th Century. But the city center quickly moved to the inland side of the Kaohsiung harbor as the city grew rapidly on international and local shipping trades in the 19th Century. After the World War II, the coast landscape of Cijin gradually changed from sandy oyster farms to heavy machines and skyscraping cranes; shipyards took over the entire in-harbor side coastline. Today, Cijin reminds as the outskirt of Kaohsiung harbor, and one of the best shipbuilding sites in Kaohsiung because of its sea accessibility.

In the present work, we tried to move outside of the scope of western naval architecture knowledge, but to look at the rich historical and social components of the transition of shipbuilding in this special island. We sort through written and oral historical data, combined with field observation findings (2006-2011), to describe the transition of shipbuilding industry on Cijin from post-war to presence; how it changes in the material used, skills/technologies, manpower and relationships with local industries. Today, Cijin is a living shipbuilding heritage with a unique mix of old and modern forms of shipbuilding industry: deserted sites of wooden boats yards, traditional yards for maintaining small fishing vessels, mid-size modern steel and aluminum shipyards and luxury industry-leading mega yacht companies. We hope this preliminary work can spark more interests in rising awareness and ideas of possible integration of preserving olds history and constructing new industry in Cijin.

(This work was partially sponsored by the Research Center for Humanities and Social Sciences, National Cheng-Kung University, Tainan, Taiwan)

S33. Naked Kaohsiung: Rethinking Cultural Tourism of Industrial Culture in a Post-industrial Era

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Abstract

Cultural tourism appears to be a booming industry in Kaohsiung. That is fundamentally driven by urban aesthetics in the last decade. For tourists, Kaohsiung was no longer distinct by its stereotyped past – heavy polluted, export-oriented industrial city. Its current placemaking projects are outward-looking and entrepreneurial. Thus, that move is celebrated the post-industrial era through emerging creative industrial and cultural tourism-related projects on which the local government relies to regenerate the urban area, particularly an upcoming renewal mega-city project around the harbor area (2014 Kaohsiung New Bay Area). In this context, cultural tourism shows contradictory faces of the city, e.g., conservation vs. redevelopment, and new (tourist) industry vs. existing industry. On the one hand, this view updates the complaint of cultural activistism, which regards Kaohsiung's urban life as not so much "authentic" as tourist spectacle. On the other hand, one should reconsider how and why visits to Kaohsiung in the post-industrial era have to more engage with industrial culture, e.g., landscape, heritages, working class communities. As a result, many places' authentic aura has been misrepresented, covered up, or even demolished. Broadly, industrial areas are either represented as marginal or strategically redeveloped as tourist spaces.

Curiously, the state's economic arm recently claims an upturn in the number of visitors staying in Kaohsiung via alternative itinerary to those state-owned industrial areas. The state's perspective seems contradict the local government's take on Kaohsiung industrial culture by shifting tourists' attention back to the supposedly authentic interest of a conservation approach. However, this actually shows cultural tourism is strategically taken by the central government as well as the local government as an instrument to increasing visitor numbers and commercial re-development.

For me, an activist once committed to the conservation of industrial heritage, I argue cultural tourism is complicated by such a tension. My case study is about those placemaking and conservation debates over industrial (tourist) spaces across the harbor and post-industrial area, such as Kaohsiung Harbor Train Station, Historically Electronic-Mechanical Street, where manifests power relations in relation to cultural tourism. That is concerned with how the role of authenticity, as Sharon Zukin argues for New York's case in *Naked City*, played in shaping the nature of Kaohsiung's industrial culture. And I seek to elaborate those complex forces that facilitate the tension between origins and new beginnings. I argue for a consumption-based perspective to rethink cultural tourism. That counts on specific traveler's experience in negotiating cultural preservation and commercial redevelopment for seeing Kaohsiung's authenticity of our lifetime.

Keywords: Kaohsiung; Industrial Culture

S95. Russia and Urals: Industrial Heritage and Industrial Tourism

ZAPARIY, Vladimir

Abstract

The article tells about the main directions of work of historians, local lore activists, state structures and social organizations to develop industrial tourism which is one of the characteristics of the Urals. Being well-developed in the European countries it is not well-developed yet in our country. Recently there have appeared all the favorable conditions for its development. Main directions of its development and methods of its realization are stated in this article.

Keywords: industrial and cultural heritage; tourism, areas; industrial Urals; production; patriotism; museum; image of Russia; historical experience

S43.Preservation and Enhancement of the Image of Post-industrial Heritage

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Abstract

In order to recognize the outstanding universal value of industrial architectures and ruins, the attention is oriented towards those properties which have connection to the Industrial Revolution, but represent locally distinct industrial cultures or contamination of construction types. The studies - aimed at rehabilitation and enhancement of architectures of the industrial heritage - require to improve a cultural attitude in sharing knowledge, to promote environmental, cultural and social quality of the urban landscape, starting with the re-appropriation of history and memory.
In summary, key factors and comparable processes between different countries, are emerging as a result of the analysis on an medium European industrial city - Turin, emblem of the automotive industry - and on international case studies, like Chelsea at Manhattan, North Adams in Massachusetts, Docklands of London and Bilbao, “industrial park” in Shanghai.
In the first phase, after a period of abandonment, there had been sometime illegal occupation of industrial sites: since the 70’s of the 20th century, in many urban areas, artists and cultural organizations began to occupy and re-make factories spaces, gradually developing them into art centers and new ‘creative industries’. The industrial complexes can be reused without losing the memory and the ‘spirit of abandonment’; surfaces are often left intact, displaying the decorative patina that comes with time: working patches, pipes, unfinished flooring, painted and scraped walls. The ‘allure’ of the industrial aesthetic determines the recruitment of the heritage as an art form and anticipates the implied emphasis on conservation; in many instances it's crucial to the success of conservation and redevelopment. The spontaneous recovery projects stimulate some private groups to start restoration projects and developers have learned from experience that their proposals are more likely to be approved if they conform with historic preservation regulations. In the second phase, the protection of significant buildings and the formulation of policies relating to such structures are essential for the conservative orientation of the projects.
The urban environment redevelopment, the improvement of urban space and capitalization - enhancement of historic industrial heritage may be a cultural drive to foster the establishment of a Creative Economy and of a Creative Industry.
Finally, I intend to report the results of research and experimentation on significant forms of artistic and architectural enhancement: it will consider building envelopes and landscapes typical of the industry, while respecting the character of structures and the environmental sustainability. Communication and sensory stimulation versus a spectacular scene of labour and industry memory may happen through interventions of wall painting art, external art glass and lightworks, which amplify the concept of industrial monuments and ruins.
With regard to wall surface finishes of abandoned factories, decoration represents a popular iconography: free use of color in large areas and comics inspired images become the basis of a relationship marketing. Concerning exterior glazed openings - often not maintainable - painted or engraved glasses can increase the perception of the facade, without altering the historic design, while color and texture of outdoor wall washers lights can redefine the image of the factory.

Keywords: post-industrial; sustainable renewal; art; aesthetic

S61. Our Pasts are in Foreign Countries- and their Pasts are in ours: The Challenge of Transnationalising Industrial Heritage

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Abstract

Almost any industrial legacy, both tangible and intangible, is heavily influenced from abroad, mirroring transboundary processes of migrating people, ideas, inventions, money, armies --- and international borders, for that matter. Despite this well-known background of industrialisation processes, most industrial heritage approaches are markedly national, with regard to both implicit and stated legitimization patterns and scopes of interpretation. Even obvious implications of 'foreignness' very often remain unmentioned, hidden or concealed or may even be deliberately erased. This is particularly true for objects or sites that can be linked to 'dark' periods of history, subject to implicit or explicit politics of forgetting. The paper will address three decidedly under-researched heritage fields of research and practice:
(1) 'Migrating' heritage, e.g. German industrial facilities, such as blast furnaces, transferred to Asia,
(2) Transnational heritage originating from war-time industrial production systems in Germany,
(3) War-time German industrial establishments abroad, now constituting the other's, i.e. the former enemy's, industrial legacy.

Keywords: transnational industrial heritage; migrating industrial heritage; dark industrial heritage; shared industrial heritage

S24. The Conservation Values of " Workers' New Village" of Iron and Steel Factory, Wuhan China

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Abstract

In the Nizhny Tagil Charter for the industrial, the definition of industrial heritage is: Industrial heritage consists of the remains of industrial culture which are of historical, technological, social, architectural or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education.

In the first five-year plan period of the foundation of the People's Republic of China, the country made great efforts to develop heavy industry. In Qingshan area in Wuhan, the government built the Wuhan Iron and Steel factory; in order to service the workers to living in the factory, the government built large workers living residence modeled on the former Soviet planning model, referred to as "workers' new village". "Workers' new village" has a unique style of "Red House", the conservation values are: (1) The special historical background created the special morphology of "workers' new village", which reflects the historic of the foundation of the early China. (2) The morphology of the "workers' new village" reflects the living condition of the workers (collective live) at the stage of the specific period of time. (3) The neighborhood of the "workers' new village" has the status of the enclosed, which is a harmonious neighborhood environment, and has been lacked in the urban residential areas nowadays. So the "workers' new village" has both materiel and immaterial heritage values.

But the conservation status of the "workers' new village" of the Wuhan Iron and Steel is not optimistic: Because the country has changed the strategy to economy not industry and the real estate development, the large area of "workers' new village" which represents the industrial heritage of Wuhan city has the fate of being demolished. This paper analyses the conservation values of the "workers' new village", in order to strengthen the comprehensive protection of the "workers' new village" and looking for ways of protection.

Keywords: Industrial heritage; "workers' new village"; conservation values

S70. Saving and Valorising Industrial Heritage with Local Organisations and Volunteers in Belgium

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Abstract

The subject of my paper is in fact inspired by practices in heritage management in Taiwan and other Asiatic countries, were much local heritage projects are successful because or an active support of local communities, local education programs and the aid of many enthusiast volunteers.
In Belgium, the industrial heritage movement started around 1975-1980 with the aid and support of local organisations. The role of the academic world has been very modest in the field of industrial heritage.
Since about twenty years the heritage movement has undergone a metamorphosis through a more professional practice and more public support (by the government and local authorities). But the role of volunteers in local or regional heritage organisations has remained of great importance all the time.
A sustainable heritage practice, included the field of the industrial and technological heritage, without the cooperation and enthusiasm of local communities or without their involvement in heritage education projects is “as a harbour without water” or “as a pub without beer” as people say in Belgium.
The presentation will demonstrate this opinion with self made images by the author including photos of concrete projects of volunteer work in saving and valorising industrial and engineering heritage in different regions of Belgium.

Keywords: Belgium; saving and valorising industrial

S36. Using contingent valuation to design an industrial heritage-preserving non-profit organization: A case of Pingtung Tobacco Factory

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Abstract

There are an increasing numbers of studies that applying Contingent Valuation Method (CVM) to cultural heritage sites. These CVM studies assess the social benefits of cultural resources, but few provide suggestions on the policy. This study would strengthen on discussing on the benefits which could be used to improve the condition of the sites.

Pingtung Tobacco Factory was built by Japanese in 1936 and operated to bake the leaves of tobacco. It was closed in 1997 because of the decline of tobacco products. The site is preserved for being a cultural and creative park to promote the cultural activities in Pingtung area. However, maintenance and operation fees will be issues to accomplish this. This study supposes that Pingtung County Government would establish a non-profit organization, and the partial finance of non-profit organization would be supported by the ticket fee for exhibition and donation. Therefore, this study aims to find what kinds of local residents would support the rehabilitation of Pingtung Tobacco Factory, and the strategy of management of non-profit organization which would be supported by local residents.

The Contingent Valuation Method (CVM) and one-bounded Dichotomous Choice were used to estimate the economic value of the conservation and rehabilitation of “Pingtung Tobacco Factory” at Pingtung County. The hypothetical market in the questionnaire was depicted as a situation in which local residents would pay to non-profit organization to supports the rehabilitation of Pingtung Tobacco Factory.

The number of observation was 398 local inhabitants at Pingtung County. This study adapted random samplings with face-to-face interviews. Logit model and multiple regression model were used to explain the result of regression analysis in this study. The descriptive statistics of the results reveals which kind of local residents would support the rehabilitation of Pingtung Tobacco Factory. This study also suggests the ticket fee for exhibition and the strategy of management on the park which could attract the donator to support the non-profit organization from the regressive estimation. Furthermore, the Government should declare the money spent on preservation of cultural heritage to the public, and it can increase the people’s willing of spending money to visit the cultural heritage.

Keywords: cultural heritage, cultural property, rehabilitation, industrial heritage, contingent valuation method

S82. Public Participation as the Access to Understanding and Reinterpretation of Industrial Heritage in the Urban Regeneration in China

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Abstract

In China, the conservation and reuse of industrial heritage, under a background with rapid urbanization and the juxtaposition of industrialization and deindustrialization, represent a distinctive scenario compared to that in Europe and American.

By reading some representative cases in China, this paper proposes to the problems in turning the conservation and reuse into an incentive to the urban economic growth with the reality that absence of public, and highlights the industrial heritage take responsibility for preserving the knowledge and memory of one of the crucial phases in the recent development of our civilization in a post-industrial context. The workers have created this heritage, their heirs should be able to show what they intend to pass on to succeeding generations. Meanwhile, prolonging the life of an industrial heritage is not to restore only, but to find the new function. Each generation needs to place a different reinterpretation of the past.

In fact, because of the deindustrialization, along with the transformation of the industrial buildings and infrastructures in certain cities in China, the custom of life and work also were changing quietly. The decontextualized display of industrial heritage makes it difficult to insure the adequate public understanding. On the other side, industrial heritage is treated as the catalysis to the urban regeneration, such as the Creative Industry used in culture-led urban regeneration in Shanghai, where many projects had an attempt to encourage the development of art and culture. In this process, it can generate economic returns, and also results in “gentrification and social exclusion”.

The conclusions of the paper will show how to overcome practical dilemma in the conservation and reuse of industrial heritage by public participation. Passion on nostalgia by artists and designers frequently result the photogenic building after being renovated, while it is needed for considering industrial heritage as a resource and as an integral part of collective identity. The social dimensions of the rehabilitation process cannot be dissociated from the economic dimensions, and then the public participation in industrial heritage will “become a key factor in improving people’s surroundings, addressing issues of social cohesion and encouraging economic development”.

Keywords: public participation; industrial heritage; regeneration; China

S22. An Expectation of Resocialization in Industrial Heritage- the Case of Taipei Jianguo Beer Factory

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Abstract

This paper aims to examine some phenomenon of urbanization from a new perspective in industrial heritage as a social product and of potential value in usage. The study further conceptualizes resocialization in industrial heritage that posits in citizenry everydayness for a discourse. It reflects socialization as a dynamic urban space production, which revealed in the discrepant roles of collective human influence and experience.

Issues involving industrial heritage conservation and rejuvenation are different to architectural heritage conservation. Comparably, industrial heritage are constructed in shorter temporal length, which arguably of less artistic value and generally lacking consensus to historic meanings annotated.Especially context to the on-going quests for new developments in urbanization, industrial heritage values are oft-eradicated or diminishing of their integrity. Therefore, industrial heritage rejuvenation is to posit in the perspective of public realm, which deals more than the conventional aspects of physical repair and reuse.

Methodologically, the study adopts ground-up theory approached from the dramaturgy model exemplified in the case of Taipei Jianguo Beer Factory.

Geographically located within the city core, the closure of the factory in the 1998 has motivated labor movement and hence also initiated the critical socializing momentum necessary for industrial heritage conservation.Its history of conservation not only testified to the socio-economical upheavals of urbanization, but also demonstrates civilian interests and involvements influencing to the designation for the precedential case for Taiwan's Live-Heritage. This had in turn, also initiated the practice and discourse in Taiwan's industrial heritage conservation.

Research framework approached from three bodily space resocialization relations analogous in capitalized body, regulated body and ritualized body, in order to depict some phenomenon of the Taipei City's space reproduction.In conjunction, examination to the internal dynamics between the three bodily space resocializations is made to understand what kind of reproduction force is capable of industrial heritage conservation. Fundamentally, also seeks to understand through the fracture of body-space resocialization, how the industrial heritage and space relation is reproduced in the city. That is, the forces of socializing to resocialization and societal self-pedagogy are reflected in everyday life through regulative and ritualistic processes in space reproduction.Such forces is known in an interactive process between object ('I') and subject ('Me') transformation in socialization or resocialization. In this sense, industrial heritage conservation is better understood through interaction with citizenry everydayness in the reproduction of meanings.Therefore, resocialization of industrial heritage is better defined by dynamic process of re-entering the modern society to properly understand in how initialization forces articulated in socialization.

Firstly, this is known through re-learning the pedagogy in a new set of attitudes, values and modes of behavior, whereby the norm of heritage practices reinterpreted as a set of individual entity. Such individual entity of industrial heritage constituted of: heritage object, space reproduction mechanics and people involved, are fundamental to resocialization. In Taiwan, this individual entity posits in public realm is dynamic in initializing socialization and societal self-pedagogy adjustment, which is deem necessary for industrial heritage to resocialize.

Secondly, That is, industrial heritage rejuvenation needs to learn to reconnect to citizens' life in proposing new development and hence historic significance. In this sense, reconstruction to the sense of place by identifying attributes of industrial heritage reproduced from collective citizenry experiences, thus bringing appropriate meanings of industrial heritage during resocialization.

Keywords: Industrial Heritage, Jianguo Beer Factory, Resocialization, Socialization, Societal Self-Pedagogy, Everyday Life Practice

S80.The Fool Push A Train--The Sweet Journey Story of Xihu Sugar Factory Transition

YOUNG, C. J.

Xihu Culture Studio

Abstract

In the narrow sense, Xihu Sugar Factory was constructed in 1919, which is a single sugar factory in Chungha County. She stopped sugar production on March 8th, 2002. In the broad sense, Xihu Sugar Factory (Taichung Operation Branch), she congregated fifteen sugar factories of Taiwan Sugar Corporation, 36% of Taiwan sugar industrial domain.

Xihu Sugar Factory has four major areas of importance from the viewpoint of community. 1.ice-pops are delicious. 2.the sugar train network was a major transportation for both public and the Factory. 3.the huge sugar mill building is recognized as local landmark. 4.the Factory's waterways had the worm and sweet water that was used in many ways.

While Xihu Sugar Factory was closing, they planned to simply dismantle the entire factory and railway network in order to get easy money. The sugar mill building and facilities was assigned to sale seventy million NT as scrap metal. But, now that Xihu Sugar Factory is keeping original form and opening transition from a industrial giant to an industrial heritage site. The Factory gained more than four hundred million NT after this transition.

The survival of this industrial heritage site began from Xihu Culture Studio has together assistance from funs, employees, Taiwan Sugar Corporation, academics and government. We are so honor to present the story of Xihu Sugar Factory transition that started as one into more than 420 fools have been pushing the Factory moving to industrial heritage site.

Keyword : Xihu Sugar Factory sugar Xihu Culture Studio

S30. Memories of Toolmakers in Joinville- Brazil

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Abstract

The objective of this research is to understand the formation process of our industrial heritage from the memories of toolmakers for plastic molds in Joinville. In this region there are factories that in the early nineteenth century settled in the town. The existing industrial heritage is embodied in various forms, mainly composed of the metal-mechanical, plastic and textiles industry.

These industries are the substantial figure in the formation of socio-cultural-economic in Joinville as a industry center in the region. The first tool, as accompany outside of the room of a big industry, emerged during the80's manly because of the ban, by the Brazilian government, of the importation of machinery. This state decision reflected within large companies that excluded the tooling production process. The laid-off professionals were encouraged to open their own businesses, outsourcing these tooling services. This process happened in large companies such as Embraco (now known as Whirlpool), Consul, Cipla, Tupy and Tigre. The studying methodology is qualitative, the technique of data collection was in deep interviews with six industry owners of Joinville, belonging to the tools Center, of the Joinville Business Association - ACIJ.The tooling industry owners are professionals that left large companies to set up their own business, which became national references. Nowadays Joinville is the second pole of foundry of Brazil. Memories of toolmakers reveal the limits of a company that requires specialized knowledge and the advances, both achieved to settle themselves in a competitive market.

Keywords: industrial heritage; tooling; memories

S72. Study on the Reuse of the Sugar Railway Network in Chiayi County

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Abstract

In order to modernize Taiwan, the Japanese colonial government promoted industrial development through railways. Many of the districts developed with the sugar factories or the sugar railways in the Japanese Colonial Period are in fact the downtown cities of Taiwan nowadays. Due to the growing of sugar industry and the increasing number of sugar factories, the sugar railways had become a network system by 1920. For the reasons mentioned above, the modern industrial heritages of sugar railways are the symbols of the changes of modernization and urbanization in Taiwan. After 1980s, Taiwan Sugar Cooperation (TSC) gradually closed their sugar factories and sugar railways that were not in use. Fortunately, some sugar factories and most of the sugar railways are preserved. But some of these sugar factories and railways were abandoned and became ruined space scattered in Taiwan.

The sugar factory and the railway network have become an important cultural and socioeconomic concern for the local residents, so it is a pragmatically important task to come up a comprehensive conservation plan for the entire sugar industrial system, which is largely unattended by the Taiwan Sugar Corporation (TSC). This paper, therefore, takes up this issue and proposes a conservation plan for the reuse of the sugar factories and sugar railway network in Chiayi County as a studying case. It is also the main focus of this research to relate the historical value to the conservation of the sugar factories and the sugar railways.

There are three main objectives in this study. 1. To explore the historical values of the sugar factories and the sugar railways by analyzing the history and the distribution of these sugar factories in Chiayi County. The characteristics of the sugar railway network connected the sugar factories, settlements and stations along main line. 2. A part of the sugar railway network connected the three sugar factories in Chiayi is reused as bicycle routes. This paper will analyze the local government's policy for the reuse of the sugar railways as bicycle routes. 3. To analyze the process of the development of the local communities and the role of the sugar railways and stations from Singang Railway Park, to Din-Tsai-Yen, in this development.

By revealing the characteristics of the sugar railway network this paper hope to show what constitutes a successful conservation policy for the conservation of the sugar railway network.

Keywords: sugar railway; sugar factory; Bcycle path; community development; Chiayi County

4.2 Poster Presentation Abstracts

P1. The conservation of industrial and cultural landscapes： A study on foreign company storage facilities and sites in Tamsui, Taiwan

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Abstract

This study discusses landscape restoration and reuse of foreign companies in Tamsui; its findings are as follows: 1. the most famous foreign firms are located at both ends of Tamsui Street. The Shell Company warehouse is the only witness in the well-preserved case with scarce value. However, other foreign firm warehouses have disappeared. 2. The concepts include the three dimensions of heritage, museum, and participation. These cases warrant preservation as a heritage site based on its historical value and environmental sustainability. The sustainability of the design must include not only the preservation of the cultural and historical relics, but should also enhance the environment in Tamsui. 3. The cultural landscape and historical remains and the already disappeared sites should be combined as naturally as possible. The sustainability of the design must include not only the conservation of the cultural and historical relics but should also enhance the environment and the disappeared sites. 4. The design strategy must support the historical preservation of the foreign company storages and sites and the rebirth of this endeavor should incorporate as much of the previous landscaping and buildings as possible. A representation of foreign company storage facilities and sites should be displayed in Tamsui eco-museum to be included with other historical heritage areas in the city. In the future, the unique historical and cultural context of foreign firms in Tamsui should be clearly defined and the conservation and reuse philosophy reexamined. Recommendations include: 1. The preservation, recovery and reconstruction of monuments, historic buildings, and space relics; 2. Careful assessment to promote cultural tourism and support cultural activities; 3. Strengthening of the integration of urban planning and the architectural and cultural administration interface; 4. Delineation of specific areas of cultural landscape.

Keywords: industrial conservation, cultural landscape, landscape restoration, Tamsui, storage facilities, foreign company

P2. Landscape Archaeology and Industrial Heritage: Origins of the Mining Industry in Minas Gerais (Brazil)

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Assistant Professor – Level III in the Pontifical Catholic University of the Minas Gerais – Brasil (PUC Minas) and Visitant Professor – Escola de Governo, Fundação João Pinheiro (CSAP/EG/FJP), President of The Brazilian Committee for the Conservation of the Industrial Heritage (TICCIH-Brasil)

Abstract

This paper present the industrial heritage and cultural heritage concepts from the relationships established between the social and economic life. The principal perspective is the industrial landscape and development of organizational landscapes. The cultural landscape is conceived from an integrated view of society and business from an endless web of interconnections that converge in the heritage and culture concepts. The relations established fall aspects of cultural and social memory and approach these concepts, providing them with an interdisciplinary characteristics. It is necessary to highlight a "specific" social-industrial landscape that determines its own identity and makes possible to know a region, a geographic space and time experienced from their surroundings and helps us understand the transformations and reflections of the conditions of life and work of individuals.

Keywords: landscape archaeology; industrial memory and identity; mining industry; Brazilian industry

P3. Discussions about the History of Technology of Chinese Traditional Alcohol Brewing

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Abstract

China is one of the earliest civilisations which have a long history and an important contribution in the fields of vintage and fermentation. As a typical representative of the Chinese agricultural civilization, the Chinese traditional a brewing technology is different from the malt beer, wine brewing technology in the Nile Valley, Mesopotamia, Mediterranean parts of Europe, which is unique in the world alcohol history of technique. Chinese traditional alcohol brewing technology experiences three important stages of development: "Qu and Nie use the same time"; "use just Qu"; "from Qu to fermentation and distillation". In particular, by adjusting the proportion of yeast and grain, and composition of different grains, there are lots of differences among various alcohols of very delicate flavor. Their technology, operating chains, and products are evolved from ineffective to effective, from cursory methode to complete classification. At the beginning of last century, the traditional Chinese brewing alcohol technology has had the definite genre, which can be classified into three major distributions by their fragrance: thick, clear, and pasted, which are typical representatives of the culture of alcohol in specific regions in China. Due to the interactions between technology, economy, society and politics, especially with the gradual increase influence of market, the supply chain, layout of industrial setting and spirits around the alcohol production methods continue to evolve. While the primitive ways of traditional production of alcohol are endangered and some techniques which reflect the concept of traditional connotations of technology tend to disappear, it is precisely the study sample and laboratory of Chinese alcohol history of technology. As a special industrial heritage, the historic distribution is the important proof of its authenticity and integrity of Chinese alcohol, need to be timely protected.

Keywords: Chinese Alcohol; traditional alcohol brewing technology; history of technology; industrial heritage

P4. Spania Dolina- Piesky, Revitalization of Early- Industrial Mining Environment through Tourism Facilities

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Abstract

To reach wealth and property has always been man's desire – to own something has always been a driving force for development. That's why was mining technology relatively quickly developed to high level. Slovak mining of precious "rich" metals we can consider as one of the first complex technology with purposeful processing. People had to make do with natural materials and known technologies. Materials and resources were used high efficiently.

We can boldly call it as early-industrial age, which put model for developing technologies, complex processing of raw materials, and labor specialization of later industry. This happened here long long before industrial revolution. Conventional mining methods, materials and technologies used in the environment we would call today environmental friendly and ecological.

It happened here in Spania Dolina, which is located in the middle of Slovakia. The exact date when village has been established is not known, but copper here was mined long before Christ. Such was the wealth and quality of its natural resources in the 16th century, the place became known as the "copper metropolis of Europe ". At the place called Piesky („sands") settlement, there were found the richest volumes of copper ore.

Energy offered by the landscape was used to obtain ore from the underground. Water, wood, and air involved into the manufacturing process helped to obtain high quality copper. Water carried out a many kinds of work to obtain the ore from mines to the final processing. Over–ground water transport system collect water from hills to supply mining machinery, located deeply in underground. Woods from surrounding hills were used to mine reinforcement, living quarters for miners and ore-processing energy. Although the surrounding forests were cut down completely, it had been systematically replanted. All the resources were re-used to last option. This approach we would call today an ecological and sustainable. Underground mining process finished at 20th century. It was replaced by new acid-based technology of extraction of metals with over-ground machinery process of exploitation. This activity changed environment drastically. Whole settlement of miner's colony has been destroyed. Rests of it were burned at the second WWII.

Place lost its origin functionality, to now we are standing before question, how to continue. The impressive nature surrounding area offers a solution – Environmental Educational Centre in nature; site in educational role at the ecological field. It is example of various approaches that have affected environment. This can withdraw more for education in this current topic. At this point it is suggested mining and tourist nature educational pavement, which will offer knowledge of environment directly to visitors. Using traditional materials in different way and presenting new technologies to people is here directly offered to people. The core of proposal is the Center of environmental education in the existing mining structures. Also, mining museum called "Geomontanic" museum with an mining exhibition in undergrounds and House of butterflies built onto ruins of the former mining house - symbolizing the fragility of the environment in parallel.

Keywords: regeneration; mining; copper; ecological; park; environment; new materials

P6. The Regeneration Ideal for the Xihu Sugar Refinery

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Abstract
The poster propose a Regeneration concept for Xihu Sugar Refinery, include 4 parts: The Letting-Dwelling Farm Image Resource Bank, Sugar Museum, Big 346 Depot Project and The Works of art.

Keywords：Spirit of Place, Coal-powered Steam Locomotive (S.L.) No. 346, Letting-dwell, the Sincere Era, the memory of journey, hand-painted works

P7. The Modern Industrial Architecture Heritage and Protection in Shandong Province

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Abstract

Shandong Province is an area of concentrated modern Chinese architecture, with modern industrial buildings being the principal component. There are three characteristics of Shandong modern industrial buildings. The first is that they are high quality, military industrial buildings erected during the Westernization Movement; the second is that they are mining industrial buildings and foreign-owned factory buildings of large-scale, proliferating in open ports and along railways. The third is that these national industrial buildings appeared very early and were of many diverse types. The military industrial buildings and national industrial buildings of Shandong have an important place in China's industrial architectural heritage. At present, the research and understanding of Shandong industrial buildings is still in its infant stages, and the task of its preservation proves to be arduous.

Keywords: Shandong; modern industrial building; heritage conservation; Jinan; Tsingtao

P8. Old Power Plant of Piešťany- Preservation and Conservation in Progress

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Abstract

Technological exhibitions and fairs reuse industrial past to explain the present and point to the future. Through the selection of objects, design and accompanying material, their creators help to form and reinforce public knowledge about the history, production and utilization of technological artifacts.

Preparations for the opening of a hands-on-science centre and power generation museum in the city of Piestany (80km NW from the capital of Bratislava) have centered on a landmark building of a municipal power station from the Registry of the Slovak National Heritage. Built in 1906 and on active power generation duty until 1945 and later serving as a transformer station until 1994, the building has been left behind ever since as an abandoned warehouse condemned to eventual demolition or self-destruction.

The former municipal power station in a famous spa town of Piestany has until recently been such an ugly duckling – decommissioned, empty and with the yard covered in waist-high weeds. The initiative of a few activists has been welcome by the property owner – Zapadoslovenska energetika, a.s., who supported the idea of revitalization of the site and its transformation into a „hands-on-science museum“ – an institution still missing in Slovakia. The following intense cooperation with the civic association of Design Factory, students and professors of the Faculty of Architecture of the Slovak Technical University, mayor and municipality of Piestany as well as the local branch of the Slovak Landmark Commission has borne fruit. What used to be only a vision has become a real project.

If you want to preserve the work of the industrial Age, you should not only keep a display the machines - most of the work was done by persons who added their individual skills and knowledge to the functioning of the machinery. The visiting public is always attracted by running equipment - making noises and producing take away. To keep this we are again putting into operation all available machines. Where are already missing they will be presented virtual so that visitors could understand the whole process of energy production.

Last time was elaborated a comprehensive inventory of valuable technology and authentic architectural elements and details (Kralova - Kubica, ADOM Studio, Bratislava 2011), determines the possibility of presentation of these elements in the new function of building. Project documentation for building permit (ADOM Studio, Bratislava 2011, co Ganobjak - Hain), takes into account the results of both in the approval process. Poster shows selected elements, which require the intervention of preservative selected opportunities for technological solutions of the restoring process.

For the partnership had to be necessarily invited experts from the Faculty of Electrical Engineering and we managed to assemble inventarization of valuable items and technologies with their help. These materials actually helps to designers in advancing work of and it shows one of the examples how important is interdisciplinary cooperation to which heartily recommend.

Keywords: industrial heritage; elektrárňa Piešťany; hands on science; eureka centrum

P9. The Industrial Cultural Heritage of the Chinese Eastern Railway- an Unique Cultural Wealth in Need of Urgent Research and Protection

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Abstract

From the nineteenth century to the middle of the twentieth century, along with the construction of the Chinese Eastern Railway which has extended from Far East Russian all the way towards the northeast of China, a tremendous industrial evolution has been triggered in relevant with transition in the two thousands and four hundred kilometers land which is located in Heilongjiang, Liaoning, Jilin province and eastern region of Inner Mongolia. The revolution lasted thirty-to-forty years, leaving a cluster of industrial heritage till today.

The industrial heritage of the Chinese Eastern Railway is extended by means of beginning with more spots, joining into a scenery line, developing linear, from which could be then developed into a piece of scene. The route-exploration, roadbed-building, track-laying; the flourish of manufactories dealt with railway materials; the technology introduction and large scales of immigration along with the construction of the railway; the gradually development of the town of settlement in aspect of both industry and business…These chain transformations eventually made a chain of the propagation and development of industrial civilization.

The industrial cultural heritage and relics of the Chinese Eastern Railway could be divided into material resources and non-material resources——The latter is about the history, process and technology of industrial development, the former is referred to the key component of industrial heritage including types as follows: 1, industry (vehicle& wood processing factory; factories and manufacturing of the necessities, such as flour, cigarette, sugar and wine; industrial- affiliated buildings such as water towers, chimneys etc); 2, transportation (railway tunnels, bridges, railway stations, warehouses, locomotive maintenance houses, the locomotive car platforms and pit pools, along with tracks and some related accessories such as spike, sleepers, identification system etc); 3, mining facilities (stone quarrying ore, coal-mining etc); 4, energy facilities (electricity power station etc); 5, other engineering facilities and historical material. In this way, this paper is due to compile an overall record of the cultural heritage of the Chinese Eastern Railway.

It is certain the Chinese Eastern Railway industry culture heritage owns a great comprehensive value. The railway strengthened the communication and contact between the northeast areas and central plains of China, even worldwide. Moreover, it gave birth to a variety of the prosperity of industry, commerce, economy, and culture; many new technological and ecological concepts are even considered to be advanced today. However, as a result of the erosion and artificial damage along the time, a lot of the industrial heritage of the Chinese Eastern Railway has been damaged. Therefore, the demands of research and protection of the valuable industrial heritage are eagerly. This paper will deal with the value of the industry cultural heritage of Chinese Eastern Railway and give some feasible measures for protection combining with the current assessment.

Keywords: Chinese Eastern Railway; industrial heritage; classification and distribution; heritage characteristics

P10. Research on the Technique Features of Harbin General Factory for the Chinese Eastern Railway

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Abstract

The Chinese Eastern Railway is an arterial railway built by Russia in Eastern China, consisting of a trunk line and a branch line to the south, with a total length of 2489.20 km. In the past more than 100 years, a large number of architecture heritage has been identified along the route, of which Harbin General Factory for the Chinese Eastern Railway built in 1907 is one of them. The factory originally had 11 plants and most of them adopted the triangle steel truss structure, with single-span,two-span, three-span and multiple-span styles. Daylight could directly pass through the skylights which were made by folding up the top part of the steel truss and inlaid with glass. Thus the skylights became one part of the steel truss. This paper carries out a profound research on the architecture technique systems of Harbin General Factory for the Chinese Eastern Railway based on the available plans and the field visits, to identify its significant historical and scientific values, and to define its role in the evolvement of the industrial architecture in modern China.

Keywords: Harbin General Factory for the Chinese Eastern Railway; architecture technique; triangle steel truss; skylight

P11. An Analysis on the Existing Water Towers in Dependency of Chinese Eastern Railway

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Abstract

At the beginning of 20th century, with the construction of “Chinese Eastern Railway”, a large number of industrial relics was left along the dependency including the water tower that was the important railway structures. This paper analyzes the existing water tower along the northern Manchuria of Chinese Eastern Railway through the functional distribution constructive techniques and artistic characteristics, and shows the important architectural artistic values to hope these important industrial heritage paid attention by the society and protected properly.

Keywords: artistic characteristics; Chinese Eastern Railway; constructive technology; water tower

P12. Regeneration of Derelict Industrial Sites in Guangzhou and Shenzhen

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Abstract

The regeneration of derelict manufacturing sites-since part of the “three olds” policy-is now pushed forward through incentive policies and to a great extent depending on the officially planned future uses, but still leaving space for negotiations and creative ideas. The article focuses on the sites preferring adaptive reuse of the derelict industrial sites in Guangzhou and Shenzhen, and examines how the redevelopment policies work at the operational level and the renovation strategies of relative cases studies in two cities.

Keywords: regeneration; derelict industrial sites; “Three Olds Renovation” Policy

P14. Primary Analysis of Existing Modern Industrial Architectural Heritages

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Abstract

Along with the building of the Chinese Eastern Railway and the opening of Harbin to foreign trade in modern times, an increasing number of Russian immigrants swarmed into this burgeoning city. For running the railway and maintaining the ordinary lives of immigrants, the early Russian immigrants established multitudinous business enterprises, triggering the development of modern industry in Harbin. Along with the urban development, early modern industrial architecture has been largely demolished or abandoned, except only a few remains at present. However, the industrial architecture's primary characteristics and construction quality of that time are still reflected in the existing industrial buildings. A detailed analysis is conducted from following aspects in this thesis.

Firstly, through the analysis of the historical and cultural background to the establishment of Harbin's modern industry, this thesis will explore its specific historical environment and developing context and reveal two main stages of development of Harbin's modern industry: one is the active period of Russian immigrants (1896-1931), and the other is the period of Japanese occupation (1932-1949). This thesis will analyze the types and distributional characteristics of Harbin's modern industrial architecture, and the influence of these buildings on the city's subsequent industrial development.

Secondly, this thesis will analyze the current situation of the existing heritage of modern industrial architecture in Harbin and the architectural characteristics of those buildings. The existing heritage of modern industrial architecture in Harbin can be divided into two categories: the first category of buildings are related to the Chinese Eastern Railway, such as, the Chinese Eastern Railway Rolling Stock Plant, the Chinese Eastern Railway Printing House, urban railway bridges, water towers, chimneys, and transformer substations, etc., and the second category are those closely related to the people's livelihood, such as the sugar refinery, tobacco factory, flour mill, sausage factory, oil mill and other buildings for light industrial use. Most of them are idle at present, except for only a few still in use.

The development level of industrial architecture in the world between the late 19th century and early 20th century is embodied in the heritage of modern industrial architecture in Harbin. As industrial plants emphasize the need for more practicality, they were constructed popularly with composite structures, not only meeting the requirements for industrial production but also at an acceptable cost. At that time, steel construction was widely used, having reached a certain level. Under the premise of fulfilling functional needs, the industrial buildings in Harbin followed then architectural styles, with a tendency toward diversification. This thesis will carry out a detailed analysis of the characteristics and types of the heritage of modern industrial architecture in Harbin and provide suggestions for relevant protection and utilization.

Keywords: Harbin; characteristics and categories; modern industrial architectural heritage; structures and artistic characteristics

P16. Former Heat Plants of Bratislava

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Abstract

Slovakia is a small country, which was fairly industrialized in the past. Its products were exported all over the Europe. Its industry and technologies were on world-class level. Today old factories are abandoned and forgotten. Last year's we are watching catastrophic loss of brightest pieces of industrial heritage by their total destruction.

This article deals with research of energetic sector Bratislava's region, which was a driving force of development. At first there was demand of electricity, later also heat started to be needed. The year 1951 is considered as a beginning of the heating industry, when nationalization took place Strategic energy objects had fallen under control of regional energetic company which in that way obtained sufficient production capacity to launch the city district heating.

Between the strategic nationalized factories were three heating plants of Bratislava. First two were built in the 20s of 20th century as private factory power plants which supplied local factories and worker colonies. Later on, after the increase of their capacity, they were connected to the city and rented. In the 50s after the nationalization, the third heating plant started to function.

All of them are unique. On the first one we can observe different layers of architecture created by enlarging the production since 1919 until today, when it is still functional. The second building went through an extensive renovation in the 40's and the architecture is preserved in authentic form till now. Dynamic composition of volumes reflects the force that drove the industry. Nowadays the building is abandoned, the devices were dismounted and it is for sale. Several student projects of its conversion are created at the faculty of architecture. They will hopefully serve as an inspiration for future owner. Third power plant was built on the site of bombed city plant. The author of this building is apparently Dusan Jurkovic, a prominent Slovak architect. It is specific for its functionalist architecture. Fuel of these three power plants was coal, which had to be imported from long distances and had a low quality. Therefore, when in 1956 the opportunity of using gas came all these plants were gasificated. Emphasis was given to ecological operation and therefore technical equipment of third plant was replaced by first cycle-gas turbines in Central Europe. Currently the building is proclaimed national cultural monument and should be converted into cultural center. In previous ten years the technical equipment was scrapped and it faced its demolition. Thanks to the growing initiative of public and professionals was this building was saved and it was proclaimed for a National cultural monument. It should be converted into a cultural center designed by Zaha Hadid.

Despite the significant demolition of the whole industrial areas of the town, these three power plants are still standing. Maybe it's because of their excellence and merit in the development of the region. As in the past they contribute to raising living standards of the population, they can satisfy current needs by a suitable conversion with cultural and social use.

Keywords: conversion; heat plants; research; Bratislava region; industrial heritage

P17. Analysis of Industrial Landscape Nodes of Daqing —Take the Pumping Unit as Example

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Abstract

Daqing, which is an energy city because of the petroleum, is a typical urban development system that “the industry formed firstly, and the city followed secondly”. Following the petroleum industrial section divided, Daqing has gradually formed a large area, sheet, decentralized city layout mode. Some of the material elements relating to the petroleum extractions have been the important parts of Daqing landscapes, including the sites, the factories and the equipments. And they are weaved into the daily life. The special petroleum industrial landscapes have also formed the special cultural temperament of Daqing.

The pumping units following the oil-pipe, as the main equipment of the petroleum industry, are in the every corner of the city including the business sections, the entertainment and leisure zones, the living districts and the suburban section with a variety of forms such as an independent point mode, a ganged line mode, and a face mode. The pumping units, with the soaring and special appearance, the sound made by the gear wheel and shaft and the striking color, have gradually been forming the important industrial landscape nodes of Daqing.

Taking the pumping unit as an example, the paper begins with the petroleum industrial history and uses the field survey as a main method. It analyzes some parts emphatically, such as the distribution characteristics of the city space where the pumping unit in, the environmental landscape forms formed by the pumping units, and the types of the pumping units. The initial purpose is to identify the types of the industrial landscape nodes formed by the pumping units, and to reveal the industrial landscape cultures. Based on this, with the urban layout mode, the paper tries to discuss the integration strategies of the rationality reuse when the pumping would be discarded in the future.

Keywords: Daqing, industrial landscape, the pumping unit, the type analysis, the integration strategy

P18. Rethinking the “Reuse” of Industrial Heritage in Shanghai with the Comparison of Industrial Heritage in Italy

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Abstract

With the deindustrialization since 1980's, the traditional industrial areas in China, especially in cities like Shanghai and Beijing, which had a profound effect by the economic conversion and industrial relocation, has been facing the many problems, similar as in the Europe since 1960's. Following in the footsteps of the industrial cities in Europe and American in encouraging the preservation and reuse of its industrial heritage，the practice of the reuse of industrial heritage is flourishing in China, but at the same time, the theory of industrial heritage is still at the initial stage.

Firstly, with the historical review of the industrial heritage in the context of Shanghai and Italy respectively, this paper analyzes the inborn deficiency of industrial heritage in Shanghai: Shanghai is an example, not only to be the first city to survey and constitute the regulations for its industrial heritage, but also because of its leading position in the practices of reuse and conservation of industrial heritage in China.

In the context of Europe, Italy also faced the transitional problems, such as the empty buildings and plants, the outdated machines and the dismissed industrial areas, in the last three decades of the 20th century. With the aims to preserve the knowledge and memory of the industrial era and to inspire others to preserve the essential evidence in a post-industrial context, “industrial archaeology” emerged with the fundamental task to bring together the materials and to develop many access to understand the "fact" of industry. Then the concept of Industrial heritage was introduced, so that the industrial heritage was classified under cultural heritage to deal with industrial buildings and artifacts. On the contrast, the historical absence of industrial archaeology and the weak concept of “heritage” lead the concept of “Reuse” in Shanghai. It is different from the ”Reuse“ of industrial heritage in Italy, not only because of the historical reason, but also the different context they are facing, which both result the different methodology adopted in the practice.

Furthermore, this paper chooses some typical cases of the reuse of industrial buildings in Shanghai and Italy, to distinguish the own characters of methodology used in the context of very rapid urbanization in China. From the reuse of traditional industrial buildings carried out by some artists in 1990s, then the development of adaptive-reuse with Creative Industry which adopted an integrated “top-down” operation that governments play the leading role with private developers in Shanghai, we can find that the urban land itself is the scarce resource in the principles of development, so the nonfunctional production will soon be hold by the other owners or upgraded for contemporary commercial use. The reuse of industrial heritage gives rise to cultural innovations and economic development, but less in the authentic heritage conservation.

On the other side, In Italy, the industrial heritage has gone from a specific interest in the monument (the individual building or a single machine) to the industrial sites (including the machines, buildings and also its infrastructure), then the whole industrial area, and until now the industrial landscape. Industrial heritage are considered as an integral part of collective identity, and the reuse should be contextualized in the wider social-economic processes.

Keywords: re-use; industrial heritage; regeneration; industrial archaeology; comparison western and eastern cultures

P20. A Memory of Forest- a Preliminary Study on Conservation and Usage of Forest Industrial Landscape in Yichun, PR China

WEI, Xiao-Yu[1] **LIU**, Song-Fu[2]

[1] Doctoral student, the School of Architecture, Harbin Institute of Technology

[2] Professor/Doctoral Advisor, the School of Architecture, Harbin Institute of Technology

Abstract

The large-scale development of forest in Northeastern China can be traced back to the period of building the Chinese Eastern Railway. During the following more than 100 years, it has experienced the Japanese Colonial Period, the War of Liberation, the recovery of national economy, the First Five-Year Period, the Great Leap Forward, the Great Cultural Revolutionary, and so on. Rich industrial heritage has formed unique landscape. The industrial heritage of each period witnesses the course of the forest development in Northeastern China, records the significant historical events and people's lives in the forest area in Northeastern China. This paper will take the course of forest development in Yichun, China as a case to study the historical value of forest industrial heritage and the significance of conservation of it.

Keywords: industrial heritage; humanity landscape; industrial landscape

P22. Research on the Industrial Technology of Railway and the Working Life of the Labors of Taipei Railway Workshop- take the Forge and Spring Shop as an example

YU, Hui-Ting[1] **HUANG**, Chun-Ming[2]

[1] Student of Architecture Graduate School of Chung Yuan Christian University

[2] Associate professor of Architecture Department of Chung Yuan Christian University

Abstract

In the Qing Dynasty, Liu Mingchuan(劉銘傳) constructed railroads, introduced steam locomotives and set up Taipei Machine Bureau, which was set for locomotives manufacturing and maintenance, launching the modernizing process of the railway industry and the transportation in Taiwan. After Treaty of Shimonoseki, the Japanese took over the maintenance workshop buildings of the Taipei Machine Bureau and its machinery. Then they imported the new industrial technology and machinery from Japan and continued the original mission of Taipei Machine Bureau. Thereafter, the space of the Taipei Machine Bureau was insufficient for use. The reason made they build a new workshop at Matsuyama Village (Songshan District), Shichisei-gun (Qixing District), Taihoku Prefecture (Taipei City) and moved in 1935 (Showa 10).

The design of the new workshop function not only fulfilled the maintaining, manufacturing and supporting lines for the steam locomotives, but also combined the concepts of the industrial village with the administration, the welfare, and the technical staff training system. From the traditional steam locomotives, the diesel locomotives to the electric locomotives; from the woody to steel trains for passengers, the heritage and improvement of professional railway technology represented the history of the railways industrial process in Taiwan since the period of Japanese rule.

This article aims to understand how the unique culture of the railway industry formed in Taiwan by going through the working process and the life of the technical staff. According to the research of the operation record in the unitary workshop, such record could offer the basic information of the industrial culture, which advanced the research on the railway maintenance workshop for the integrated culture. Therefore, the article targets to the Forge and Spring shop which forged components and manufactured springs for Taipei Railway Workshop. The sections of this article: 1. Preface. 2. The management system of TRW. 3. The processes of work and the behaviors of workers. 4. Conclusion.

Keywords: Taipei Railway Workshop; life history of the labors; forge and spring technology of the railway parts; the industrial culture of the railways

P23. The Colliery Capital in China- Fushun Coal Industrial Heritage and its Value System

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[1] College of Architecture and Urban Planning Tongji University Shanghai P.R.C

[2] Department of Commerce of Tongji Architectural Design (TJAD)

Abstract

Mining town Fushun locates in eastern part of Liaoning province in North China with a low hill landscape, the Hun River is East-West across the city, and a narrow strip city is formed. Fushun is a city with an over one century coal mining history. It was with prosperity in the past, and declines due to exhausted resources. However Fushun known as the capital of coal is indeed the witness of the colonial city planning and building layout in typical resources city in China. Perhaps it is one of the most characteristic coal industry districts even in Asia. The remained documents and historic environment have a typical significance for our understanding of modern industrial development in Northeast China. In the period of transition, industrial heritage renovation and utilization is currently a universal concern. Any conservation and development inevitably involves historical background research, it is an important aspect of analysis and determination of the heritage conservation policies.

The paper takes Fushun's existing coal mining industrial heritage as the research object. And can be divided into two sections. One section is coal mine industrial heritage formation, there are six periods, onset period (1901-1905), Japanese occupation period(1905-1945), The national government period(1945-1948), The recovery of production and large-scale construction period(1948-1965), Turbulent times(1966-1979) along with Rectifying period(1980-). This paper focuses on the analysis of Japanese city plan in Fushun, the plan drew on the European advanced planning ideas, industrial land was priority determined, and then a comprehensive strip city form was made with complicated facilities. The other focus is the first five years of the construction of national economy plan (1953-1957). At the time, Soviet Union aided to build 156 projects in China. Fushun owned 8 projects including 4 coal mining projects. It is one main history in the development of Funshun city construction. The other section of the paper is about Fushun coal mining industrial heritage's types, forms along with characteristics. The direct component of the heritage can be generalized as five open pit coal mines. Time spanned mainly from the Japanese occupation period to 1970s. The world's largest artificial pit, known as the Magnificent West Pit, is located not far from the downtown. Then the related component of the heritage is a number of auxiliary facilities which covers living quarters, management, religion, education, transportation and logistics locations etc. Basing on the above analysis, the paper concludes that after the long term operation in Japanese occupation and after the founding of the large-scale construction, Fushun is a highly industrialized area. It has developed as a thriving center for fuel, power and raw materials, Industry heritage is extremely rich and diverse. Facing challenge nowadays, the unique characters of coal mining heritage in Fushun should be deeply discussed in the city development strategy.

Keywords: Fushun; Mine coal industrial heritage; Japanese occupation; 156 projects

P24. The Regeneration Plan of the Traditional Industrial Heritage: by the case of Judong Canal, Hsinchu County, Taiwan

WEI, Kuang-Yi[1] **CHEN**, Chie-Peng[2]

[1] The chief-sectary of Judong Township, Hsinchu County. PhD. Candidate, Department of Civil Engineering, National Central University
[2] Associate Professor, Interior Design Department, Chungyuan Christian University

Abstract

Judong Canal, built in 1926, used to be the prime water supply channel to irrigate the fertile plain of Touchien riverbank. Throughout the years, Judong Township has become an important rice-barn in this area due to its bounteous water resources. With booming economic development in Taiwan since the 1980s, the newly developed Hsinchu Science Park has become the primary 3C industry production and research base. As for supplying the huge water usage for industrial purposes, the water for original irrigation has thus shifted to the industry. The function and institution of the traditional Judong Canal system have been transformed into a complete new system; however, the old irrigation channel still remains and kept intake.

This research studied the possibility and vision of a regeneration plan for the traditional irrigation canal system in which virtually concluded not only irrigation channel, but also traditional Hakka settlement, paddy field, irrigation pond, old power plant, old oil drill well, etc. It is almost composed of industrial, historic, humanistic, and agricultural sources to from a holistic industrial heritage for further development. Based on this concept, this study aims to conclude the following tasks:

(1) To discover plentiful heritage resources of the studied area.
(2) To initiate a development plan to combine all landscape resources.
(3) To encourage a people participation activity plan.
(4) To construct a comprehensive plan for operation models and planning concepts.

To draw up an executive institution and maintenance organization plan.

Keywords: irrigation; industry; landscape; Hsinchu County

P25. Postindustrial Areas Reclamation: a Paradigm for Abandoned Industrial Areas

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Abstract

Dramatic increase in more technological and sustainable practices along with the crisis of drastic city expansions have resulted in creating obsolete industrial sites. These sites pose hazardous risk due to negative attitude associated with these industrial sites. One of many context that a designer is forced to participate is definitely the development of postindustrial landscape in order for a sustainable future.

The transformation of a derelict industrial site, to new cultural and environmental uses can be reached by transforming them into public spaces through ecological reclamation. These postindustrial sites mark a historical document at an industrial era. They also obtain cultural values as creating public spaces possible to be everlasting by people‘s involvement .The value of ecological structure is regained in this respect by restoring natural landscape in urban context. The paper‘s concern is studying the reclamation of a major derelict textile factory into a city public space and an industrial heritage as well. It is a 12 Acer site in Karaj city (center of Alborz province in Iran) , approximately 60 year old site, with worthy architecture which used to be out of the city, at present in the center of it due to city expansion . The conclusion of the study leads to possibility of being a pattern for other abandoned industrial sites in similar areas.

Keywords: postindustrial; reclamation; industrial heritage; derelict sites; public urban space

P26. Developing Creative Industry by Adaptive Reuse of Industrial Heritage: Take Nanjing for Example

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Abstract

So far, Chinese cities have entered an important development stage chiefly marked by renewal and redevelopment. In this stage, the functional layout and industrial structure of their old urban areas are under reconstruction and transformation. A great lot of industrial land in these cities is becoming a key point and a major target of the renewal and renovation of their old urban areas. Meanwhile, as a new economic form, creative industry is rising rapidly, with its economic potential and influence upon urban development having been appearing gradually. As can be seen from actual cases, the two newborn things in China, adaptive reuse of industrial heritage and creative industry, are gradually showing a desirable mutual compatibility and combination.

First, this thesis interprets the concept and meaning of creative industry and adaptive reuse of industrial heritage. Then, through demonstration and relevant data, the paper expounds the status-quo and feature of the combination of the two, and analyzes the possibility and necessity of their combination. On the one hand, through the renewal of industrial buildings and districts in cities, an incubation space that suits creative industry is established，and this space is supplied (maybe by means of lease) to institutions and individuals engaged in creative industry, so that creative industry clusters can come into being. On the other hand, old factory buildings with a high historical and cultural value are rehabilitated so that a new function can come into being. This can not only optimize the industrial structure and change the means of economic growth of cities, but also actively protect and reasonably utilize industrial heritage, and achieve the sustainable development of society and resources.

Thereafter, by taking Nanjing as an example, the paper introduces the general status quo of this region in renovating and developing its creative industry by adaptive reuse of industrial heritage, studies and analyzes the features of its spatial layout, and sums up the types of its functional mode, and the trend of its development.

Finally, combining with on-the-spot investigation and international experience, the paper sums up the conceptual process, implementation strategy and technological application in the combination of creative industry and adaptive reuse of industrial heritage, and points out that we should attach importance to planning guidance, heritage preservation and achieve an integrated improvement of building and environment while developing creative industry by adaptive reuse of industrial heritage.

Keywords: creative industry; industrial heritage; adaptive reuse; Nanjing

P27. Documentation of Modern Architecture within Pernambuco, 1930-1980: A Railway Station Caruaru.

TENORIO, Luciene

Abstract

The article is a thematic focus of a larger study in the state of Pernambuco, in the capital and rural cities, from the research project entitled "Documentation of Modern Architecture in Northeast Brazil, 1930-1980." The project was accomplished through inter-institutional cooperation with the support of CNPq. Among other buildings, the study identified the existence of the railway station Caruaru both as representative of the modernization of the architecture and development Caruaru that industrialization brought to the cities of the interior of Pernambuco. In this study, we analyzed the architectural and urban aspects, such as deploying the lot, building technologies, facade details, among others, and signaled their historical and cultural importance.

Keywords: modern Architecture (EP); Industrial Architecture

5. Conference Social Program and Tours

【Table-11】Social Program

Social Program	Date	T ime	Place
Pre-congress Tour	4th Nov.	14:00-17:30	- Songshan Cultural and Creative Park - Taipei Railway Workshop
Welcome Reception	4th Nov.	18:00-21:30	- Venue2: 2F, M4B, Huashan1914 Creative Park
Opening Ceremony	5th Nov.	09:00-10:00	- Venue1- A: Conference Hall, NTUT
Congress Tour	6th Nov.	08:00-23:00	- Taichung Creative and Cultural Industries Park - Xihu Sugar Factory or Changhua Railway Workshop - Lugang Settlement - Lugang Longshan Temple (Congress Banquet)
Closing Ceremony & Farewell Party	8th Nov.	16:00-20:30	- Taiwan National Museum
Post-congress Tour	9th – 11th Nov.		- Industrial Heritage Tour to Southern Taiwan - Industrial Heritage Tour to Northern Taiwan

5.1 Social Programs

5.1.1 Welcome Reception

Date: 4th November 2012（MON）
Venue2: 2F, M4B, Huashan1914 Creative Park

【Table-12】Timetable of Welcome Reception

Time	Contents	Moderator / Participants
17:50-18:30	Registration for Welcome Reception	
18:30-18:35	Opening Performance	
18:35-18:40	Welcome Remark & Introducing Distinguished Guests	Moderator
18:40-19:00	Addresses	Distinguished Guests
19:00-19:10	Welcome Ceremony	Distinguished Guests
19:10-19:30	Performance 2	
19:30-20:00	Dinner buffet	
20:00-20:30	Performance 3	
20:30-21:00	Dinner buffet	

5.1.2 Opening Ceremony

Date: 5th November 2012（Mon）
Venue 1: National Taipei University of Technology
Room A: International Conference Hall, B2 floor, Technology Building, NTUT

【Table-13】Opening Ceremony

Time	Contents	Moderator / Participants
08:00-09:00	Registration for Congress	
09:00-09:05	Opening Remark	Moderator
09:05-09:30	Opening Addresses	Distinguished Guests
09:30-10:00	The Introduction of Taiwan Cultural Heritage	Representative of Bureau of Cultural Heritage
10:00-10:20	Coffee Break	

5.1.3 Farewell Party

Date: 8th November 2012（Thu）
Venue: National Taiwan Museum

【Table-14】Farewell Party

Time Slot	Contents	Moderator / Participants
16:00-16:30	Registration and Gathering for departure (Venue 2)	
16:30-17:00	Huashan 1914 Creative Park → National Taiwan Museum	
17:00-18:00	Guide Tour in National Taiwan Museum	
17:30-18:00	Registration for Farewell Party	Invited Guests
18:00-18:10	Performance	
18:10-18:40	Greetings	
18:40-19:30	Dinner	
19:30-20:00	Performance	
20:00-20:30	Dinner	

The schedule may be slightly modified according to practical reasons.

5.2 Congress Tour

5.2.1 Pre-Congress Tour: Taipei Industrial Heritage Tour

【Table-15】Taipei Industrial Heritage Tour

Time	Place	Contents	Remarks
13:00-14:00	Venue 2	Registration and Gathering for departure	
14:00-15:00	Taipei	**Huashan 1914 Creative Park** **Press Conference**	
14:30-14:50		Huashan to Taipei Railway Workshop	
14:50-16:00		**Taipei Railway Workshop, Taiwan Railways Administration**	
16:00-16:10		Taipei Railway Workshop to Songshan Cultural and Creative Park	
16:10-17:10		**Songshan Cultural and Creative Park**（**Old Songshan Tobacco Factory**）	
17:10-17:30		Songshan Tobacco Factory to Huashan	
17:30-18:30	Venue 2	Registration for Welcome Reception (Huashan)	

5.2.2 Congress Tour: Industrial Heritage Tour to Central Taiwan

【Table-16】6th Nov. (Tue) - Industrial Heritage Tour to Central Taiwan

Time	Place	Contents		Remarks
08:00-08:20	Venue 2	Registration and Gathering for departure		
08:20-11:00	Taipei to Taichung			
11:00-11:40	Taichung	**Taichung Broadcast Bureau**		
11:40-12:00		Broadcast Bureau to Cultural Park		
12:00-13:30		**Taichung Creative and Cultural Park/** Lunch		
13:30-14:20	Taichung to Changhua			
14:20-16:00	Changhua	**A**	**B**	
		Xihu Sugar Factory	**Changhua Railway Workshop**	
16:00-16:30		to Lugang		
16:30-20:00		**Congress Banquet (Lugang Longshan Temple)**		
20:00-23:00	Changhua to Taipei			

The schedule may be slightly modified according to practical reasons

5.2.3 Post-Congress Tours

A. Industrial Heritage Tour to Southern Taiwan

Date: 9th Nov. (Fri) – 11th Nov. (Sun)

【Table-17】Industrial Heritage Tour to Southern Taiwan

Time	Place	Contents	Remarks
【DAY 6】9th Nov. (Fri)			
08:00-08:20	Venue 2	Registration and Gathering for departure	
08:20-11:20	Taipei to Nantou		
11:20-13:00	Nantou	Lunch	
13:00-15:30		**Tea Research and Extension Station (Branch of Yuchi)**	
15:30-16:10		Yuchi to Checheng	
16:10-17:30		**Checheng Community (the Terminal of Jiji Train Station)**	
17:30-19:00	Nantou to Chiayi(Supper/Accommodation)		
【DAY 7】10th Nov. (Sat)			
08:00-08:20		Registration and Gathering for departure	
08:20-08:30	Chiayi	Hotel to Pei-men Station	
08:30-11:00		**Pei-men station of Alishan Forest Railways**	

		National Forest Recreation Area of Alishan	
11:00-12:00		Chiayi (Lunch)	
12:00-13:00		Chiayi to Tainan	
13:00-15:00	Tainan	**Wushantou Reservoir and Jianan Irrigation Waterways (Wushantou Reservoir)**	
15:00-16:00		Reservoir to Salt Museum	
16:00-18:00		**Taiwan Salt Museum / Cigu Salt Mountain (Southwest coast National Scenic Area)**	
18:00-19:00		Salt Museum to Tainan/(Supper/Accommodation)	
【DAY 8】11th Nov. (Sun)			
08:00-08:20		Registration and Gathering for departure	
08:20-09:20		Tainan to Kaohsiung	
09:20-11:20	Kaohsiung	**National Science and Technology Museum**	
11:20-11:40		Museum to The True Love Harbor	
11:40-14:00		**Kaohsiung Harbor** (Ship/Lunch)	
14:00-14:10		Harbor to Takao Railway Museum	
14:10-16:00		**Takao Railway Museum**	
		Pier-2 Art Centre	
16:00-22:30		Kaohsiung to Taipei/ Free night	

The schedule may be slightly modified according to practical reasons.

B. Industrial Heritage Tour to Northern Taiwan

Date: 9th Nov. (Fri) – 11th Nov. (Sun)

【Table-18】Industrial Heritage Tour to Northern Taiwan

Time	Place	Contents	Remarks
【DAY 6】9th Nov. (Fri)			
08:00-08:20	Venue 2	Registration and Gathering for departure	
08:20-09:40	Taipei to New Taipei City		
09:40-11:40	New Taipei City	**Coal Mine Museum**	
11:40-12:40		Coal Mine Museum to Gold Museum	
12:40-17:00		**Gold Museum (Lunch)/ShuiJinJiu Community**	
17:00-18:40	New Taipei City to Jaiosi, Yilan (Supper/Accommodation)		
【DAY 7】10th Nov. (Sat)			
08:00-08:20		Registration and Gathering for departure	
08:20-08:50	Jaiosi to Luodong		
08:50-10:50	Yilan	**Luodong Forest District**	
10:50-11:10		Luodong to Yilan	
11:10-12:00		**Memorial Hall of Founding of Yilan Administration**	
12:00-14:00		**Taiwan Tobacco & Liquor Corporation / Lunch**	
14:00-14:10		Taiwan Tobacco & Liquor Corporation to Yilan railway station	
14:10-15:10		**Taiwan Railway Heritage in Yilan**	
15:10-18:10	Yilan to Miaoli (Supper /Accommodation)		
【DAY 8】11th Nov. (Sun)			
07:40-08:00		Registration and Gathering for departure	
08:00-10:30	Miaoli	**Old Moutain Line Railway (Sanyi-Shenghsing-Taian station)**	
10:30-11:00		Miaoli Sanyi to Kungkuan	
11:00-12:20		Lunch at Miaoli Kungkuan	
12:20-14:20		**Tsu-Huang-Kun Oil Field(CPC corporation)**	
14:20-16:20	Miaoli to Taipei		
16:20-17:30	Taipei	**Taipei Water Park**	
17:30	Free night		

The schedule may be slightly modified according to practical reasons.

6. TICCIH Congress 2012 Committees And Staffs

6.1 The Organizing & Academic Committees

6.1.1 The Organizing committee

Chairman:

Dr. LIN, Hsiao-Wei	Chung Yuan Christian University, Taiwan

Vice-Chairman:

Dr. HUANG, Chun-Ming	Chung Yuan Christian University, Taiwan

Committee members:

Prof. ALBRECHT, Helmuth	Technical University Freiberg Institute for Industrial Archaeology, Germany
Dr. CHANG, Kun-Chen	National Taipei University of Technology, Taiwan
Prof. FU, Chao-Ching	National Cheng Kung University, Taiwan
Mr. HSU, You-Jen	Chief of General Planning Division of Bureau of Cultural Heritage, Ministry of Culture, Taiwan
Dr. HUANG, Borling	Consultant of Taiwan Cultural-Creative Development C.o., Ltd.
Prof. LIN, Hui-Cheng	Taipei National University of the Arts, Taiwan
Dr. OGLETHORPE, Miles	Head of Policy, Historic Scotland, Edinburgh, UK
Prof. PREITE, Massimo	Dipartimento di Urbanistica e Pianificazione del Territorio, Università degli Studi di Firenze Vicepresidente dell, Italy
Mr. SHY, Gwo-Long	Deputy Director of Bureau of Cultural Heritage, Ministry of Culture, Taiwan
Prof. YANG, Min-Chih	Chaoyang University of Technology, Taiwan
Dr. YANG, Kai-Cheng	National Yunlin University of Science & Technology, Taiwan

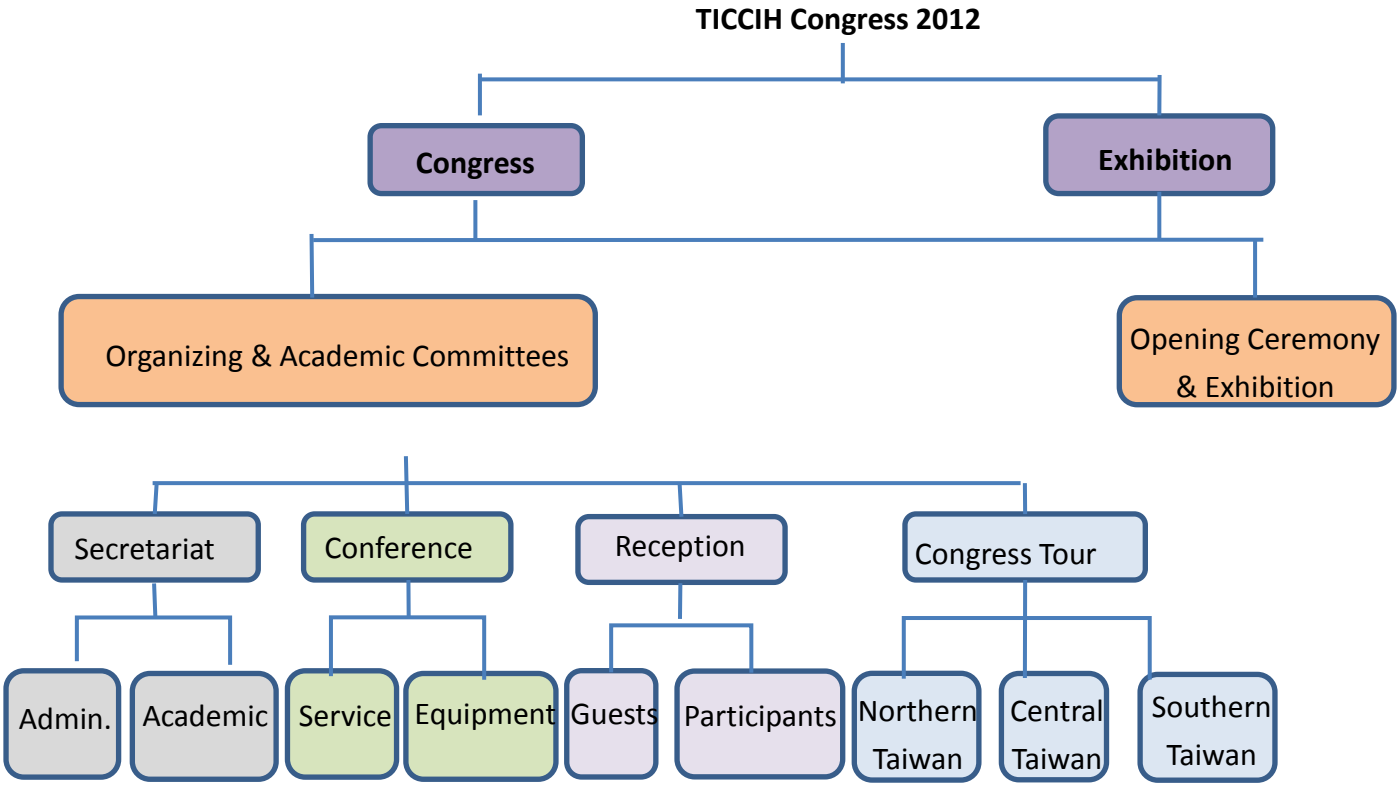
6.1.2 The Academic Committee

Academic Committee members:

Dr. AVANGO, Dag	Department for the History of Technology, Royal Institute of Technology, Sweden
Dr. CHEN, Jeng-Horng	National Cheng Kung University
Mr. HSIAO, Tsung-Huang	Director of Department of Cultural Resources, Ministry of Culture, Taiwan
Prof. HSU, Min-Fu	National Cheng Kung University
Prof. HUANG, Ching-Lin	Chung Yuan Christian University
Dr. HUANG, Jun-Fu	Associate Researcher of Division of Collections& Research, National Science And Technology Museum
Dr. LIN, Chung-Chieh	Director of Urban Redevelopment Office, Taipei City
Prof. LIN, Chung-Hsi	National Yunlin University of Science and Technology
Prof. LIN, Hui-Cheng	Taipei National University of the Arts, Taiwan
Prof. OITA, Akira	ATOMI University, Japan
Dr. STUART, Iain	JCIS Consultant, Australian
Prof. WANG, Huey-Jiun	National Taiwan University of Science and Technology, Taiwan
Ms. WU, Shu-Ying	Associate Research Fellow of Department of Culture Recourses, Ministry of Culture, Taiwan

6.2 Team Structure & Staffs List

6.2.1 Team Structure



6.2.2 Staffs List

A. Congress Office

Planner: LIN, Hsiao-Wei 林曉薇; HUANG, Chun-Ming 黃俊銘;

Secretaries: CHEN, Po-Chih 陳柏志; LAI, Ming-Chun 賴明君

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PENG, Yun-Rong 彭韻容; WANG, Yi-Han 王怡涵

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Graphic Advisor: HUANG, Wen-Tsong 黃文宗

Web Designer: CHIU, Mao-Ting 邱茂庭

Graphic Designer: WANG, Mu-Sun 王沐森

Assistant Designer: KU,Te-Wei 顧德偉; KUO, Chih-Chuan 郭芷銓

B. Team Members

・Chung Yuan Christian University

CHANG, Huei-Ling	張惠苓	LIN, Tai-Chieh	林岱潔
CHEN, Po-Jung	陳柏蓉	LIOU, Wan-Ling	劉婉羚

CHEN, Yu-Bin	陳俞斌	LIN, Chiao-Kai	林喬凱
CHOU, Su-Ju	周素如	LU, Chia-Jung	呂嘉蓉
CHOU, Te-Chou	周德清	PAN, Li-Hsin	潘麗心
CHUNG, Wei-Yi	鍾維憶	SU, Chin	蘇　琴
HUNG, Yi-Ting	洪宜婷	SU, Yu-Di	蘇郁迪
LEE, Tsung-Yao	李宗耀	WEN, Yu-Lin	溫郁琳
LIANG, Chao-We	梁朝威	YANG, Chun-Ning	楊濬寧
LIN,Ching-Ch	林靖哲	YEH, Ya-Ting	葉雅婷
LIN, Ching-Chun	林靖淳	YU, Yuan-Hao	游原豪
LIN, Jie-Yu	林倢伃	YU, Ching-Fen	游青芬

・National Cheng Kung University

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LOU, Wan-Ning	羅婉寧	YANG, Ning-Ya	楊甯堯

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8. Organizations & Supporters

8.1 Organizations

8.1.1 Supporters

- Ministry of Culture, Taiwan, ROC
- Bureau of Cultural Heritage, Ministry of Culture, Taiwan, ROC
- The International Committee for the Conservation of Industrial Heritage (TICCIH)

8.1.2 Organization

- Chung Yuan Christian University

8.1.3 Main Co-organizers

- Taiwan Heritage Society
- Taiwan Cultural-Creative Development Co., Ltd. (Huashan 1914 Creative Park)

8.1.4 Operating Organizer

- Department of Architecture, Chung Yuan Christian University

8.1.5 Co-organizers

- National Taipei University of Technology
- National Cheng Kung University
- Taipei National University of the Arts
- National Taiwan University of Science and Technology
- National Yunlin University of Science and Technology
- Chaoyang University of Technology
- Tamkang University
- National Taiwan Museum
- National Science and Technology Museum

8.1.6 Supporting Organizers

- Ministry of Foreign Affairs Taiwan, ROC
- Bureau of Foreign Trade Taiwan, ROC
- National Science Council Taiwan, ROC
- Department of Cultural Affairs, Taipei City Government
- Department of Information and Tourism, Taipei City Government
- British Council
- Goethe Institut
- Taiwan Architecture Magazine
- World Heritage Magazine
- Xinmedia

8.2 Supporters

- Tourism Bureau, M.O.T.C. Taiwan, ROC
- Taiwan Railways Administration, M.O.T.C. Taiwan, ROC
- Council of Agriculture, Executive Yuan, Taiwan, ROC
- New Taipei City Government
- Taichung City Government
- Tainan City Government
- Kaohsiung City Government
- Cultural Affairs Bureau, Changhua County
- International Culture and Tourism Bureau, Miaoli County
- Cultural Affairs Bureau, Yilan County
- Taiwan Sugar Corporation
- Taiwan Tobacco & Liquor Corporation
- CPC Corporation, Taiwan
- TAIYEN Co. Inc.
- Taiwan Salt Museum
- Taiwan Coal Mine Museum
- Sheng-yuan Huang Architects & Planners + Field Office
- Lukang Lung-shan Temple
- Lugurice Family

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