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CISDI

NEWSLETTER

Vol. 12, 2018



Blast Furnace 1&2 at Formosa Ha Tinh Steel, Vietnam

Special issue for CISDI's 60th Anniversary 1958-2018



Technology and Solutions Partner for the Global Metals Industry

FULL-PROCESS SERVICES

CISDI provides full-process services from the bulk material handling yard to the final post-processing line of rolling mill.

FULL-FUNCTION SERVICES

CISDI provides standard and customized consulting, execution, and operations management services.

FULL-LIFE-CYCLE SERVICES

CISDI provides the FEED (front-end engineering & design), implementation, and production and operations management services throughout the entire project life cycle and provides continuous after care services and support.

TABLE OF CONTENTS

>> Special issue for CISDI's 60th Anniversary	02
>> Key dates in the story of CISDI	03
>> Sharing the journey with China's steel industry	
A pioneer of China's steel engineering	09
An active player in the construction of multiple benchmark projects	11
Providing solutions to create a greener and leaner steel industry	13
Our focus on the digital future	15
>> CISDI - going global	16
>> Frontline teams committed to excellence	18



Celebrations of CISDI 1958-2018



As nations around the world prepared to celebrate the arrival of 2019, CISDI was celebrating its own milestone - its 60th successful year in business and the bright future that lies ahead.

The company hosted a commemorative event at its Chongqing headquarters on December 15, 2018. Together with its staff and 30-plus partners and fellow enterprises, CISDI reflected on its 60-year evolution and looked forward to the exciting innovations and global projects on the road ahead.

At the celebration, CISDI released the latest of its intelligent manufacture total solutions, its team declaring its determination and commitment to the development of intelligence-led steel enterprises.

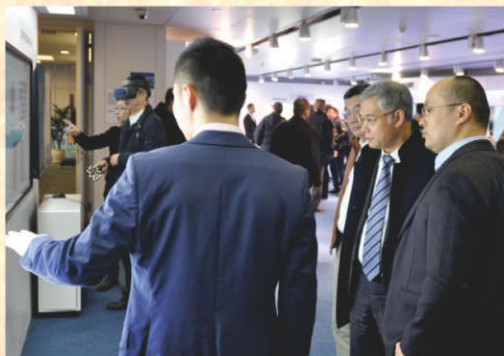
Guests were able to view a specially-made film documenting CISDI's history and highlighting the numerous developments which generations of CISDI employees have contributed to. The footage also featured the remarkable story of China's steel industry transformation.

CISDI was formed from Anshan Ferrous Metallurgy Design Institute and relocated to Chongqing in 1958.

It became a trailblazing leader of China's steel industry, going on to build major steelworks for Pangang, Baosteel and



CISDI's 60th anniversary celebrations, held at its Chongqing headquarters



Baosteel Zhanjiang's chairman Genghong Sheng enjoys a user experience



CISDI Group's chairman Xuwen Xiao addressing the celebration meeting



FHS's president Funing Zhang visits CISDI's R&D Centre

Ansteel, among a host of others, and made the initial massive strides in the exportation of Chinese engineering and large-scale equipment.

Keeping true to its vision of revitalising the Chinese nation by forging a stronger steel industry, for six decades CISDI has been committed to the continual development of its brand, its innovations and its reach.

It now employs more than 4,000 people around the globe and is firmly focussed on the new growth driver of intelligence and information technology.

CISDI is creating core intelligence and big data platforms and a host of products which will create comprehensive systems embracing intelligent manufacturing, intelligent and IT-based methodology, capability systems and product systems.

In January 2019, CISDI is setting sail into the New Year determined to create vital links between intelligence and industry, urban construction and agribusiness.

Key dates in the story of CISDI

1958



The office building for the former Anshan Ferrous Metallurgy Design Institute in Anshan. Sited in the Liaoning Province, Anshan was known as the cradle of New China's steel engineering

In response to China's call for industry to aid the development of its southwestern provinces, the Anshan Ferrous Metallurgy Design Institute was relocated to Chongqing and renamed Chongqing Ferrous Metallurgy Design Institute. It was run by the Ministry of Metallurgical Industry.

1978



Baosteel Shanghai's ground-breaking and mobilisation ceremony

At the beginning of China's period of economic reform and opening up to the outside world, a revolutionary steel project, Baosteel Shanghai, officially broke earth. It was China's first modernised large steel enterprise and CISDI were responsible for the general design.

1998



The event staged for joining Baosteel Shanghai

Management of the Chongqing Ferrous Metallurgy Design Institute was taken on by the China Metallurgy Construction Group and renamed the Chongqing General Iron and Steel Design & Research Institute.



The Pangang blast furnace during its construction

A team of more than 70 engineers were sent to Panzhihua Steel (Pangang) to carry out field design and services. They remained until 1974, by which time Phase I of China's first self-built large steel base was largely complete.

1965

To reinforce collaboration between engineering and production, a decision was taken to allocate the Chongqing Ferrous Metallurgy Design Institute to Baosteel Shanghai.

1992



Xinyu Steel's basic oxygen furnace in operation

Chongqing General Iron and Steel Design & Research Institute was awarded the EPC-based contract for Xinyu Steel's Basic Oxygen Furnace. At the time it was China's biggest investment in a single unit metallurgical EPC project. It was also the first time a design institute had been tasked with building a steel plant on an EPC basis.

2001

2003



The opening ceremony for CISDI Engineering Company

Chongqing General Iron and Steel Design & Research Institute handed its core businesses to the newly incorporated CISDI Engineering Company.

2010

CISDI launched its first overseas branch, CISDI Brazil (MCC-CISDI Projetos Industriais do Brasil Ltda).

2014



Representatives of CISDI Group and the UK team, pictured at the CISDI UK building

CISDI opened its UK subsidiary in Sheffield, creating a bridging link for the company's European and American marketing.



The Gerdau Acominas 1,750m³ blast furnace is running smoothly in Brazil

CISDI Engineering Company won the bid to create the 1,750m³ blast furnace for Gerdau Acominas in Brazil on an EP basis. At the time, this was China's largest metallurgical package supply export project.

2005



The opening ceremony for CISDI Group Co., Ltd.

CISDI Group Co., Ltd. was created. CISDI Engineering Company became one of its subsidiaries and began to diversify its business portfolio.

2011



An artist's view of the CISDI-designed blast furnace 2 at TATA Steel's KPO Plant in India

CISDI was awarded the contract to engineer the new blast furnace 2 for TATA Steel's KPO Plant in India, the largest of its kind in the world.

The year also saw the release of the CISDI-developed technology Nudge+, the first self-sufficient internet platform product for mobile office.

2015

2016



Baosteel Zhanjiang's green steelworks

Baosteel Zhanjiang's Phase I was completed. CISDI was the master designer and the predominant service provider for Zhanjiang Steel. CISDI has since provided E/EP/EPC services for Zhanjiang Steel's stockyard, ironmaking, continuous casting and hot strip mill plants. CISDI is also helping Baosteel to achieve its goal to build Zhanjiang Steel as a world-class green carbon steel prime production base.

Also this year, construction began at ASSB MCKIP in Malaysia. CISDI was responsible for general design and plant design, plus package supplies of most of the equipment. CISDI is contributing to the Belt and Road Initiative.

2018

CISDI set out its agenda for a journey of innovation - it aims to boost intelligent and big data developments to upgrade the steel industry.



The CISDI-developed Q-Touch 2.0 went on show at the Smart China Expo in 2018

CISDI was awarded a national Chinese scientific and technological progress prize for its recently concluded research and development of High-efficiency, Low-consumption Mega Blast Furnace Core Technology and Application.

This year the blast furnace 1 of Formosa Ha Tinh Steel (FHS) in Vietnam was successfully started up. CISDI had built it - its first mega blast furnace overseas - to an EPC mode. The project is seen as an outstanding example of international cooperation for production

2017



The application of the CISDI-developed High-efficiency, Low-consumption Mega Blast Furnace

and equipment supply on the Belt and Road route.

Also in 2017, CISDI Group opened its USA subsidiary in Pittsburgh.

Sharing the journey with China's steel industry

In recent decades, steel has become one of the critical fundamental industries of the Chinese national economy and a pillar of China's industrial

modernisation.

Over the last 60 years, CISDI has been a staunch supporter of the establishment of New China's independent industrial

system, promoting China's modernised steel industry and forging ahead to work with the world's steel powers.

► CISDI: A pioneer of China's steel engineering

Chongqing Ferrous Metallurgy Design Institute, the predecessor of CISDI, was formed at the very outset of New China's steel industry.

The company was born in response to the call for building a southwest steel base which would implement

a new steel layout across the country.

The Anshan Ferrous Metallurgy Design Institute was relocated to Chongqing and renamed Chongqing Ferrous Metallurgy Design Institute.

The Institute braved numerous difficulties to set up two

flagship steel complexes, Pangang and Baosteel. It also unveiled China's steel modernisation drive by designing WISCO's 1,700mm hot strip mill.

These early success stories laid a solid foundation for China's steel development.

Pangang: China's first independently-designed and built large steel complex



The Pangang site before construction began



Pangang today

Construction started at Pangang in the 1950s and became well-known for its ivory sculpture profile.

Chongqing Ferrous Metallurgy Design Institute designed the world's first large vanadium-

titanium smelting blast furnace for Pangang, becoming China's first design institute able to independently undertake the engineering of a large steel complex.

Baosteel: China's most modernised steel complex

Baosteel Shanghai was the first steel complex in China to be modernised and was built in line with the new ethos of reform and opening up. Chongqing General Iron and Steel Design & Research Institute was the general designer and main builder.

Baosteel's buildup enabled China's steel industry to step forward, away from technological imports to master planning and self-sufficiency. The country's manufacturing and production levels were greatly enhanced.



The prototype for Baosteel Shanghai before construction



Baosteel Shanghai today

WISCO 1,700mm hot strip mill: China's first imported hot strip mill

Chongqing General Iron and Steel Design & Research Institute took part in the supportive design and imported engineering management of WISCO's 1,700mm hot strip mill.

This imported production line, which in the 1970s featured world-leading technological levels, had a revolutionary effect on China's production. It enabled the country to create for the first time its own vast quantities of sheets for the automobile industry and for ship-building, bicycle strips, galvanised sheets, tin-plated and silicon sheets.



The WISCO 1,700mm hot strip mill has been producing smoothly since it went into production

► CISDI: An active player in the construction of multiple benchmark projects

Since the 1990s CISDI has seized the opportunities created by China's blooming

steel economy. It has been responsible for the design and construction of multiple

benchmark projects and brought about numerous technological breakthroughs.



The TISCO BOF is producing smoothly

TISCO: The 1.50Mt/a stainless steel plant with the world's largest single-unit (BOF)-output

When TISCO's 1.50Mt/a stainless steel plant was built, it was the largest of its kind in the world and boasted the world's largest stainless steel melting output created by a single unit. It was also CISDI's first and classic design for a

stainless steel plant.

TISCO is a leading representative of China's stainless steel production upgrading and sets benchmarks for top world levels.

Bayi Steel's 1,750mm hot strip mill: China's first hot strip mill to be package-supplied and built with a Chinese engineering company leading the technology

CISDI undertook the package supply of EIC (electric, instrumentation and computer), the hydraulic servo system, software commissioning and the technical leadership for Bayi Steel 1,750mm hot strip mill. It was the first time a Chinese hot strip mill had been built utilising only Chinese skills and technology.



Bayi Steel 1,750mm hot strip mill running with a hot strip

Gerdau Acominas 1,750m³ blast furnace in Brazil - a Chinese first

CISDI package-supplied the 1,750m³ blast furnace for Gerdau Acominas in Brazil. It was China's first complete export of the core

technologies and equipment for a large blast furnace and the first export of its kind to South America.



A night view of the 1,750m³ blast furnace at Gerdau Acominas in operation

► CISDI: Providing solutions to create a greener and leaner steel industry

CISDI is doubling its efforts to become a leading supplier of state-of-the-art steel technology and equipment around the world and spearhead China's emergence as a state-of-the-art steel

industry specialist.

With standout contributions to steel complexes inside and outside China, CISDI's total solutions competitiveness is already attracting global attention and exerting wider influences.

The company has a finger on the pulse of frontline green and intelligent manufacture, is dedicated to the success of the Belt and Road Initiative and the ongoing transformation of China's steel industry.



An aerial view of Baosteel Zhanjiang

Baosteel Zhanjiang: The ultimate green, highly competitive steel complex

Baosteel Zhanjiang is a leading example of China's steel supply-side structural reform. Its industrial layout, product mix, flow and energy structures were designed to create a streamlined, highly-efficient, lean and green plant.

And shortly after its startup, Zhanjiang was

showcasing world-leading levels for its eco-friendly production methods and product quality.

CISDI is the general designer and the main supplier of engineering to Zhanjiang Steel and has scored highly with Baosteel in satisfaction ratings.

Formosa Ha Tinh Steel Vietnam: Leading light on the Belt and Road Initiative represents a first for China's steel specialists

Formosa Ha Tinh Steel is one of the largest and most advanced steel complexes in Asia and Pacific region.

It is the only Greenfield steel complex to be created with an output target of 10 million tonnes a year outside China in the last 20 years. The Greenfield site's systematic design and full

process chain equipment was created by China and is the first time these services and skills have been exported to a Greenfield steel project of this size on foreign soil.

CISDI's exemplary skills in consulting, design and project management ensured the success of the construction.



An aerial view of FH5 in Vietnam

ASSB: Innovation-led achievement forged by China and Malaysia, working together for the new Maritime Silk Road

CISDI is the master designer and core equipment package supplier for ASSB. Thanks to CISDI's innovative concept, methodology and full-process services, ASSB is on track to become the most competitive producer of building materials in Southeast Asia.



ASSB under construction

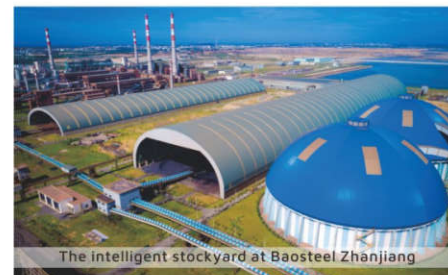
► CISDI - our focus on the digital future

In the midst of structural readjustment, transformation and upgrading and "going global", CISDI remains firmly focused on the continuing development of its intelligent and digital products.

Its experts are creating a five-pronged capability system which will encompass intelligent and IT-based platforms, intelligent methodology and products, big data and cloud computing,

automation and digital design. CISDI's total solutions are consultancy-led and geared to create intelligent manufacturing methods and build greener, better performing and more efficient and sustainable steel enterprises.

Baosteel Zhanjiang: The world's first unmanned and digital stockyard



The intelligent stockyard at Baosteel Zhanjiang

Zhanjiang's new environment-friendly stockyard is the most intelligent of its kind in the world and was package-supplied by CISDI.

Its technological features enable green and clean production methods, digital yard management and unmanned operation.

Baowu Shaogang: The world's first upstream-BF integrated intelligent control platform

CISDI achieved two world steel industry firsts when it created an Intelligent Manufacturing Centre and a Smart Centre for the Baowu Group's Shaogang plant.

The IMC features a big data centre, intelligent math models and an upstream-BF integrated control platform, which is responsible for the intelligent manufacturing of upstream-BF and energy media.

The Smart Centre serves an integrated operation control and makes intelligent decisions for the ironmaking process and the energy media system.



Shaogang's Intelligent Manufacturing Centre and Smart Centre in the Guangdong Province

CISDI - going global



CISDI is fully committed to its globalisation strategy and is now a leading exporter of core technology and equipment to steel companies around the world.

To aid its global customers the company now operates a chain of overseas subsidiaries and branches.

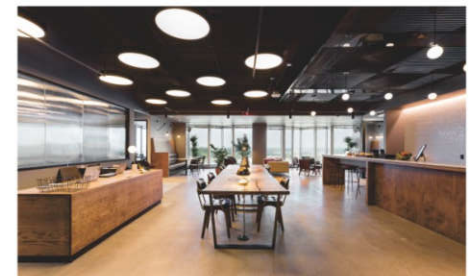
Based in the world's steel hot spots, each

site is staffed by talented steel experts with wide-ranging local knowledge.

CISDI has continued the partnership with NSENGI, Hatch, Rockwell Automation. CISDI has been Mitsubishi Corporation's global preferred steel partner and TATA UK's quality supplier.



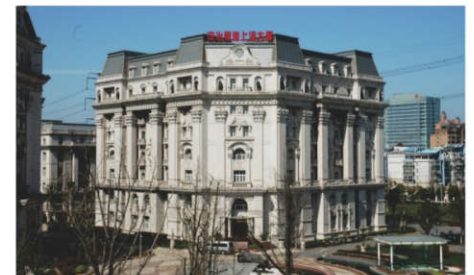
CISDI's base in the UK



CISDI USA



CISDI's Chongqing headquarters



CISDI's subsidiary in Shanghai

Frontline teams committed to excellence

Images of CISDI Group through the decades

1. CISDI staff, pictured in the 1950s
2. CISDI engineers working for Pangang in the 1970s
3. CISDI staff are photographed in the 1980s surveying the construction site for Baosteel Shanghai



1 2 3

4. The CISDI team which worked on the Gerdau Acominas blast furnace project in Brazil in 2007
5. A CISDI team working for Bayi Steel in 2014
6. CISDI people working for Baosteel Zhanjiang in 2015
7. CISDI engineers are pictured training teams at FHS at the Vietnamese site in 2016

4 5 6 7



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10 11

8. CISDI's team took this image as Blast furnace 1 at FHS was started up in May 2017

9. Staff from CISDI headquarters and its UK team members are pictured at a technological leadership training programme for TATA Steel in Chongqing in 2017

10. CISDI UK's team are pictured in a meeting

11. CISDI's technical assistance team working at Shaogang in 2018

12. CISDI team working for ASSB, photographed in 2018

13. Visitors get to grips with CISDI's smart products at Smart China Expo in Chongqing in 2018

14. One of CISDI's cultural activities taking place. The company stages a number of cultural events and performances every year

15. Pictured at a CISDI sports meeting in 2018

16. New employees undergoing training in 2018

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14 15 16