



**CISDI GROUP CO., LTD.**

**CISDI HEADQUARTERS**

Add.: 1 Shuanggang Road, Yuzhong District, Chongqing 400013, China  
 Tel.: +86 23 6354 5622  
 Email: OB@cisdi.com.cn  
 Website: www.cisdigroup.com.cn

**CISDI UK**

Add.: CISDI HOUSE, 8 Furnival Rd, Sheffield, S4 7YA, UK  
 Tel.: +44 1142291067  
 Email: info@cisdi.co.uk  
 Website: www.cisdi.co.uk

**CISDI Turkey**

Add.:122,A3 Blok,Mashattan, MASLAK MAHALLESİ, Istanbul, Turkey  
 Tel.:+90-6340137287  
 Email:jing.zhang@cisdi.com.cn

**CISDI India**

Add.: 503-504, 5th Floor, A-Wing, Galleria Building, Hiranandani Gardens, Powai, Mumbai 400076, India  
 Tel.: +91-9702043402 +91 22-49701004  
 Email: yong.liu@cisdi.com.cn

**CISDI Malaysia**

Add.: 5-9-6 Corinthian Condominium, Jalan Binjai, 50450 Kuala Lumpur, Malaysia  
 Tel.: +60 165626758 / +86 13508339926  
 Email: Shihong.Ma@cisdi.com.cn

**CISDI USA**

Add.: One PPG Place, Suite 3100, Pittsburgh, PA 15222, USA  
 Tel.: +44 (0)114 229 1067  
 Email: info@cisdiusa.com  
 Website: www.cisdiusa.com

**CISDI Brazil**

Add.: Rua Pernambuco 1002, Sala 902, Bairro Funcionarios, Belo Horizonte, CEP 30.130151, Minas Gerais, Brasil  
 Tel.: +55 31 34638880  
 Email: xin.yan@cisdi.com.cn

**CISDI Vietnam**

Add.: Phòng 2108 tòa nhà Charmvit Tower số 117 đường Trần Duy Hưng, Phường Trung Hòa, Quận Cầu Giấy, Thành phố Hà Nội, Việt Nam  
 Tel.: +84 0 2432007795 / +84 943482089  
 Email: xinbin.liu@cisdi.com.cn

# CISDI NEWSLETTER

## Issue 8: August 2021



New rotary hearth furnaces dried off and ready to bring greener production

Published By CISDI Corporate Culture Department

**IN THIS ISSUE**

- Six months of success reported at CISDI Group's half-yearly meeting
- CISDI forges a stronger footing in thermal engineering market
- CISDI's state-of-the-art RHF tech - creating greener steel
- Latest report from our Equipment Manufacturing Base at HQ

# CISDI

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

### » NEWS

Six months of success reported at CISDI Group's half-yearly meeting ..... 02

### » Events

CISDI-built dual high-speed bar mill is in operation at Chongqing Steel ..... 04

New rotary hearth furnaces dried off and ready to bring greener  
production ..... 05

Regional on-grid for power generation at Baowu Aluminium ..... 06

Arc of triumph: First step achieved for TISCO's green stockyard ..... 07

Hi-tech CDQ silos to be built for Rizhao Steel ..... 07

CISDI forges a stronger footing in thermal engineering market ..... 08

### » S&T

Innovative desulphurisation tech is tested at steelworks ..... 10

### » Specialised Topic

CISDI's state-of-the-art RHF tech - creating greener steel ..... 11

### » Core Equipment and Products

Latest report from our Equipment Manufacturing Base at HQ ..... 15

### » In Pictures

Our Teams have been battling a heatwave ..... 18



## Six months of success reported at CISDI Group's half-yearly meeting



CISDI Group's mid-year meeting

Impressive results were reported at CISDI Group's mid-year progress meeting, held recently at its HQ in Chongqing.

Business operations in the first six months of the year were presented and tasks and targets for the remainder of the year were prioritised.

Mr Xuewen Xiao, group chairman, addressed the meeting and reported on numerous positive factors:

Stable, robust marketing in China and beyond has been maintained and is resulting in remarkable growth in revenue. Steel manufacturing is still pivotal to the company's growth and recently orders have been won for two blast furnaces at Guangxi Shenglong Steel, four high-speed bar and wire-rod rolling lines at Zenith Nantong Steel and at other projects in China.

A number of breakthroughs have been made in the company's continuous casting, energy conservation and green divisions. The company is a rising Chinese brand, thanks to its developments in intelligence and information tech.

Efficient, quality delivery has been achieved across all implementations. Major projects were started up and their quality and schedule targets were met – namely blast furnace 3-based plants at Baosteel Zhanjiang, blast furnace 2 at Liuzhou Steel's Fangchenggang Plant and a stockyard rebuild to eco-friendly level at Anhui Changjiang Steel.

Scientific and technological innovation continues to drive corporate business development. Pooling strong forces to brainstorm intelligent, green, efficient and low-carbon critical tech and products, the company has successfully developed and applied its super-green and intelligent electric arc furnace, 3-roll cross mill for tube rolling, and industrial internet platform for centralised control across multiple production procedures.

By June 2021, 12 S&T research subjects had been submitted and approved, six new technological rewards had been granted and six standards, including one at international level, had been issued.

Solid progress has been made in digital transformation. The company has built a digital design standard system, enabling parameterised design, QR code scanning of 3D construction drawings and other new

digital tech applications.

Four major aspects of the business will receive strong focus in the next half of 2021 – marketing, implementation, technological innovation and deepening reform. The company is committed to synergising all its core tech and its strength in metallurgical industrial chain to serve global customers.

Pinpointing orientations for the corporate steel business, Mr Xiao stated: "Firstly, we need to speed up our transformation into becoming a tech company featuring core tech and product provisions.

"We will scale up digital, intelligent developments and create products and platforms delivering our tech and services. Our solutions must be active players in advancing low carbon undertakings in China and the rest of the world.

"Our core equipment must benchmark world-class levels. We should value every opportunity to push forward with gaining overseas business.

"Secondly, we should strengthen our research and development and its management system, unleashing the full creativity and strengths of our research engineers.

Thirdly, we will focus on greater team-building in our leadership and specialist teams.

# CISDI-built dual high-speed bar mill is in operation at Chongqing Steel

A world-class dual high-speed bar rolling line is now operating successfully at Baowu Chongqing Steel.

Built by CISDI on an EPC basis, the line's projected production capacity is 1.40 million tonnes a year and its main product specification ranges from 8 to 22 millimetres in diameter.

It operates with state-of-the-art tech, equipment, quality and management levels, producing bars for high-strength buildings. CISDI has designed, manufactured and integrated the line's core process, equipment and automation.

A number of CISDI's intelligent, information technologies have been applied:

- Continuous casting and direct hot charge rolling
- Single pass rolling
- NHCD short stress path rolling mill
- CDMC super-heavy-duty high-speed modular mill.



The CISDI team celebrates the start-up of Chongqing Steel's dual high-speed bar rolling line



The bars being cooled on a cooling bed for the dual high-speed bar rolling line at Chongqing Steel

# New rotary hearth furnaces dried off and ready to bring greener production



Xinyu Steel's RHF is enabling smoother, greener production

Two CISDI-built rotary hearth furnaces have been dried off ready for production.

Baosteel Wuhan/WISCO's RHF1 is designed to treat 200,000 tonnes of solid waste a year. It will be working in conjunction with the plant's RHF2, which features the same annual treatment capacity. CISDI built their main lines and auxiliary facilities on an EPC basis.

All iron and zinc-bearing sludges and dusts can now be recycled inside the plant, reducing external emissions and achieving cascade transformation to resources.

Xinyu Steel's RHF applies CISDI's patented technologies to treat its iron and zinc-bearing sludges and dusts. Built by CISDI on an EPC basis, it took nine months for the furnace to dry off.

The 250,000-tonne treatment line totally negates the need to store piles of solid waste and removes environmental and systematic operation problems caused when waste returns to the production procedures without this level of eco-friendly treatment. It is enabling Xinyu Steel to achieve its aim of zero-waste-discharges.

## Regional on-grid for power generation at Baowu Aluminium



Members of CISDI and Baowu Aluminium are pictured on the roof designated for harnessing solar power



A view of the distributed roof photovoltaic power generation plant at Baowu Aluminium

A groundbreaking green energy project at Baowu Aluminium is powering forward.

Part of a planned photovoltaic power generation plant has now been put on grid, thanks to CISDI's dedication to its EPC-based services.

This groundbreaking green energy project features 11.03MWP distributed roof photovoltaic power generation, 50kW/100kWh energy storage, DC smart lighting and intelligent management systems.

When complete it will supply around 10 million KWHs of green electricity a year.

Compared with a coal-fired power plant of similar size, it can save 3,200 tonnes of standard coals and reduce around 9,800 tonnes of carbon dioxide emissions every year.

Remarkable economic and social benefits are predicted, which will assist in China's goal of capping carbon dioxide emissions by 2030 and achieving carbon neutrality by 2060.

CISDI has applied multiple smart means for achieving project construction, including 5G tech and 360-degree HD cameras for online, real-time monitor, and drones for patrol check, and infrared imaging tech for maintenance and safety control.

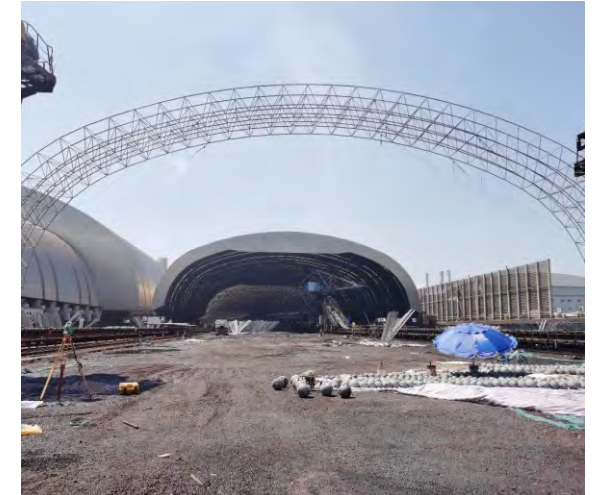
## Arc of triumph: First step achieved for TISCO's green stockyard

After 17 hours of toil, the first span of metal net frames which will enclose TISCO's stockyard is now in place.

The enclosure needs to be around 36,400 square metres in size with a major span of 116.5 metres.

The stockyard is currently being rebuilt to enlarge its storage capacity and ensure safer production at the plant. CISDI was awarded the EPC-based contract for construction in March.

It is the latest in multiple successful enclosed rebuilds at TISCO's stockyard to advance the plant's green credentials - since 2016, the primary stockyard zone 1, 2 and 3 and the blending stockyard have been rebuilt by CISDI on an EPC basis.



The first span of the net frames for TISCO's enclosed stockyard

## Hi-tech CDQ silos to be built for Rizhao Steel

CISDI is to build 20 highly-advanced silos for the storage of dry quenched coke at Rizhao Steel in China's Shandong Province.

EPC-based, the project aligns with China's stricter environmental guidelines and will feature multiple CISDI firsts. Innovative technologies will be applied to the silos:

- Silo top will be closed by steel-framed membrane structures
- An in-silo rotating chute will reduce the coke powdering ratio
- An air-floating belt conveyor will transport coke.

# CISDI forges a stronger footing in thermal engineering market

CISDI Thermal Engineering and Environmental Protection Co. has recently won multiple contracts for its feature products and EPC-based services.

All new projects are on course to meet design, manufacturing, project management and delivery schedules and quality standards.

## ■ Annealing furnace (EPC) for Fujian Qingtuo Special Steel

Five new batch annealing furnaces will be built for Qingtuo Special Steel in China's Fujian Province.

Each furnace features a maximum charging capacity of 200-250 tonnes. CISDI's innovative coil-dedicated base stand and

full-nitrogen atmospheric protection will be applied, in addition to the company's low-NOx combustion technologies, to achieve recrystallisation bright annealing of the hot-rolled 400-grade stainless steel coils.

## ■ Reheating furnace 3 (EPC) for Rizhao Steel

A new walking-beam reheating furnace will be built by CISDI for Rizhao Steel in China's Shandong Province.

Furnace 3 will be located at the slab warehouse area for the existing 1,580mm hot strip rolling line. It will improve the line's

production capacity and efficiency and also enable reheating of the discharged slabs from the existing ESP rolling lines to the 1,580mm line for rolling, which will increase yield.

## ■ Al-Mg galvanizing equipment supply for Jiangsu Guoqiang

CISDI is to supply its latest aluminium-magnesium galvanizing and heat recovery tech and equipment at Guoqiang Galvanizing Industry Co. in China's Jiangsu Province.

This strategically important project will enhance and expand the company's range of products.

## ■ Annealing furnace rebuild (EPC) for Pangang

Annealing furnace 3 at Pangang Cold Mill Plant will be rebuilt by CISDI. The project will include an additional combustion mathematical model for its process computer system.

The rebuild will increase Pangang's green,

intelligent credentials and follows on from a rebuild of reheating furnace 3 at Pangang Xichang Steel's 2,050mm hot strip mill and the construction of new reheating furnaces for the bar and wire-rod lines at Pangang Metal Products Co.

## ■ Reheating furnaces (EPC) for Jinan Steel

Three new reheating furnaces will be built by CISDI for Jinan Steel in China's Hebei Province. The furnaces will serve the 1,580mm hot strip mill.

They are designed to high quality, high

efficiency, low carbon, green and intelligent levels, thanks to CISDI's expertise in low-NOx BFG dual-regenerative combustion, real-time optimised air-fuel ratio and intelligent combustion control model.



Reheating furnaces at Formosa Ha Tinh Steel in Vietnam

# Innovative desulphurisation tech is tested at steelworks

Industrial testing of a new hot stove for blast furnace 4 at Chongqing Steel, which features CISDI's sodium-based dry desulphurisation tech, has been successful.

Test results met the designed target.

The innovative SDS tech is fully adapted to hot stove fume conditions, ensuring the desulphurisation system continuously and stably meets ultra-low emissions standards.

It results in higher desulphurising efficiency, simplified process flow and easier operation, and produces eco-friendlier, easily-disposable by-products.

The industrial test has verified the

feasibility of CISDI design scheme and resulted in identifying the optimal desulphurising conditions for the SDS method by testing different fume temperatures, retention time, the grain size of the desulphurising agent and the sodium to sulphur ratios which affect desulphurising efficiency.

Meanwhile, the industrial test has measured the desulphurising concentrations at the outlet of the thioniser and the bag filter, to check if the front-end simulation model and parameters were functioning accurately.

This valuable testing data and results lay a solid foundation for the project's application.

# CISDI's state-of-the-art RHF tech - creating greener steel

Over 80 per cent of the Chinese market has furnaces, making the company now been supplied with CISDI's rotary hearth

## China's first total solutions provider for iron-bearing solid waste treatment centres.

Two rotary hearth furnaces, built by CISDI to an EPC mode, went operational in China in July.

CISDI Thermal Engineering and Environmental Protection Co. is a specialist in consulting, design, supply, EPC-based and ops management services for metallurgical thermal engineering, environmental-protection thermal power and solid and gas waste treatment.

It is the first company to recommend the centralised treatment of steel plant iron-bearing solid waste, and also the only provider of these total solutions in China.

Steel plants with centralised treatment centres can achieve zero solid waste discharge and recycle all their iron, zinc and carbon-bearing resources.

The company is also expert at rotary hearth furnace, homogenising, cold briquetting, sludge drying and hazardous waste incineration technologies, all of which contribute greatly to green and clean production.

CISDI Thermal Engineering and Environmental Protection is a quality full-process service provider, from environmental consulting, engineering design, equipment manufacturing to

systematic control, technical assistance for production and ops management.

In 2009, the company set up a team dedicated to the task of systematically approaching rotary hearth furnace-based dezincification.

The team has achieved continual innovations in a cluster of RHF-related technologies - homogenising, cold briquetting and sludge drying.

Iron-bearing solid wastes are homogenised, formed, dried and reduce-roasted; zinc-bearing sludges of various compositions created throughout all procedures from ironmaking to steelmaking are treated and recycled.

The company's unique rotary hearth furnace developments can separately recover iron and zinc from the zinc-bearing sludges.

All zinc-bearing wastes are turned into resources.

The recovered zinc powder is a quality zinc product which can be sold. Recovered iron returns to ironmaking as raw material for quality smelting. Steam generated from the treatment is recovered and utilised as energy.

### Zero discharge of iron-bearing solid waste

The mainstream use of waste galvanised sheets as a raw material for BOF melting is causing an increase of zinc content in dusts and sludges.

In addition, a higher percentage of scrap is also charged into the BOF for melting. The dusts and sludges from these melting processes feature a high content of zinc and lead. Reusing these wastes for production impairs the ironmaking equipment's service life and hampers operation.

A new process for the recovery of these iron and zinc-bearing wastes needed to be found.

CISDI's RHF total solutions improve dezincification efficiency to over 85 per cent and almost totally recover the iron element, achieving a final product metallisation ratio of more than 75 per cent.

Environmental pollution caused by conventional landfill is eradicated and the impact of ineffective recovery on production is negated.

Applying RHF tech to an integrated steel plant reduces consumption of iron-bearing raw materials by returning the metallised pellet and powder products into the blast furnace. There are increased economic benefits, as the ZnO powder product can be sold.

The reuse or sale of the steam produced by HRSG recovery of the excess fume heat is a further economic and environmental benefit, enabling the steel plant to achieve zero iron-bearing waste discharge.

CISDI has applied for 67 patents of RHF-based products, 52 of which have been granted, including 10 patents for invention. Two computer software copyrights have also been awarded.

### RHF tech leader – over 80 per cent of the Chinese market share

CISDI Thermal Engineering and Environmental Protection Co. is making great strides in converting steel production to greener processes.

It has now built nine rotary hearth furnaces – at Yanshan Steel, Baosteel Zhanjiang, Shanghai and Wuhan, Shougang Jingtang and Xinyu Steel.

Six RHF's are in the process of being constructed at Zenith Nantong Steel, Donghai Special Steel and several other

plants.

CISDI Thermal Engineering and Environmental Protection is now China's number one RHF supplier for both as-built and in-process quantities.

Its standardised RHF products range from annual capacities of 100,000 tonnes, 150,000 tonnes, 200,000 tonnes to 250,000 tonnes and 300,000 tonnes. They account for over 80 per cent of the Chinese market share.

### Star RHF's

#### The solid waste centralised treatment centre at Baosteel Zhanjiang



The solid waste centralised treatment centre helping to create a greener Baosteel Zhanjiang

Plant-wide solid wastes from the Zhanjiang complex feature very complicated compositions and varied moisture contents.

Based on massive data analysis of the iron-bearing waste quantity, source procedure, variety and composition, CISDI proposed a world-first solution – the first centralised treatment centre of its kind.

The centre has two RHF production lines, each requiring 200,000 tonnes a year, one homogenising line with an annual capacity of 800,000 tonnes, one cold briquetting line with an annual capacity of 100,000 tonnes, and one scale separation line with an annual

capacity of 200,000 tonnes.

Phase 1 of construction was started up in June 2016 and all lines were completed, with the exception of one of the RHF's during Phase 2, which was started up in April 2021.

All lines ramped up to their projected treatment capacities on schedule and to quality targets. All systems and equipment are running stably and smoothly.

An integration of CISDI's four critical solid waste treatment technologies, the centre removes the impact of hazardous impurities and ensures all related procedures operate more smoothly and to greener standards.



### Waste to energy project at Shougang Jingtang Steel

CISDI built a homogenising line with an annual capacity of 150,000 tonnes and a RHF line with an annual capacity of 300,000 tonnes at Shougang Jingtang Steel. The build followed a comprehensive analysis of the internal iron-bearing waste's quantity, storage capacity, variety and composition.

The homogenising line blends oily sludge with a high moisture content from the hot rolling production with low-zinc dry dusts, which can then be regenerated as a resource.

Production began in April 2020 and reached its designed capacity in the

first month after start-up.

The RHF line transforms dusts from blast furnace ironmaking's cyclone dedusting and from BOF steelmaking's primary and secondary dedusting into resources. It began operation three months after the homogenising line and its performance indicators have seen steady improvements.

Jingtang Plant is the first application of CISDI's standardised 300,000-tonne RHF product. All iron traces are being removed from the plant's solid waste.



Waste to energy facilities at Shougang Jingtang Steel

## Latest report from our Equipment Manufacturing Base at HQ

July and August are the hottest months of the year in Chongqing, where CISDI Equipment Co. is based.

This is when our manufacturing teams remain in their workshops and immerse themselves in the many tasks required to keep projects on schedule and to our quality standards.

Good progress has been made in our manufacture of core products for Sichuan Shengquan Steel's bar and wire-rod mill, Chengdu Chengshi Metallurgy's rolling mill and spare parts for Chongqing Steel's bar and wire-rod mill and Hebei Xinjin Steel.

Our equipment manufacturing base, in the Jiangjin District of Chongqing, focuses on the manufacture of pilot and core products and non-standard mechanical equipment integration.

It holds over 200 sets of modernised, high-precision numerical control machine tools and more than 100 sets of advanced measurement and metering units.

Committed to transforming our core technologies into products, it produces more than 40,000 tonnes of precision core equipment a year.

### Heavy ladle turret – our core product for continuous casting

CISDI's large ladle turret features a maximum loading capacity of 450 tonnes at each of its two ladle positions. 27 sets have been supplied. Its equal bearing capacity design is built for super-reliability and stability.

In July, the manufactured ladle turret for Zenith Nantong Steel passed its critical equipment inspection.

Representatives from Zenith Nantong, who attended the workshop inspection with CISDI's manufacturing team, were impressed by the advanced process, premium quality and also the ladle turret's eye-catching appearance. Key features include:

- Larger operational space on the equipment for easier access to its operation and maintenance



Teams meet for the joint inspection of the ladle turret before its delivery to Zenith Nantong Steel in China's Jiangsu Province

- Upgraded guard and thermal prevention to protect against the high-temperature radiation source and improve working conditions for critical parts, ensuring their operational reliability.

■ **BDCD breakdown mill for special steels' bar and wire-rod, sections rolling**



The BDCD breakdown mill supplied by CISDI at Shijiazhuang Steel

CISDI's standard product, the BDCD breakdown mill, is a major player in the global and Chinese long products rolling market due to its stable performance. Showcase references include China's Shijiazhuang Steel and Hebei Yongyang Special Steel and India's Aarti Steels.

Featuring large screw-down, high rigidity and super reliability, the BDCD breakdown mill's highlights are:

- Hydraulic cobble-free design
- Hydraulic axial lock
- Roll's axial automatic adjustment

- Hydraulic automatic position control
- Reduced-labour, fully automatic rolling.

The product is a breakthrough for China's breakdown mill tech and equipment. Chinese steel producers can now buy reliable, high-performing mills rather than rely on imports.

As an example, a CISDI-supplied breakdown mill was hot-commissioned at a Chinese steel plant in July 2021 and pilot production achieved 800-plus tonnes of output per shift. This was a rebuild project, replacing the original imported mill.

■ **NHCD short-stress path rolling mill for long products rolling**

Global sales of CISDI's NHCD short-stress path rolling mill have soared in the past decade. Over 3,000 sets have now been supplied to 100-plus production lines.

The speciality machining tools and the dedicated, streamlined assembly line at CISDI's manufacturing shop create the ideal conditions for creating high-quality equipment.

In July, 42 NHCD CISDI-supplied mills were

hot-commissioned at the Roughing and Intermediate Mill areas of the Tai'an' special-purpose building products rolling line at Shiheng's Special Steel Plant. Auxiliary facilities were also supplied by CISDI.

A leading Chinese producer of building steel products and very particular about its equipment's tech and quality, Shiheng Special Steel has forged a long-term relationship with CISDI.



CISDI-supplied NHCD short-stress path rolling mills are hot commissioned for a high-speed wire-rod rolling line at Shiheng Special Steel in China's Shandong Province

August marked another tough schedule for the manufacturing base. Multiple crucial manufacturing tasks began:

- Assembly and testing of the vertical and horizontal straighteners, edger mill and universal mill for Hebei Yongyang Steel's rail and beam project

- Manufacturing of tube rolling mills for VALIN Hengyang Steel's 3-roll cross rolling line (featuring the maximum tube's diameter  $\Phi 720\text{mm}$ )

Unremitting efforts are being made across the manufacturing teams to ensure all targets will be met in the second half of this year.

# Our Teams have been battling a heatwave

Out on site, our front-line project teams have been braving the intense heat of China's scorching July and August weather

conditions, showing true commitment and tenacity to meet their targets.



At the photovoltaic power generation site in Xinjiang Autonomous Region, our engineer discusses installation details with a construction worker for photovoltaic panels.

Our engineer checking the construction schedule at the stockyard of Zenith Nantong Steel in Jiangsu Province



At the blast furnace 3 and 4 site of Shenglong Steel in Guangxi Province, our engineer checks construction measurements on the pump house platform.



Our engineer rushes to solve a problem at the steelmaking and continuous casting plant of Laiwu Steel Taojialing in Shandong Province

Our engineer and a construction worker, problem-solving at the stockyard of Baosteel Desheng Stainless Steel Co. in Fujian Province



Our assembly engineer carefully checks assembly precision at the workshop of CISDI Equipment Co. in Chongqing



Our engineer monitors the production of the forging mill in the workshop of MCC SFRE's manufacturing base in Shaanxi Province



At the workshop of MCC SFRE's manufacturing base in Shaanxi Province, our STD pickling-free descaling research engineers inspect equipment before it leaves the shop for delivery



# CISDI Intelligent and Green Stockyard

Over the last decade, our world-leading stockyard solutions have helped 70 per cent of the steel world's stockyards to operate with greater efficiency, improved economics and green credentials.

The 170-plus new and rebuilt stockyards

created through CISDI's expertise have a total production capacity of nearly 500 million tonnes a year.

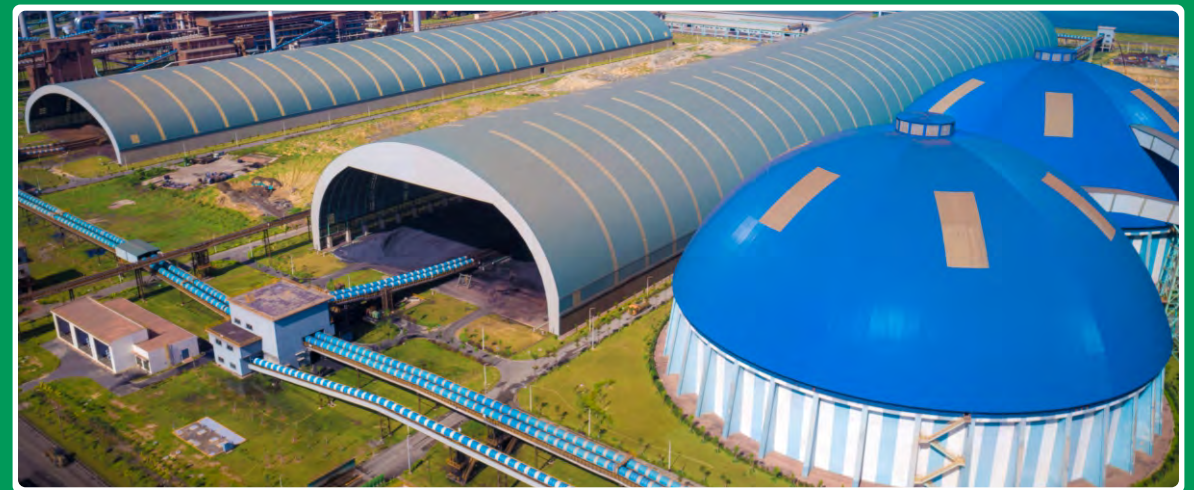
They feature eco-friendly storage, clean production methods and intelligent control.



The stockyard at Formosa Ha Tinh Steel in Vietnam, the new and the largest green stockyard beyond China



Baosteel Shanghai's green stockyard rebuild, the largest of its kind in the world



Baosteel Zhanjiang's coastal stockyard, the world's most intelligent and greenest