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CISDI USA

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TOTAL SOLUTIONS AND TECHNOLOGY PROVIDER
PREFERRED BY GLOBAL METAL INDUSTRY

► **Full-Process Services**

CISDI provides full-process services from the bulk material handling yard to the post-processing line of the hot 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 through the entire project life cycle.

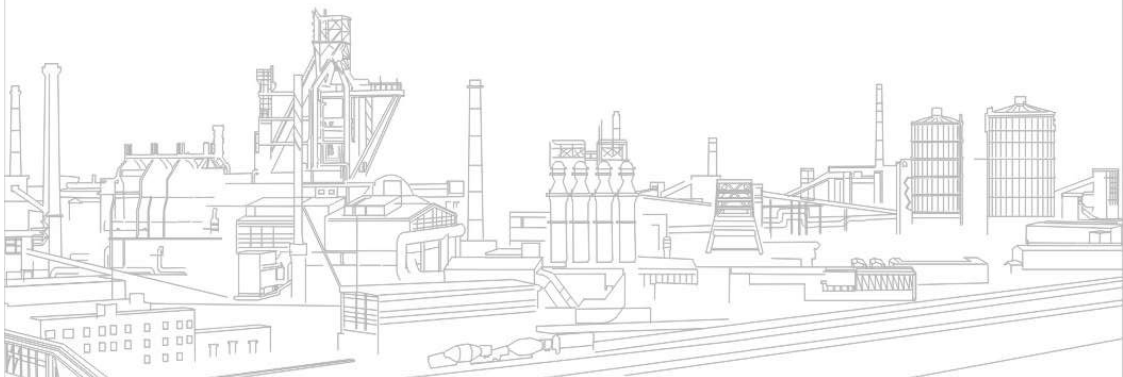


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CISDI honoured to be first Chinese supplier to showcase its technical skills at ArcelorMittal event

Last month CISDI showcased its technical expertise to one of the most prominent steel companies in the Western hemisphere.

A team of CISDI's technical experts were invited to a forum at ArcelorMittal USA.

Luxembourg-based ArcelorMittal Group, the world's leading steel and mining company owns 51 steel plants in 18 countries and produces more than 90Mt of crude steel a year.

Its American division supplies quality steel products to North America's automotive, construction, pipe and tube, appliance, container and machinery markets and employs more than 18,000 people at 27 operations.

Gathered at its Chicago HQ were eight research and development engineers from AM's global research and design centre, and related disciplines. Leading engineers and department heads from AM's divisions in Brazil, Mexico and Canada joined the conference remotely, via video

link.

CISDI's team detailed the company's expertise across the full process of steel production, including its consulting services. It detailed its specialism in automation, the design and delivery of smart and environment-friendly stockyards and the ironmaking, steelmaking, continuous casting, flat rolling and long products rolling processes, and profiled its smart & IT-based applications.

After the presentation, global steel industrial development trends and new technologies were discussed and AM North America's head of engineering Mr. Costa Lima expressed his confidence in CISDI's expert delivery of total solutions for the steel processing industry and pledged to strengthen communications and tap into the potential of collaborative research and project work.

The group had re-gathered fresh from a technical presentation at AM Group's HQ in Luxembourg.



John Lester (right), managing director of CISDI UK, exchanges views with Dominique Vacher, AM vice president in charge of procurement

CISDI was honoured to be the first Chinese supplier to be invited to demonstrate its skills and applications and its team reported it had enjoyed in-depth exchanges with vice president and CTO Mr. Carl De Mare and vice president in charge of procurement Mr. Dominique Vacher.

Mr. De Mare and Mr. Dominique stated they were highly impressed by CISDI strong competence,



CISDI's technical team pictured at ArcelorMittal

feeling illuminated by CISDI's systematic optimization and total solutions perspectives.

CISDI visits Brazil for ABM Week

CISDI headed to Brazil in October to present its latest developments to a global audience at ABM Week.

Organised by the Brazilian Metallurgy and Mining Association, ABM Week is the largest science and technology event in Latin America for the metallurgy, materials, and mining industries.

The event, which dates back to 1944, attracts suppliers from around the world to Sao Paulo in Brazil in the first week of October.

In group discussions, CISDI shared the technology and applications for its latest developments, including high efficiency, low consumption blast furnace developments and

electric arc furnace steelmaking for mini mill.

Its developments in core equipment, process and system solutions were embraced widely by fellow traders.



CISDI and the team at ArcelorMittal USA in Chicago



CISDI's technical experts present their expertise to the AM team in Chicago

CISDI wins a bid for Jiangsu Chengde Φ114mm mandrel pipe mill

CISDI has won the contract to supply a Φ114mm mandrel pipe mill package for the Jiangsu Chengde Steel Tube Share Company.

The pipe mill will be capable of producing 200,000 tonnes of fine-calibre seamless steel pipe a year.

Outer diameters of pipe will range from Φ38mm to Φ114.3mm, with a wall thickness in 3.5mm~12mm.

CISDI learned of the contract win on October 20. It will configure the tapered roll piercing mill, 6-stand 3-roll mandrel mill and 28-stand tension sizing mill and supply the electro-mechanical-hydraulic production equipment from continuous rolling to pre-finishing package, excluding the reheating furnace and eddy current inspection unit.

Ansteel expects increase in production from CISDI upgrade of its slitting line

China's state-owned steelmaker Ansteel is anticipating a substantial increase in production and quality as a result of a planned upgrade of its slitting line.

The major revamp will see the creation of a 250,000t/a tension leveling, trimming and recoiling unit. Ansteel are pledging to utilise a significant amount of existing equipment.

The upgraded unit will conduct withdrawal straightening of annealed and leveled strip to improve its profile and trimming quality.

The new slitting line will also be capable of strip surface inspection, head and tail end cropping, coil dividing and oiling.

The upgrade will bring the slitting process into line with the plant's downstream requirements from mainly the strategic end-users and thin specifications of general end users.

CISDI learned it had won the contract for package supply of the 1,350mm unit on October 28. It will be undertaken by MCC-SFRE Heavy Industry

Equipment, a subsidiary of CISDI Group, which manufactures and distributes industrial machineries.

MCC-SFRE produces, processes, and sells heavy duty equipment and other related products.

PLEASE REWORK THIS SECTION...It holds over 2,000 production and processing equipment for smelting, casting, forging, heat treatment, plate working and welding, machining and assembly. Among the rest, the single casting capacity can reach a net weight of 230t, the maximal mill roll has a net weight of 65t, and the heaviest overhead crane lifts 260t.

MCC-SFRE is a trusted supplier to industries ranging from metallurgy and mining, to machinery and integrated equipment manufacture. It also works closely with the petroleum and chemical industries and specializes in water conservation and hydropower, marine and environmental protection and the military.

CISDI enables Yingkou Steel to almost triple production by rebuilding BF2

A new blast furnace 2 at Yingkou Steel almost tripled its output within 60 hours of start-up.

Wang Hong, the president of Yingkou Steel, hailed the rebuilt blast furnace's performance as the most successful revamp project in the plant's history.

The BF2, rebuilt by CISDI on an EPC basis, was smoothly blown in on October 27. It tapped hot metal just after midnight and had used TRT two hours later. PCI was being used by 05:34am.

Normal production output rose from 680 tonnes on the first tapping day to 1,910t by the fourth day. The guaranteed daily output, set at 1,800 tonnes, was reached within 60 hours of startup.

The furnace is now tapping new high hot metal on a daily basis and output is set to increase.

CISDI took 79 days to complete the rebuild and startup of the blast furnace - nine days ahead of the contractual schedule.

Their task included the total replacement of the shell and related coolers and refractory. Foundations above ground had to be totally reconstructed and CISDI optimised the charging system. The top and top cone of the blast furnace were reused.



New stove dome is closed for Erdemir BF1 in Turkey

Construction of a new stove proper refractory at Erdemir, the largest iron and steel company in Turkey, is now complete.

CISDI's engineers finished a major phase, closing the dome of the new stove for blast furnace 1, at the end of September.

Erdemir was founded in 1965 and is the largest flat steel producer in Turkey. It produces plates, hot and cold rolled sheet and tinplate.

The new internal combustion stove works for the BF1 with a volume of 1,850m³ and can achieve a blast temperature of 1,250°C.

Presently, the hot blast piping refractory, steel structures, pipework, equipment installation and excess heat recovery facility rebuild is progressing in good order.

To ensure they were available at all times to guide

and problem-solve for the local construction team, CISDI's supervision engineers had been on-site since June. Their presence enhanced understanding of design drawings and building process, and ensured the project kept to the time schedules.



CISDI works through typhoons to deliver Beihai Chengde's new reheating furnace to deadline

A new reheating furnace at Beihai Chengde Steel Rolling passed its load test first time on October 20.

CISDI Thermal were tasked with the challenge of creating the new No.3 furnace for the plant's hot mill on an EPC basis and have been working on the project, from detailed design, procurement and construction management through to load testing, for the last nine months.

There were numerous challenges to be met along the way. CISDI had to ensure production from the workshop's No.1 and 2 reheating furnaces was not interrupted and the high summer temperature and several typhoons affected construction.

But by mobilising all its resources, CISDI Thermal completed the site work in just 100 days, and delivering the project on schedule.

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Our Birthday: Grand Opening of CISDI USA in the Steel City

CISDI has announced a further leap in its international operations with the launch of a US subsidiary.

An office has now opened in Pittsburgh, Pennsylvania, America's Steel City.

CISDI chose Pittsburgh for its world-renowned metallurgy industry and its geographical

importance. The centralised location of the State of Pennsylvania connects trade from East to West America.

The subsidiary, which is based at One PPG Place in downtown Pittsburgh, is headed up by Robert Smith, CEO of CISDI USA Inc.



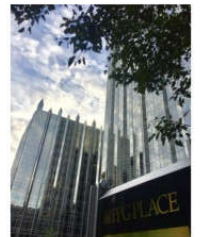
CISDI USA's offices



A bird's eye view from the offices of CISDI USA



Stunning views from the offices at One PPG Place



One PPG Place in downtown Pittsburgh

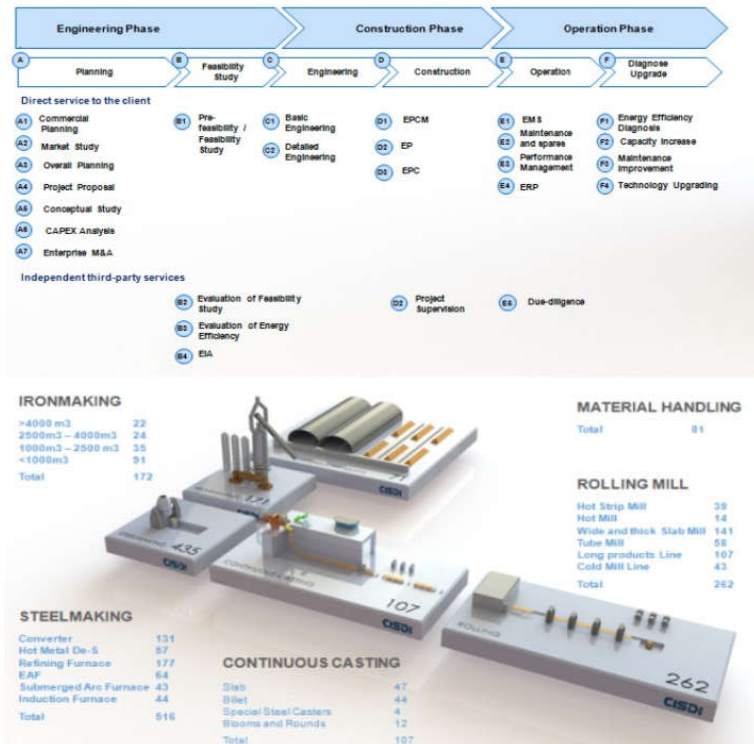
What We Do: An Inside Window into NAFTA Marketplace

CISDI USA's Pittsburgh team will provide "an inside window into the American steel industry".

Mr. YU Zhaohui, the CEO of CISDI Group, outlined the vital role the American subsidiary would play in the company's global operations when he attended the launch of the new offices on October 22.

"The subsidiary will utilise CISDI's global resources to preempt the Americas market," he commented.

"Its pioneering team will work in the metallurgy and infrastructure arenas, strengthening relationships with local partners and promote to the American and NAFTA marketplace CISDI's multi-disciplinary expertise in making steel plants more productive and energy-efficient through upgrading and modernisation."



CISDI USA will provide the following facilities for all CISDI group companies:

- Global support and sales
- Quality control and standards
- Engineering
- Project management
- Global procurement
- Training

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How We Succeed: Together Everyone Achieves More

The American subsidiary will be a vital aid in CISDI's mission to provide cost-effective, prime quality equipment and technical services and systematic solutions to clients in the NAFTA region.

CISDI USA will amplify to a global audience the technical expertise, rich experience and extensive resources harnessed at CISDI's headquarters in Chongqing, China, and the strong personal reputation and close connections the company has forged with major clients and local partners over its 30 years in the metallurgy industry.



Message from Robert Smith, CEO of CISDI USA:



The opening of CISDI USA symbolises CISDI Group's strong presence in the NAFTA market and its full commitment to serving it.

We believe our global expertise in the iron and steel industry; along with our global cost competitiveness from a commercial perspective, makes us more than competitive against global competition.

Just take, as one example, the number of blast furnace projects CISDI has accomplished. It far outweighs the combined total carried out by our three worldwide competitors.

Similarly, our technical expertise in other product lines throughout the entire metallurgical process, such as stockyard, converter and caster, reheating furnace and rolling mill, has been proven to be equally successful to our blast furnace product line expertise.

Realising that the market here in North America is a mature market, we will start our business initially from ground level - such as the supply of minor and major spare parts - , and we will expand step by step on to rebuild and modernisation projects and new equipment supply.

We will focus on major flat product producers, such as USS and AM USA, as well as specialty-steel producers such as Union Electric Steel, Ellwood Group Inc., and long product producers such as Gerdau and CMC.

Even though we have been working with our headquarters as one team for a short period of time, it feels as though we have been together for several years. And we are now in the process of aligning a strong local core team for project management and engineering, complemented by the support of individuals from headquarters. I am therefore confident in building a business based on an American-Chinese team that can bring added-value to our end users in the near future.

Smart logistics system brings stockyards into an intelligent age

The future is bright for CISDI's unique smart logistics system, which is already bringing stockyards in Asia into an intelligent age.

Simple to operate, the system enhances the automation and intelligent level of stockyard production by improving the efficiency of material conveying and reducing running equipment redundancy and idle rates.

It is creating tangible benefits for CISDI clients. The system first went into online operation in Baosteel Zhanjiang's stockyard project in March 2015 and just five months later, a smart logistics system was started up at Zhanjiang's stockyard.

The following May, CISDI successfully introduced smart logistics at Tangshan Ruifeng's environment-friendly stockyard. And in June this year, there was a smooth startup of the application at Formosa Ha Tinh in Vietnam. Next year, it will transform the MCKIP ASSB stockyard in Malaysia.

CISDI's patented logistics technology creates a full-free-process automation control model to accommodate the route smart decision system, route automatic navigation system and equipment control system. It works like a map: it envisions stockyard equipment as roads and interfaces between equipment as key crossings.

All an operator needs to do is input start and end points. The software automatically generates all possible conveying routes between them - and makes dynamic decisions on the optimal route according to strategic analysis of cost, energy consumption, time, route length and production plan.

At the same time, the running status of processing equipment is automatically navigated to achieve real-time tracking of the path line of material.

Currently, stockyards running via conventional automaton control systems are far less competent.

They operate via large quantities of equipment and facilities which connect end to end with each other to form hundreds of material conveying routes.

These process routes are intricate and hard to control and the operator has to work from memory of route codes. Selecting better routes and tracking materials in real time is extremely difficult and the result is low operation efficiency.

Zhanjiang's stockyard is a prime example of the advantages CISDI's smart logistics technology brings to operations. To achieve an annual capacity of 34.1Mt, it is designed with over 1,600 material conveying and delivery routes.

Undoubtedly, a traditional logistics automation system would not have enabled Zhanjiang's plant to become the global leader it is today, with the highest of efficiency indicators.

CISDI now hopes to introduce other related smart systems - such as smart logistics, digital yard, unmanned stacking and reclaiming at the core - into Zhanjiang's stockyard and play the leading role in bringing it truly into an intelligent age.

CISDI's SCAP top lance reaches a milestone in pilot test

A SCAP top lance designed by CISDI for RH vacuum refining furnaces was incorporated into Chongqing Steel's meltshop on September 30 after a successful phase of pilot production.

The Supersonic Co-jet and Annular nozzle for Powder spraying is capable of a number of functions for the metallurgical industry, such as oxygen blowing, powder injecting and CO secondary combustion for heating vacuum tanks, all of which operate in vacuum conditions.

It can also carry out the functions of baking vacuum tank by fuel gas heating, the thawing of bonded steel (slag), automatic ignition and flame monitoring, and continuous temperature measurement in atmosphere.

The CISDI SCAP top lance was put into #1 duty

position in the 210tRH refining furnace at Chongqing Steel's meltshop in March. By September over 2,000 heats had been carried out on a total of 420,000 tonnes of liquid steel.

Results of pilot tests show the SCAP top lance is a safe and reliable device which is easy to maintain as there is less sticking of slag. Its performance indicators meet Chongqing Steel's production requirements and are higher than those achieved by the KTB top lance in #2 duty position.

Design targets have also been met, with test results exceeding expectations.

The SCAP top lance will remain at the meltshop, where it will undergo further industrial tests on its service life.



CISDI smart stockyard technology

CISDI has taken the lead in smart stockyard technology research development for the metals industry and successfully applied it at Baosteel Zhanjiang, a demonstration reference of China's first unmanned and digital stockyard.

Technical highlights:

- Free-process control: the material route is configurable and the conveying process traceable
- Unmanned stacking and reclaiming operation: a monitored driverless stacker and reclaimers operates automatically, with anti-collision features
- Digital stockyard: features a 3D display of the stockyard, automatic inventory-making (distribution of stock piles, volumes, weights) and

an inventory reporting chart

CISDI will be committed to developing and building green, smart stockyard with enhanced equipment operating efficiency and improved labour conditions.



CISDI smart stockyard technology

- A subsidiary of CISDI Group, dedicated to equipment manufacture
- Established as CISDI's R&D pilot centre, core product manufacturing base and equipment manufacture and integration base
- Annual production of more than 30,000t of equipment and products
- Providing a life-cycle support for total equipment solutions
- Synergising the process from equipment research, development and design to manufacture, incorporating smart, information and control technologies in core equipment



CISDI's equipment manufacture center



Guofeng Steel's 5-stand tandem cold mill, designed, manufactured, installed and commissioned by CISDI



Jiangsu Chengde Steel 3-roll multi-stand pipe mill incl. sizing mill, a world first designed, manufactured and commissioned by CISDI