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# Enterprise Information System Integrated Services

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## Solutions of Automation Control Systems for the Steel and Aluminum Industry

- Automation Control Systems for Raw Material Handling and Iron Making Process
- Automation Control Systems for Hot & Cold Rolling Process
- Automation Control Systems of Utility Facilities for the Steel and Aluminum Process
- Automation Control Systems for Public Works and Power Plants

## Solutions of Process Information Systems for the Steel and Aluminum Industry

- Process Management Information Systems and Process Control Computer System

## Intelligent Monitoring and Control Products

- Intelligent Detecting and Monitoring System

## Solutions of Logistics and Public Transportation

- Vertical Automatic Coil Storage System (VACSS), Warehouse Management Computer System for Steel and Aluminum Products
- Logistics System
- Public Transportation
NEW PROJECT

CHINA STEEL GROUP

China Steel Corporation | Integrated Steel Mill

The “Integrated Information System Services” is an overall information system architecture established by consolidating functions of the six major modules, including sales, production and quality, financial management, human resources, procurement-transportation-inventory and equipment management, and then incorporating the integrated concept of operation which is market-oriented and takes accounting and bookkeeping as the main core.

China Steel Corporation | Integrated Steel Mill

DRAGON STEEL CORP commissioned InfoChamp to develop and incorporate the Overall Information System, covering 10 domains and 101 systems. There are four phases for the development, including the general management system, expansion project management, different sizes of steel billet, section steel production and sales system as well as ironmaking, steelmaking, rolling mill information system and equipment management system for steel metal product line in order to establish information operation of the huge integrated steel plant of DRAGON STEEL in the future.

China Steel Corporation | Ching Hung Steel Corporation (HSM)

The i-SEAS Steel Industry Overall Information System developed by InfoChamp incorporates some system modules, including Information Processing Management System (IPMS), financial and accounting management, human resource management, procurement-transportation-inventory management, administrative support management, business and sales management, production and quality management, and equipment management. The “Development and Incorporation of Equipment Asset Management System” means to incorporate the eMCS, which is a product of InfoChamp, to construct a complete equipment asset management information system for various management activities, including equipment asset data, maintenance plan, outsourcing cooperation, maintenance expense, maintenance history and performance, regional spare parts, and oil product inspection.

MAINLAND CHINA REGION

Baosteel Group Corporation | Integrated Steel Mill

The “Overall Production and Sales Information System Services” covers 37 related systems, and their operations expand to sales and production of the whole plant. Through the introduction of InfoChamp solutions, information can be effectively centralized and a high degree of information sharing also can be achieved.

Baosteel Group Corporation | Integrated Steel Mill

The development of the “Overall Equipment Maintenance Management Information Systems” includes 10 application subsystems which cover all maintenance management activities and cost performance occurred during the whole lifecycle of equipment from the construction phase to the retirement phase.

Wuhan Iron And Steel (Group) Corporation | Integrated Steel Mill

The “Overall Production and Sales Management Systems” is an overall management system exclusive to the steel industry developed for sales, production, quality, shipping, billing, cost, and information management of the Wuhan Iron & Steel Corp. In order to carry out operation rationalization, management computerization and production automation.

Ningbo Iron & Steel Corporation | Integrated Steel Mill (HSM) Hot Strip Mill

The i-SEAS Steel Industry Overall Information System developed by InfoChamp incorporates system modules, such as Information Processing Management System (IPMS), financial and accounting management, HR management, procurement-transportation-inventory management, engineering management, business and sales management, production management, quality management, and equipment management. It also incorporates technique transfer, including system (source code) transfer, system environmental planning and adjustment, CMMI system import, and system cooperation and development.

Benzhong Iron & Steel (Group) Corporation | Iron & Steel Making, Plate Rolling and Sales of Related Products

BENZHI IRON & STEEL CORP. is a super large iron and steel integrated enterprise with fully furnished services of mining, ore screening, sintering, ironmaking, steelmaking, rolling, oxygen making, power generation utility, water supply, transportation, equipment manufacturing, building construction, international trade as well as technology research and development. InfoChamp provides Benzi with the services of “Overall Information System Development and Building,” covering more than 80 related systems, such as sales, production, quality, equipment, procurement-transportation-inventory, finance, human resources, etc. Through the introduction of the total solutions proposed by InfoChamp, “an overall production and sales information system of sales-production integrated management and tracking, which is market-oriented and takes accounting and bookkeeping as the core,” is established to provide the group with necessary integrated management information, establish ability of integrated enterprise production and sales management, and further enhance overall competitiveness of the enterprise.

Nanjing Iron & Steel United Corporation | A super-large iron and steel united company with integrated ore screening, iron & steel making and steel rolling

(1) Integrate distributed information resources of the enterprise
(2) Construct information operating platform of the enterprise
(3) Refine data acquisition system of the enterprise
(4) Realize integrated operation of production and sales
(5) Build process assessment model of the enterprise
(6) Optimize performance indicator tracking system
(7) Break through the bottleneck of financial business integration
(8) Fully realize the objectives of integrated management and control
Jiangsu Shagang Group Corporation
A super-large iron and steel united company

The main purpose of the ‘Real-time Dispatching and Monitoring System of Steelmaking Operation Plan’ is to provide quick and convenient scheduling from BOF to CC for steelmaking scheduling staff with aids of computer scheduling system, and to integrate production performance information of various process machines with single common platform in order to achieve the goal of real-time monitoring. In case of abnormalities, the system will respond in a timely manner and adjust to meet regulatory requirements to ensure smooth production.

In 2013, several equipment management construction projects were implemented, including the Equipment Management System and the Fixed Asset Management System. The Equipment Management System provided features of account, spot checking, maintenance, repair of spare parts, outsourcing contract, malfunction of machine, maintenance expense, all kinds of history, measuring equipment calibration, inspection of special equipment, oil product test, and hand-held device patrol. The Fixed Asset Management System provided billing and physical management functions, including the ledger, making an entry in the account book (including inspection and acceptance for buying at retail, inspection and acceptance of project item), transfer, increase or decrease in values, and charging an account.

This project was able to complete in-depth integration with several ERP modules of JIANGSU SHAAGANG GROUP, including procurement and inventory, finance and accounting, and cost, and to realize comprehensive and full lifecycle management requirements of enterprise assets. It not only had a clear grasp of asset inventory and status but also improved equipment availability and reduced total cost of equipment maintenance, providing the most solid foundation for business operations and benefits.

Jilin Steel Corporation
Iron & steel smelting, plate rolling and sales of related products

Main products: Carbon structural steel, quality carbon structural steel, low-alloy structural steel, atmospheric corrosion resisting steel for welded structure, and automobile beam steel. InfoChamp provides development and establishment in Phase I, plant construction period, covering modules of human resources, engineering management, financial management and procurement-transportation-inventory management. In addition, management system of data, production and quality data are provided by InfoChamp in the Phase II operation period. JILIN STEEL CORP. brought in overall business management thinking philosophy and model of China Steel Corp. of Taiwan, and took roots in advanced system and process of iron and steel businesses in the system introduction phase.

Beiyin Iron & Steel Group Co., LTD.
An iron & steel enterprise owned by the Benxi Iron & Steel Group

BEIYIN IRON & STEEL GROUP was the first customer of InfoChamp in the Mainland China region where the Overall Information System was implemented in the manner of migration. The Overall Information System was customized to be suitable specifically for BEIYIN based on the ERP system of BENXI after going through variance analysis. Various management domains were included in the system, including production, sales, quality, finance, procurement and inventory, equipment, and human resources, in conjunction with coding system and management system. Organizational changes were successfully completed and the system was available online in eight months only, making a new record on domestic informatization projects of the same scale.

Yongfeng Group Co., LTD.
High-grade wire rod steel

YONGFENG GROUP owns numerous subsidiary companies, such as Shandong Laigang Yongfeng Steel & Iron Co., Ltd., Shandong Yong Tong Industrial Co., Ltd., etc. Business scope of YONGFENG GROUP includes investment in industrial projects, ferrous metal smelting, rolling and processing, sales of ores, industrial gas manufacturing, power supply, logistics services, construction and installation, real estate development, and proprietary import/export business. The Overall Information System was introduced to the company in 2016, and contents of the system included overall production and sales quality operation, procurement-inventory-transportation, financial cost, equipment and human resource management.

Tangshan Iron & Steel Group Co., LTD
Formed steel, medium-thickness plate

TANGSHAN IRON & STEEL GROUP is one of the subsidiary companies of the HEBEI IRON & STEEL GROUP. The main business of TANGSHAN includes the auxiliary production capacity of 16 million tons annually. The four major product categories are plate, rod, wire and form with more than 140 products, such as hot rolling sheet, cold-rolled sheet, galvanized plate, color-coated steel plate, medium-thickness plate, stainless steel, steel rods, steel wire, formed steel, etc. InfoChamp built the MES system for the formed steel plants and medium-thickness steel plate plants of TANGSHAN. The system included quality management and control, production planning as well as management and control optimization for achieving the goal of multi-process design, order priority process allocation as well as integration and tracking of contractual production status, and also seamlessly integrated with heterogeneous platforms.

Baogang Group
Having an iron and steel industrial base with production level of ten million tons, focusing on iron & steel industry, rare earth industry, mining industry, and non-steel industry

BAOGANG GROUP has four major series of products, including plates, pipes, rails and wires. It is one of the major high-speed steel rail suppliers and one of the seamless steel pipe production bases in China with the most complete types and specifications. InfoChamp introduced the i-SEAS information system to the company, including integrated production and sales platform, e-commerce, mobile commerce and financial management, equipment management, HR management and procurement-transportation-inventory management.
**NEW PROJECT**

**Tianjin Pipe (Group) Corporation**

The largest petroleum casing pipe manufacturer in mainland China

The main products of TIANJIN PIPE (GROUP) CORPORATION are seamless steel pipes, including petroleum casing pipe, oil pipe, drill pipe, high- and low-pressure boiler tube, high-pressure gas cylinder tube, pipeline, etc.

Due to market considerations, TIANJIN PIPE invested US$1 billion in building the seamless steel pipe plant in the U.S. A full production line from steel making, pipe rolling, heat treatment to pipe processing was established at the plant with expected annual production output of 500,000 tons of seamless steel pipes.

InfoChamp introduced the informationized management system in two phases: implementation of integrated production and sales platform for heat treatment and pipe processing lines in Phase I, and implementation of production-sales-quality system and related systems of finance and accounting, human resource, costs and equipment management as well as steelmaking, hot rolling production lines in Phase II.

**Zenith Steel Group Corporation**

An important supplier of steel construction material, industrial wire, and industrial rod

The main products of ZENITH STEEL include hot rolling ribbed steel bar, hard wire, steel strand, PC steel rod, and bearing steel, with an annual output exceeding ten million tons. In 2012, wire and rod informatization products of InfoChamp were incorporated into ZENITH STEEL to implement the overall production and sales system, iron ore MES, procurement-transportation-inventory, equipment, cost, data collection, inspection and testing, electronic sales, electronic procurement and decision support.

**SOUTHEAST ASIA & INDIA**

**China Steel Sumikin Vietnam**

A cold-rolling mill

InfoChamp integrated China Steel Corp. with NSSMC management concept to build the Overall Information System for the cold-rolled steel re-rollers in response to local needs. The system covers operating management of company operations, including sales, production and quality, finance, human resources, procurement-transportation-inventory and equipment. Furthermore, the system highly integrates with production line control system, storage area management system, and laboratory management system in order to achieve the management objectives of information at source, automation, real-time and integration.

**China Steel Corporation India**

A cold-rolled steel re-roller

In cooperation with the progress of plant building, management system of plant building phase and management system of operation phase were introduced in different phases. The management system of plant building phase included engineering contract, budget, human resources, attendance, procurement, reporting expenses, payables, and accounting management. The management system of operation phase included procurement of raw materials, sales, quality, production, equipment, cost, invoice and receivables. The overall management system was built to meet system implementation requirements, such as short construction period, low cost and seamless integration of plant building phase and operation phase.

**Group Steel Corporation (M)**

Pickled and cold rolled product, hot-dip galvanization and colored steel sheet

InfoChamp takes the i-SEAS as the architecture to incorporate relevant production and sales management as well as procurement-transportation-inventory management, which is to include purchase, orders, scheduling, production, release, shipping, clearance and manufacturing norms in the management system. The "development and import of equipment asset management system" means to incorporate the eMVR, which is a product of InfoChamp, to construct a complete equipment asset management information system for various management activities, including equipment asset data, maintenance plan, outsourcing cooperation, maintenance expense, maintenance history and performance, regional spare parts, and oil product inspection.

**MEGASTEEL SDN BHD (Malaysia)**

Electric furnace steelmaking, GSP hot rolled steel coil, and cold rolled steel coil

The i-SEAS Metal Industry Overall Information System developed by InfoChamp introduces system modules, including Information Processing Management System (IPMS), finance and accounting management, procurement-transportation-inventory management, business and sales management, production management, quality management, equipment management, and technology transfer including system transfer.

**BRIGHT STEEL SERVICE CENTRE SDN BHD**

Iron & steel shearing and processing, sales and manufacturing industry

BRIGHT STEEL SERVICE CENTRE is located in the Selangor of Malaysia. The planning of the Overall Information System for the Shearing Industry includes: Information Processing Management System (IPMS), finance and accounting management, material procurement management, business and sales management, production management and cost management. In addition, customized system development is conducted on the Bar Center production process. It is the overseas English version of the "Overall Production and Sales Management System" specifically developed for product applications of the "Steel Shearing and Processing Industry."
TAIWAN REGION

Yeun Chyang Industrial Corporation
Stainless steel shearing, seam stainless steel pipe

The overall planning was incorporated into the Overall Information System for Manufacturing Industry developed by InfoChamp, including Information Processing Management System (IPMS), finance and accounting management, human resource management, procurement-transportation-inventory management, business and sales management, production management, quality management, and equipment management. It is the blueprint for planning Phase I system import.

Chien Shing Stainless Steel Corporation
Integrated stainless steel smelting and rolling

The “Overall Information System” covers sales, production quality, finance-cost, procurement transportation-inventory, equipment management, and human resources. The system will be completed and available online within four months through the quick import mode of InfoChamp resolution.

Yuan Long Stainless Steel Corporation
304 stainless steel, 430 stainless steel

The “Overall Information System” covers sales, production quality, finance-accounting-cost, procurement-transportation-inventory, equipment management, and human resources. The system will be completed and available online within four months through the quick import mode of InfoChamp resolution.

Walsin Lihwa Corporation
Focusing on diverse domains, including wire and cable, special steel and hi-tech reinvestment

The special steel business territory of WALSIN LIHWA stretches across Taiwan, Hong Kong and mainland China. The steel plant under construction has frequent interaction with vendors. As a result, there is an urgent need for organizing and managing numerous and complex engineering graphic materials. InfoChamp introduced a graphic system with authorized management mechanism as well as process and audit management capabilities, which can quickly build relevant graphic data and manage different versions. Through convenient structural inquiry features, the system can be more effective in reducing unnecessary waste of time for searching documents.

Yung Kuang Hwa Metal Industrial Corporation
Steel plate shearing, steel structure processing

Headquarters of YUNG KUANG HWA METAL INDUSTRIAL CORP. is located in Taipei, including departments of operations, finance, accounting, and administration. The steel plate mill and steel structure mill belong to the Department of Production situated in the Pingzhong Industrial Park of Taoyuan County. The production and sales system will be introduced in Phase I. Geographical limitations between taking sales orders and plant

Cuan Yuan Steel Industry Corporation
Electromagnetic steel, special steel

To develop and incorporate business sales, production management (including material inventory) and cost system into the Taiwan Silicon Steel Division (Erchong Plant, Taichung Plant).

Great Grandeul Steel Corporation
Steel shearing and processing, sales and manufacturing industry

Receiving orders, production scheduling, issuance of work orders, raw material warehousing, getting materials ready for going out of the warehouse, production result feedback, product entering the warehouse, delivery of goods, bill of lading issuance, shipping, accounts receivable, invoice issuance, cost accounting, and final accounting are all included. The integration with China Steel Corp. e-business is specifically designed in order to achieve collaborative operations of micro supply chain. The “Overall Production and Sales Management System” is developed specifically for the “Steel Shearing and Processing Industry.”

Superiority Steel Corporation
Steel shearing and processing, sales and manufacturing industry

SUPERIORITY STEEL CORP. is located in the Anping Industrial Zone of Tainan City. Planning of the Overall Information System for the Shearing Industry includes: Information Processing Management System (IPMS), finance and accounting management, material procurement management, business and sales management, and production management. A feature of integrating with China Steel Corp. e-business is particularly designed to achieve collaborative operations of micro supply chain. The “Overall Production and Sales Management System” is developed specifically for small and medium “Steel Shearing and Processing Industry” in Taiwan region.

Sheng Yu Steel Corporation
Cold rolling, baking finish, galvanized steel coil

The “Development and Import of Equipment Asset Management System” means to incorporate the eMOS, which is a product of InfoChamp, to construct a complete equipment asset management information system for various management activities, including equipment asset data, maintenance plan, outsourcing cooperation, maintenance expense, maintenance history and performance, regional spare parts, and oil product inspection.
Neoflex Technology Corporation | Manufacturing industry of electronic parts and components

In consideration of its industrial and bonded features, the established capabilities include MRP, BOM, production scheduling, delivery of work order and production order, quality control, delivery of goods, issuance of bill of lading, shipping, accounts receivable, invoice issuance, bonded, and cost accounting in order to achieve integrated production and sales as well as benefits of instant warehouse information.

Shu Sheng Metal Corporation | Manufacturing, processing and sales of hardware industry

In consideration of its industrial and bonded features, the established capabilities include MRP, BOM, production scheduling, delivery of work order and production order, quality control, delivery of goods, issuance of bill of lading, shipping, accounts receivable, invoice issuance, bonded, and cost accounting in order to achieve integrated production and sales as well as benefits of instant warehouse information.

Non-ferrous Metal Processing Industry

China Steel Aluminium Corporation | Manufacturing industry of aluminium product

Properties of metal smelting with continuous production were incorporated into accounting and bookkeeping, and were regarded as the core. The six major domains, including enterprise business, production, equipment, procurement-transportation-inventory, human resources and finance, also were integrated so as to form a WEB-BASED corporate overall information system with complete capabilities.

Ningbo Huayang Aluminium-Tech Corporation | Manufacturing, processing, development and sales of new aluminum alloy

By utilizing extensive experiences of InfoChamp in the steel and aluminium industry, related information systems were brought in, including information operation management, finance and accounting management, HR management, procurement-transportation-inventory management, business sales management, production management, and equipment management, together with adjustment and optimization in coordination with aluminium product features of mainland China.

Manufacturing Industry

Family Glove Corporation | Manufacturing, processing, sales and import/export of gloves

Receiving orders, production scheduling, issuance of work orders, MRP, procurement, raw material warehousing, getting materials ready for going out of the warehouse, production result feedback, product entering the warehouse, shipping, accounts receivable, invoice issuance, cost accounting, and final accounting are all included. In addition, production results collection and feedback of Taiwan, Hong Kong and mainland China also are included.

Taiwan Steel Tower Corporation | Steel tower production and cable installation industry

Information management systems involving procurement, raw materials, orders, production and finance are imported aiming at the needs of the company business. Functions of master production scheduling, material requirement planning, production order management and shop floor control are designed specifically for the assembly industry. In addition, integrated services for conversion and upgrade of system software/hardware also are provided.

Taiwan Rolling Stock Corporation | Vehicle manufacturing and maintenance industry

To plan for TAIWAN ROLLING STOCK CORP some related systems, including company information portal website, information operation management, finance and accounting management, HR-payroll-attendance management, procurement and material management for establishing the basis of information operations.
Trading Industry
China Steel Global Trading Corporation
Import/export, trading, buying and selling industry
InfoChamp provides CHINA STEEL GLOBAL TRADING CORP. with major functions of a trading company, including finance and accounting management, procurement management and sales management, and covers centralized information operations for subsidiary companies around the world as well as supplies global and instant integrated information.

Shipping Industry
China Steel Express Corporation
Vessel transport, buying and selling, leasing business
The “Overall Information System for Express Network” provides capabilities of Enterprise Application Integration (EAI), Enterprise Information Portal (EIP), load balancing network and hardware architecture, covering shipping and transportation management systems including all kinds of voyage management, information correction of finished boat, quick extension fee management, and voyage revenue estimate, and vessel ship management systems including material and parts management, seafarer-HR-payroll management, and work order management. By coordinating with the general management systems, such as shore duty human resources, finance and accounting, the overall information system will become a total solution for vessel transport and shipping industry.

Venture Capital Industry
Gains Investment Corporation
Investment in production business of all kinds
GAINS INVESTMENT information system covers main business functions of an investment company, including enterprise information portal website, information authorization and security management, general accounting management, expenditure control management, direct investment management, financial investment management and short-term fund management, for providing global and instant integrated information.

Security Industry
China Steel Security Corporation
Security services, including security guard, surveillance, entry access control
Security business can be roughly divided into system security and guard security. The focal point of the information system of CHINA STEEL SECURITY is to establish a complex information system of receivables.

Machinery Industry
China Steel Machinery Corporation
Machinery & equipment manufacturing industry
In the initial phase, InfoChamp introduced enterprise information portal website, information authorization and security management, general accounting management, expenditure control management as well as HR and payroll management for establishing the foundation of information operations for CHINA STEEL MACHINERY CORP.

Fastener Industry
San Shing Fastech Corporation
Manufacturing, processing and sales of screws and nuts
The “Overall Production and Sales Management System” is designed specifically for the “Fastener Industry” to provide corresponding system capabilities for related businesses of production and sales processes, including calculation of demand for raw materials, raw material procurement, acceptance and warehousing, receiving orders, production scheduling, dispatching, preparation for an item going out of the warehouse, production result handling, product warehousing, delivery of goods, and accounts receivable.
Mass Rapid Transit System

Kaohsiung Rapid Transit Corporation

Mass Rapid Transit System operation

The Red Line and Orange Line Metro Kaohsiung projects of the KAOSHSIUNG RAPID TRANSIT CORP. are still under construction. At the present time, apart from building the general operations of the company, including enterprise portal website, finance and accounting management, HR management, material procurement management, and office automation support management, the information system primarily focuses on building engineering management related systems, such as engineering management, engineering inquisition and valuation management, engineering drawings management, file and document management, hazard prevention management, industrial safety management, engineering progress reporting management, risk management, checking records management, and engineering quality records management, to ensure that engineering works can be completed as scheduled with expected quality within the budget range for the benefit of the public.

Governmental Authorities

Central Mint Factory

Currency in circulation, precision casting mintage, commemorative coin

The newly developed and imported Production and Sales Information System is to build an integrated information system to effectively integrate sales and production businesses in conjunction with the introduction of information operation management and office information system. The information system provides single portal and standard user interface, shortens user learning curve, supplies instant information, and establishes Web operating environment. No space limitations on acquisition of information, information input at source and online checking also are included to ensure information accuracy and consistency, rigorous information confidentiality authorization mechanism and system parametric design as well as to reduce program modification time and costs.

Central Engraving and Printing Plant

Engraving and printing of securities, such as banknotes, tax receipts and postal stamps, and printing of governmental documents

By cooperating with computer system and operating environment of the CENTRAL ENGRAVING AND PRINTING PLANT, a Corporate Objective Management System is built to integrate interdepartmental information and establish integrated businesses of sales, production, material and cost in order to enhance information sharing and correctness as well as achieve better production type by taking orders.

To build a Web operating environment, provide single portal and standard user interface so as to achieve a simple, real-time and convenient

Environmental Protection Industry

China Ecotek Corporation

Environmental protection engineering

CHINA ECOTEK CORP. is second to none in the industry of environmental protection in Taiwan. Therefore, one of the major focuses of the project is to incorporate the Overall Engineering Management Information System for the company. It is an information system containing a series of engineering automation and integration systems, including receiving tenders, preparation of tender documentation, submitting tenders, winning tenders, budget, contracting out, procurement, estimate, construction management and cost management. This system is capable of making market demand oriented engineering budget and control closely integrated, and undertaking a construction job under contract with optimized cost. Furthermore, the system can quickly send actual operating condition to various management levels in order to provide decision making as well as necessary adjustment and measures so as to achieve the state of dynamic management.

Onyx Ts-Ho Energy Recovery Corporation

Waste removal and disposal

It is a small Production and Sales Information System. Functions of the system include customer management, business management, storage and transportation, production and accounting. It is an information system with a series of automation and integration processes. This system is capable of quickly sending actual operation status to various management levels in order to provide decision making as well as necessary adjustment and measures so as to achieve the state of dynamic management.
In the automatic production processes of the steel and aluminum industry, efforts were made to implementing of automatic production process, process improvement and establishment of monitoring system as well as supplying technical supports and information services for automatic control system of production process equipment in order to improve production efficiency and strengthen enterprise competitiveness.

Contents of the total solutions include raw material handling, blast furnace, steel making, continuous casting, hot rolling, cold rolling and utility facilities.
### New Project

- New project of online realtime moisture temperature detection system for the Coke line of China Steel Corp.
- New project of electric control system of equipment for BOF slag improvement experiment line of China Steel Corp.
- Renew project of electric control system for No. 1 & No. 2 Sinter Plant of China Steel Corp.
- Renew project of electric control system for No. 3 & No. 4 Sinter Plant of China Steel Corp.
- New project of DCS and PLC control system for No. 1 Blast Furnace of Dragon Steel Corp.
- New project of DCS and PLC control system for No. 2 Blast Furnace of Dragon Steel Corp.
- Renew project of electric control system of preheating equipment at No. 1 Blast Furnace of China Steel Corp.
- Renew project of electric control system of stack for slag granulation facility at No. 1 Blast Furnace of China Steel Corp.
- Renew project of electric control system of TRT and S/G facility at No. 1 Blast Furnace of China Steel Corp.
- Renew project of electric control system of gas system and auxiliary equipment at No. 1 Blast Furnace of China Steel Corp.
- Refining project of electric and instrumentation control system for No. 4 Blast Furnace of China Steel Corp.
- Renew project of electric control system and information system for all railroad system of China Steel Corp.

### Automation Control Systems for Steel Making Process, Continuous Casting Process, Finishing and Handling Process

- Renew project of Distributed Control System (PCS7) of No. 6 BOF at Steelmaking Plant of China Steel Corp.
- Renew project of Distributed Control System (PCS7) of dust collection integrated system for BOF at Steelmaking Plant II of China Steel Corp.
- Renew project of PLC control system of No. 3 FEF dust collection equipment at Steelmaking Plant of China Steel Corp.
- Renew project of electric control system of No. 1 Ladle Furnace at Steelmaking Plant of China Steel Corp.
- Renew project of PLC and HMI control system of No. 4 & No. 6 RH at Steelmaking Plant of China Steel Corp.
- Renew project of DCS and PLC control system of No. 3 RH and VOD at Steelmaking Plant of China Steel Corp.

- Renew project of electric control system of off line preheating equipment for No. 1 RH at Steelmaking Plant of China Steel Corp.
- Renew project of electric control system for No. 6 Slab continuous casting machine of China Steel Corp.
- New project of automatic control system of casting powder adding system for continuous casting machines (a total of 7 machines) of China Steel Corp.
- Renew project of electric control system for No. 3 Bloom continuous casting machine of China Steel Corp.
- Renew project of PLC control system for Phase III & Phase IV Slab finishing facilities of China Steel Corp.
- Renew project of PLC and HMI control system of new slab cutting line for Slab finishing facility of China Steel Corp.
- Renew project of PLC and HMI control system for Electric Furnace Plant of Dragon Steel Corp.
- New project of scrap charging computer system for Electric Furnace Plant of Dragon Steel Corp.
- New project of electric control system of slag spray equipment for BOF at the Steelmaking Plant of Dragon Steel Corp.
- New project of thermal imaging surveillance system of refining furnace at the Steelmaking Plant of Dragon Steel Corp.
- New project of electric control system of Slab finishing equipment at the Steelmaking Plant of Dragon Steel Corp.
- New project of electric control system of for billet finishing equipment and plate warehouse construction of Dragon Steel Corp.
Automation Control Systems for Hot & Cold Rolling Process

- Renew project of PLC control system of Billet surface processing line for Billet mill at Rolling Plant I of China Steel Corp.
- New project of Steel Slab ID Recognition system of Slab furnace for Plate mill at Rolling Plant I of China Steel Corp.
- New project of Laser Thickness Measuring system of Plate for Plate mill at Rolling Plant I of China Steel Corp.
- Renew project of electric control system of Slab furnace for Plate mill at Rolling Plant I of China Steel Corp.
- Renew project of electric control system of Walking Beam of Slab furnace for Plate mill at Rolling Plant I of China Steel Corp.
- Renew project of electric control system of Pickling line for Rod Mill at Rolling Plant I of China Steel Corp.
- Renew project of electric control system of Cold Levelling Machine No. 2 new Cold Levelling Machine and surrounding related equipment for Plate mill at Rolling Plant I of China Steel Corp.
- Renew project of electric control system for No.1 Rod mill at Rolling Plant I of China Steel Corp.
- New project of electric control system of spray rolling oil of Rough mill for No. 1 & No. 2 Hot Strip Mill at Rolling Plant II of China Steel Corp.
- Renew project of PLC control system of POL line for the Hot-Rolled Coil Finishing mill at Rolling Plant II of China Steel Corp.
- Renew project of PLC control system of No. 3 continuous annealing line at Rolling Plant III of China Steel Corp.
- Renew project of PLC control system of No. 2 continuous annealing line at Rolling Plant III of China Steel Corp.
- Renew project of PLC control system of Packing line for No. 1 continuous annealing line at Rolling Plant III of China Steel Corp.
- New project of electric control system of Slab Sizing Press (SSP) equipment for Hot Strip Mill of Dragon Steel Corp.
- New project of electric control system of No. 4 temper and recool line for Hot Strip Mill of Dragon Steel Corp.
- Renew project of electric control system of Pickling line for Cold Strip Mill of Chang Hung Steel Corp.
- Renew project of electric control system of cleaning line (EDL) for Cold Strip Mill of Chang Hung Steel Corp.
- Renew project of Digital Driver System (DDS) of Pipe cutting machine for No. 2 & 3 Piping machines at Steel Pipe Mill of Chang Hung Steel Corp.
- Renew project of electric control system of No. 5 Slitting and recool line for Rolling Mill of China Steel Aluminum Corp. (CSAC)
- New project of HMI control system of No. 6 Slitting and recool line for Rolling Mill of China Steel Aluminum Corp.
- Renew project of electric control system of No. 1 Continuous galvanizing line for Rolling Mill of Prosperity Tieh Enterprises.

Automation Control Systems of Utility Facilities for Steel & Aluminum Process

- Renew project of DCS control system and process information integrated system of No. 1 to No. 5 Boilers for Power Plant of China Steel Corp.
- Renew project of electric control system of FSSS system of Phase III Boilers for Power Plant of China Steel Corp.
- Renew project of DCS and PLC control system of Steam Turbines TG4 & TG5 for Power Plant of China Steel Corp.
- New project of electric control system of Demineralized water pump for Power Plant of China Steel Corp.
- New project of VVVF control system of circulating cooling water pump for Power Plant of China Steel Corp.
- Renew project of electric control system of CWP/BFP equipment for Power Plant of China Steel Corp.
- New project of temperature detection system of MCC panels for Power Plant II of China Steel Corp.
- Renew project of DCS control system of Turbine Blowers (TB) for Power Plant of China Steel Corp.
- Renew project of PLC & HMI control system of Biomedical waste water facilities for Water Treatment Plant of China Steel Corp.
- New project of electric remote control system of Industrial waste water purification facilities for Water Treatment Plant of China Steel Corp.
- New project of electric control system of steam storage device using recovered BOFG waste heat for Utility Department of China Steel Corp.
- New project of installation of fiber optic communications network for Utility facilities of China Steel Corp.
- New project of automatic reading function of power meters in plant areas of China Steel Corp.
- Renew project of improvement of energy measurement system for Utility facilities of China Steel Corp.
- New project of PLC & HMI control system of water treatment facility for No. 4 RH of China Steel Corp.
- New project of PLC & HMI control system of water treatment facility for No. 2 CSL of China Steel Corp.
- Renew project of PLC & HMI control system of Oxygen Plant I of China Steel Corp.
- Renew project of Relay and Power monitoring system of feeder management for Cold Rolling Mill of Chang Hung Steel Corp.
- Renew project of Power monitoring system and Protection Relay for Steel Pipe Plant of Chang Hung Steel Corp.
- Renew project of DCS control system of water treatment facility for Hot Strip Mill of Chang Hung Steel Corp.
- New project of DCS control system of Utility Dispatching Center (UDC) for Utilities Department of Dragon Steel Corp.
Renew project of PLC control system of water treatment facility for cold rolling mill of Hung Li Steel Corp.

Renew project of improvement of power factor and harmonic wave for the power system of Great Fortune Steel Corp.

**Automation Control Systems for Public Works and Power Plants**

- New project of electric control system of loading devices for composite fire-resistant furnace at Architecture and Building Research Institute, Ministry of the Interior.
- New project of installation of controller devices and radio system for Keelung River Remediation Plan.
- New project of installation of indoor coal bunker surveillance system at Hsinta Power Station of Taiwan Power Company (TPC).
- New project of electric control system of ship unloading facility at Hsinta Power Station of Taiwan Power Company.
- New project of electric control system of ship unloading facility at Talin Power Station of Taiwan Power Company.
- New project of electric and instrument control system of coal conveyor system at Taichung Power Station of Taiwan Power Company.
- Renew project of Siemens electric control system of coal conveyor of ship unloading facility at Taichung Power Station of Taiwan Power Company.
- New project of electric control system of coal conveyor system at Linkou Power Station of Taiwan Power Company.
- New project of electric control system of Continuous Ship Unloader (CSU) at Linkou Power Station of Taiwan Power Company.

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**SOLUTIONS OF PROCESS INFORMATION SYSTEM FOR THE STEEL & ALUMINUM INDUSTRY**

In the automatic production processes of the steel and aluminum industry, dedicated efforts were made to engineering operations of the total solutions, including process control computer system, process information computer system, statistics process computer system, thermal model of reheating furnace and annealing furnace computer system, Continuous Emission Monitoring System (CEMS) for air pollutants of stationary pollution source, air pollution and greenhouse gas information system, Energy Management System (EMS) and renewable energy management system.
Process Management Information Systems and Process Control Computer Systems

- New project of process control computer system for No. 3 Annealing and Coating Line of China Steel Corp.
- New project of process control computer system for Continuous Annealing and Pickling Line of China Steel Corp.
- New project of process control computer system for No. 3 Reversing Cold Rolling Mill of China Steel Corp.
- Renew project of process control computer system of Reheating furnace for No. 2 Bar Mill of China Steel Corp.
- Renew project of process control computer system of Batch Annealing Furnace for Hot Rolling Mill of Yeh United Steel Corp.
- Renew project of HMI of process control computer system for No. 3 Blast Furnace of China Steel Corp.
- Renew project of HMI of process control computer system for No. 4 Blast Furnace of China Steel Corp.
- Renew project of HMI SW/HW of process control computer system for No. 3 and No. 4 Sinter Plant of China Steel Corp.
- New project of process control computer system (RMHS) for Raw Material Handling System of Dragon Steel Corp.
- New project of process control computer system for No. 3 Hot Finishing and Recoil Line of Dragon Steel Corp.
- New project of process control computer system for No. 4 Hot Rolling Temper and Recoil Line of Dragon Steel Corp.
- New project of Statistics Process Computer (SPC) system for Hot Rolling Mill of Dragon Steel Corp.
- New project of Statistics Process Computer (SPC) system for Hot Roll Finishing Mill of Dragon Steel Corp.
- New project of Statistics Process Computer (SPC) system for Section Mill of Dragon Steel Corp.
- Renew project of process control computer system for Section Mill of Dragon Steel Corp.
- New project of HMI and Report of process control computer system for No. 2 Blast Furnace of Dragon Steel Corp.
- New project of process control computer system for "Phong Ho" Coke Oven Plant of Dragon Steel Corp.
- New project of process control computer system for Utility Facilities of Dragon Steel Corp.
- Renew project of process control computer system for Billet Casting Machine of Dragon Steel Corp.
- New project of Process Management Information System (PMIS) for Cold Rolling Mill of Chung Hung Steel Corp.
- New project of process control computer system of P-plan for new Pipe Mill of Chung Hung Steel Corp.

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INTELLIGENT MONITORING AND CONTROL PRODUCTS

To provide the total solutions and development of quality inspection system of product, production process surveillance, equipment monitoring system, software and Hardware of diagnostic system, and integration of advanced equipment.
Intelligent Detecting and Monitoring System

- New project of roller number identification (RFID) and roller information management system of hot and cold coil for Hot/Cold Rolling Mill of China Steel Corp.
- New project of online width and hole measuring system for High Finishing Line and Cold Rolling Mill of China Steel Corp.
- New project of online width and hole measuring system for Hot Finishing Line of Dragon Steel Corp.
- New project of online width and hole measuring system for Hot Temper Line and Galvanizing Line of Chung Hung Steel Corp.
- New project of online width and hole measuring system for Cold Rolling Mill of CSC STEEL SDN BHD, Malaysia.
- New project of online width and hole measuring system for Cold Rolling Mill of CSVC.
- New project of online coating/oiling thickness measuring system for Cold Rolling Mill of China Steel Corp.
- New project of continuous monitoring and control system for Picking Line of CSC Group.
- New project of online status visualization system of equipment for plant area of CSC Group.
- New project of arch-shaped steel belt monitoring and control system in hot rolling area of CSC Group.
- Ultrasonic C-SCAN System for online scanning of bonding quality of target materials.
- New project of Continuous Emission Monitoring System (CEMS) of environment in Dragon Steel Corp.
- New project of continuous automatic monitoring computer system of chimney in Dragon Steel Corp.
- Automatic monitoring system for Volatile Organic Compounds (VOCs) of electronic industry.
- Automatic monitoring system for Volatile Organic Compounds (VOCs) of the petrochemical industries and traditional industries.
- Automatic monitoring system for Volatile Organic Compounds (VOCs) of the contracted inspection industry for environmental protection.

SOLUTIONS OF LOGISTICS AND PUBLIC TRANSPORTATION

To be committed to technical supports and information services of engineering business solutions, including storage yard management system of steel and aluminum finished and semi-finished products, vertical automatic coil warehouse, vehicle tracking system, vehicle reporting, vehicle queuing, inspection of steel products, and gate clearance system in order to improve productivity and strengthen corporate competitiveness.
NEW PROJECT

Vertical Automation Coil Storage System,
Warehouse Management Computer System
for Steel & Aluminum Products

- New project of process control computer system of Vertical Automatic Coil Storage, Inspection and Packing Line (VACSS/PRLL/2NL) for No. 3 Cold Rolling Mill of China Steel Corp.
- New project of Transportation Management System (TMS) for bars and wire rods vertical automatic storage warehouse of China Steel Corp.
- New project of Warehouse Management System (WMS) for bars and wire rods vertical automatic storage warehouse of China Steel Corp.
- New project of Warehouse Management System (WMS) for aluminum products vertical automatic storage warehouse of China Steel Aluminum Corp.
- Renew project of Coil storage yard management computer system for No. 2 Hot Rolling Mill of China Steel Corp.
- New project of front and back storage management computer system for 3PLTCM of China Steel Corp.
- New project of Slab and Coil storage yard management computer system for Jiaxing area of China Steel Corp.
- New project of Billet storage yard management computer system for Billet Finishing area of Dragon Steel Corp.
- New project of Coil yard management computer system for hot rolling coil storage area (CYMC) of Dragon Steel Corp.
- New project of application software of Slab yard management computer system for Slab storage area of Dragon Steel Corp.
- New project of Coil yard management computer system for finished rolling coil storage area (PYMC) of Dragon Steel Corp.
- New project of Coil yard management computer system for finished rolling coil warehouse D3 (DYMC) of Dragon Steel Corp.
- New project of Coil yard management computer system for finished rolling coil warehouse D7 (PYMC) of Dragon Steel Corp.
- New project of Section yard management computer system for section storage area of Dragon Steel Corp.
- New project of Coil yard management computer system for cold rolling coil storage area of Chung Hung Steel Corp.
- New project of Crane Guidance System for cold rolling coil warehouse of China Steel Corp.
- New project of Crane Guidance Systems for 31/33/41 finished hot rolling coil warehouse of China Steel Corp.
- New project of Crane Guidance Systems for 81/82/83/20/23 finished rolling coil warehouse of China Steel Corp.
**Logistics System**

- Renew project of loading vehicle traffic management system for China Steel Corp.
- New project of transport surveillance system of scrap trucks for China Steel Corp.
- New project of export shipping truck M System for China Steel Corp.
- New project of shipping truck reporting system for China Steel Corp.
- New project of image retrieval system of the inspection station at the local and Lin-Hsi plants of China Steel Corp.
- New project of image retrieval system and gate clearance system of the inspection station for Dragon Steel Corp.
- New project of new functions of RFID/CCTV for railway transport of lime stones at Hualien.
- New project of warehouse management system for ore stones at Hualien.
- New project of automation system of road truck scale, steel scrap truck scale, and industrial waste truck scale for China Steel Corp. and Dragon Steel Corp.

**Public Transportation**

- Related projects with regard to Metro Kaohsiung, including ticketing integration system, add-value and bonus platform, offline transaction authentication platform, and multi-card frontend ticket validation system.