

# 2018 OPERATION REPORT

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OPERATION REPORT 2018 January 1 through December 31, 2018

\* This English version is a translation of the Operation Report 2018 published in Chinese. In case of any discrepancy, the Chinese version shall prevail.

# **Highlights of Operating Results**

# **Operating revenues and profit before income tax** <sup>1</sup>

(in hundred millions of New Taiwan Dollars)



<sup>1</sup> Starting from 2015, CSC applied the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the 2013 version of the IFRSs. The 2014 financial statements were recompiled retroactively.

		2018	2017
Operating revenues	(Millions of New Taiwan Dollars)	235,403	207,099
Operating costs and expenses		219,023	195,671
Profit from operations		16,317	11,575
Profit before income tax		26,397	18,521
Employment costs <sup>2</sup>		20,260	19,406
Depreciation		17,610	17,395
Interest expenses net <sup>2</sup>		1,454	1,772
Total assets		481,082	472,428
Capital expenditures		11,514	11,818
Equity		312,908	304,010
Output of steel products	(Thousands of metric tons)	9,240	8,832
Sales volume of steel products		11,242	10,846
Number of employees <sup>3</sup>		10,424	10,222
Return on sales	(%)	11.21	8.94
Return on equity <sup>4</sup>		7.93	5.57
2 3	4		

<sup>2</sup> Excluding capital expenditures <sup>3</sup> As of the end of the calendar year <sup>4</sup> Based on net income

# **Chronology of Major Events**



Steel Building takes place.

<sup>8</sup> Hereinafter also referred to as"The group".

<sup>9</sup> Hereinafter also referred to as "DSC".

# July 1

CSC becomes a state enterprise.

### December 16 July 1

Phase I is completed, with capacity  $^{6}$  of 1.5 million tons <sup>7</sup> per year.

Phase II construction commences.

# June 30

Phase II is completed. Capacity <sup>6</sup> reaches 3.25 million tons <sup>7</sup> per year.

# July 1

Phase III construction commences.

# April 30

Phase III is completed. Capacity <sup>6</sup> reaches 5.652 million tons <sup>7</sup> per year.

### 1978 1984 1977 1982 1988 . . . . . . . . . . . . 2008 2017 2013

# October 6

Dragon Steel Corporation 9 becomes a wholly owned subsidiary of CSC.

# 2010

June 30

DSC's stage II phase

1 expansion project

is completed. CSC

Group's <sup>8</sup> capacity <sup>6</sup>

million tons <sup>7</sup> per

reaches 13.36

year.

# March 5

DSC's stage II phase 2 expansion project is completed. CSC Group's <sup>8</sup> capacity <sup>6</sup> reaches 15.86 million tons 7 per year.

## October 22

China Steel Building is inaugurated. The Board of Directors approves the initiation of the revamp of the coke ovens (phases I and II).

December 20

# 2018

# December 31

CSC Group's operating revenues in 2018 sets the record of exceeding NT\$400 billion for the first time.

2018 OPERATION REPOR

# An Overview of the Business Situation

Chairman Chao-Tung Wong Chao-lung h

The major issues that the international steel industry faced in 2018 were:

The global economy continued to expand. On January 21, 2019, the International Monetary Fund (IMF) published the 2018 global economic growth rate to be 3.7%, which was slightly decreased in comparison with that of 2017 (3.8%).

The global steel demand was steady. On April 16, 2019, World Steel Association (worldsteel) published the statistics that the global apparent use of finished steel in 2018 was 1.712 billion metric tons, which was increased by  $4.9\%^{10}$  in comparison with that in 2017.

Global crude steel production continued to grow. World Steel Association also published on January 25, 2019 that the global crude steel production in 2018 was 1.809 billion metric tons, which was increased by 4.6% in comparison with that in 2017.

 $^{10}$  The increase became 2.1% after the adjustment of the Mainland China data.



The main factors which influenced the operations of the steel industry in Taiwan included:

The domestic demand of steel was stable. According to the statistics published on April 16, 2019 by worldsteel, there was a 1.0% increase of the apparent use of finished steel in Taiwan in 2018 in comparison with that in 2017.

Export sales outperformed domestic sales. According to the statistics on imports and exports published by the Ministry of Finance in 2018, the accumulated export value of base metals and articles of base metals reached US\$31.65 billion, which was increased by 9.0% in comparison with that of 2017, indicating that overall sales had increased in a steady manner.

CSC's 2018 operating revenue amounted to NT\$235.403 billion, which was 13.66% more than that in 2017 mainly due to the increase of the unit prices of steel products in sales as well as the increase of the sales volume. Gross profit in 2018 was NT\$24.972 billion, which was 27.86% more than that in 2017 mainly owing to the fact that the increase of the unit prices was more than that of the unit costs of steel products. The non-operating income in 2018 was NT\$10.081 billion, which was 45.13% more than that in 2017 and mainly attributable to the increase of the share of the profits from the subsidiaries and affiliates recognized under the equity method. Net profit in 2018 amounted to NT\$24.454 billion, which was 44.66% more than that in 2017. The consolidated operating revenue reached NT\$400.665 billion in 2018, which set a new historical record of NT\$400 billion after the adoption of IFRS.

# CSC's 2018 operating directives included the following key points:

- Enhancement of effectiveness by smart production and marketing: With a modular structured smart production and sales management platform, smart product design, scheduling, driverless cranes, equipment supervision, process control, shipping arrangements, etc. were promoted to improve efficiency in production and sales and customer satisfaction. Delivery of steel products reached 9.96 million metric tons in 2018, which was 106% of the targeted amount.
- 2. Reduction of energy consumption and dedication to circular economy: The campaign for the reduction of costs, five-year energy conservation action plan, and energy integration of the Lin-hai Industrial Park was continuously promoted. Equipment was updated to improve energy efficiency and reduce costs. Reduction of costs reached NT\$4.69 billion in 2018, which was 123% of the targeted amount.
- 3. Promotion of the grades and quality of products with innovative technology: According to the operational development strategies and industrial trends, planning for five R&D strategies, namely, core technology for the electric vehicle industry, smart production technology, technologies for environmental protection and reduction of carbon emissions, development of key industrial materials, and development of key materials for the government's "5+2" Innovative Industrial Plan, was completed to solidify CSC's technical foundation for its sustainable development. Orders for high-grade products reached 5.41 million metric tons, which was 46.6% of the total orders in 2018 and 104% of the targeted amount.

4. Succession of heritage and advancement of core values: CSC has a good corporate culture, attaches importance to the development of employees' careers, and continues to conduct various training programs and promotion of succession planning. To implement safety awareness, CSC has carried out many safety and health education and training programs with a total of over 5,000 trainees.

The International Monetary Fund (IMF) published the 2019 global economic growth rate to be 3.5%, maintaining an overall expansion. In terms of the steel market, worldsteel predicted that the global steel demand in 2019 would increase by 1.3% in comparison with that in 2018, with the global apparent use of finished steel reaching 1.735 billion metric tons. As observed, the development of infrastructure projects in Mainland China, India, and Southeast Asia is flourishing, the U.S. and European central banks have become milder in raising interest rates, and the Bank of Japan will continue its easing policy, all of which will drive the increase in steel demand. Nonetheless, Brexit, the China-United States trade war, and geopolitical tensions will become uncertain factors affecting the stability of international steel prices. To sum up, the steel market remains cautiously optimistic in 2019.

To enhance long-term competitiveness, CSC has mapped out its 2019-2023 operation and development strategies for the steel business as follows: (1) succession of the corporate culture, promotion of succession planning, establishment of the LOHAS environment, and promotion of the Group's image, (2) optimization of CSC's global operational capabilities, strengthening of strategic partnerships, implementation of the blue ocean strategy, and promotion of lean overseas deployment, (3) integration of the deployment of Group resources, uniting related industries, and promotion of the Group's operational synergy, (4) research and development of advanced products, efficient production processes and application technology, promotion of smart manufacturing, and enhancement of the value of the steel industry chain, (5) enhancement of the Group's engineering autonomy and cautious development of the wind power and light rail businesses, and (6) continuous reduction of costs and shortening of delivery, improvement of energy conservation and environmental protection, enhancement of safety and health, and increasing the value and quantity of the Group's products.

Based on the 5-year operation strategies, directives for 2019 include: (1) zero disaster related to industrial safety and environmental protection, (2) enhancement of quality and cost reduction to have better operational performance, (3) increase of profits with smart production and sales, and (4) maintaining stable operations with succession of culture. Targets for 2019 include: (1) reduction of costs equals to or exceeds NT\$3.8 billion, (2) delivery of steel products equals to or exceeds 9.63 million metric tons, (3) orders for highgrade products, including hot-rolled products produced by DSC, equal to or exceed 5.43 million metric tons and 47.1% of the total orders, and (4) no cases of major occupational accidents.

# **Production and Sales**



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# Production and Sales

In terms of raw materials, the price of premium coking coal fell from a high of US\$230/MT to nearly US\$170/MT FOB as there was a rebound in steel prices in the first half of 2018. In the second half of the year, the price of coal returned to the level of US\$230/MT FOB due to the following facts: (1) Prices of steel rose. (2) Miners in North Goonyella, Australia could not supply premium coking coal because the level of gas in the underground mining area exceeded the standard (force majeure), which forced them to suspend their production. (3) The impact of congestion was an issue in the Dalrymple Bay Coal Terminal (DBCT) at the port of Hay Point in Queensland, Australia, which is the main export port of premium coking coal. As a result of the aforementioned factors, the price of coal was pushed up to the level of US\$230/MT FOB, and the index price fluctuated between US\$170/MT and US\$230/MT in 2018.

Regarding iron ore, due to the high tariffs imposed by the United States on imported steel products and a number of Chinese goods, the prices of steel products in Mainland China were impacted, resulting in a drop in the prices of iron ore in the first half of 2018. By the end of 2018, Mainland China entered into negotiations with the United States regarding the trade war; in addition, there was expansion of public construction investment



Removal of the shells of the No. 3 Blast Furnace



The blessing ceremony for the initiation of the third major campaign of the No. 3 Blast Furnace

in Mainland China. As a result, the confidence of the steel market had stabilized, and the prices of iron ore had gradually recovered. In 2018, the index price of iron ore fluctuated between US\$63 and US\$80 per metric ton.

In terms of production and sales, as the major campaign of the No. 3 Blast Furnace was completed in the end of February, 2018, the production of molten iron, crude steel, and steel was 9.636 million metric tons, 9.834 million metric tons, and 9.240 million metric tons, respectively, which were more than those of 2017. Sales volume of CSC's steel products was 11.242 million metric tons, 70% of which was domestic sales and 30% of which was overseas sales.

CSC generated 53.9% of the electricity it required in 2018; it was 1.2% more than the amount in 2017 due to the overhaul of some units in its power plant and the reduction of power generation in Kaohsiung to adjust the air quality. Energy consumption per ton of crude steel (slabs and blooms) was 5,774 million calories, which was 82 million calories more than that in 2017 and resulted from higher fuel rates consumed in the Nos. 3 and 4 Blast Furnaces and installation of new environmental protection equipment.

In order to upgrade the efficiency of regional resource utilization, CSC continued to promote regional integration of energy resources within the Lin Hai Industrial Park by selling excess quantities of selfproduced gases such as steam, oxygen, nitrogen, and argon, which amounted to NT\$1.88 billion, a 8.7% increase compared with those of 2017, which was due to the increase of oil prices as well as the amount and unit price of steam. The quantity of sales of steam in 2018 was 1.672 million tons, which was 129,000 kiloliters of oil equivalents in terms of energy conservation. 383,000 tons of CO<sub>2</sub>, 1,222 tons of SOx, 847 tons of NOx, and 120 tons of particulate matters were reduced if converted to benefits in reduction of air pollution and greenhouse gas emissions annually. Key tasks and results of the management platform of the Committee for Development of Smart Production and Marketing in 2018 were listed as follows:

- The Optimized Suggestion System for Steelmaking Scheduling Decisionmaking: An optimized scheduling model was established based on expert experience to provide fast online automatic scheduling in line with the goal of full utilization of production capacity and high demand ratios.
- 2. Development of Driverless Cranes: Availability of automation has reached over 99%.
- 3. The Smart Steelmaking Design System: With one click to complete all the production processes in the smart design system, the enhancement of efficiency of steelmaking design has been achieved, the design time has been shortened, and the purpose of passing down the experience has also been achieved.
- 4. The Smart Product Design System: Auxiliary tools for quality design for steel plates, bars, and wire rods have been completed to promote product design efficiency, accumulate experiences, and establish the foundation for automatic replies to customers' inquiries in the future.
- 5. The Smart Costs and Production Process Control Mechanisms of the Metallurgical Index Code: The minimum cost process proposal mechanisms of production have been systemized to offer tools for cost integration.

# Key tasks and results of quality management in 2018 were listed as follows:

### 1. New Product Development

Thirty-seven new products were developed in 2018, the highlights of which included:

- (1) Steel plates: The development of 9-13mm thin steel plates was completed in collaboration with the customers' applications and also verified by the CR Classification Society. These products were developed in coordination with the government's strategy to build national ships domestically to effectively enhance national defense.
- (2) Bars and wire rods: The development of naval ship welding wire used for welding of shipbuilding structural steel plates was completed. Relevant tests were qualified, and the first stage of CR Classification was obtained.
- (3) Hot rolled products: The development of SBHS500, bridge steel, combining strength, low temperature toughness, and excellent welding performance, was completed. This product meets the support strength required for large spans of bridges and improves their seismic resistance, both of which promote the upgrade of domestic bridge steel.
- (4) Cold rolled products: The development of SPCC-2B, CUST S35C, steel for automotive clutch applications, and JSC440P, wide non-red-rusting steel plates, was completed to enhance the supply capacity of the automotive industry chain. In addition, the development of the third generation advanced high-strength steel was also completed. CSC can keep pace with advanced steel mills in terms of its technical capabilities, which serve as the basis for the development of steel with ultra-high strength in the future.
- (5) Galvanized products: The development of GA chromium-free passivation-treated products was completed in response to the global trend of using environmentally friendly chromium-free products. The development of SCGA980DUB and exposed CR180B2, GA automotive steel, was completed. As for electrogalvanized products, the development of high processing, corrosion-resistant, and fingerprint-resistant products was also completed to increase the sources of coatings, which achieve the goal of reducing costs and optimizing product performance at the same time.



- (6) Electrical steel: The development of 35RC300, a material used to produce inverter compressors, and G3S1, a coated product with resistance to annealing, was completed. The performance of the finished products has been verified by customers and has met the market demand for fast-growing refrigerant compressors used in air-conditioners.
- (7) Specialty alloys: The development of ASTM F67 Gr.4, pure titanium wire for medical dental implants, CSC SPEC. BTA650YEE (Ti-1.5Al-6.8Mo-4.5Fe), wire for fasteners, and ASTM S31008 310S, medium thick heat-resistant stainless steel used in a high temperature environment, was completed.

# 2. Technological Advancement of Production Processes

- (1) Steelmaking: The top-notch ES inclusion control technique was developed to improve product performance; the free oxygen control technique in liquid steel was refined to simplify the production processes to produce high-sulfur free-cutting steel. Reduction of costs reached NT\$ 22.38 million a year; in addition, the high pressure double-roller technique was developed to improve segregation and shrinkage cavities in the centers of slabs, which resulted in the successful production of cast slabs for building naval ships.
- (2) Production of steel plates: The low yield of SM570M was improved by the implementation of Six Sigma. The average yield was increased from 87.87% (before the improvement) to 89.32%, and the tangible annual benefits reached NT\$10.43 million.

### Sources of coking coal, 2018



Sources of iron ore, 2018



### Sources of flux materials, 2018



### Percentage of steel production volume by product, 2018



### Percentage of steel sales volume by product, 2018



- (3) Production of bars and wire rods: Stringprocess rolling was refined to improve the grain sizes of low carbon steel after being drawn and annealed. The cooling process of SAE 9254 was optimized to achieve incomplete decarburization of the product, which was granted certification by automobile manufacturers.
- (4) Hot rolling: Dynamic descaling control technique in rough rolling was developed to adjust the time in descaling water shocks according to the information of material thicknesses and steel grades, and production costs of NT\$5.50 million were saved annually.
- (5) Cold rolling: The improvement of defects, such as indentations, scale, etc., and the quality of edge strains in the products of the batchannealing line was completed for automobile OEMs, which resulted in the promotion of the product yield and decrease of rejects and the risk of customers' processing failures.
- (6) Hot-dip galvanized products: The complex coating technique was completed to highlight the product functions and enrich the product categories with surface treatment. The technique which generates thin coatings in electrogalvanized products with high surface quality was completed to reduce production costs and enhance competitiveness regarding product prices.
- (7) Electrical steel sheets: The improvement of the production technique in manufacturing annealed high-magnetic products was completed to effectively improve production flexibility and expand the available width sizes of products to meet the customers' strict thickness difference requirements.
- (8) Specialty alloys: The pickling performance of the online solution treatment on stainless steel was improved by optimizing the blasting speed and pickling speed, increasing the acid temperature, and controlling the concentration of low metal ions. The average number of times for pickling was reduced from 1.8 times to 1 time.

### 3. Certification of Management Systems

The audits of the new versions of the IATF 16949 and ISO 9001 were completed.

The audits of the revised QC 080000 and three other combined quality management systems were also completed. Moreover, CSC was granted the certification of the first IATF 16949 as well as ISO 9001 for its steel and specialty alloy products by BSI, which demonstrated CSC's quality management systems had met the new high-level management requirements. In response to the expansion demand of China Steel Global Trading Corporation, the certification of the additions of JIS MS EN 10025-2:2011 S355 JR+AR and JIS G 3101:2010 SS540, the Malaysian MS MARK, were granted for two types of hot rolled products. To meet the demand of steel for wind turbines, CSC was also granted the certification of the additions of EN 10025-2 and EN 10025-3 for steel plates, which expanded the applications of its products and sales channels.



### Percentage of domestic sales by industry, 2018



# Research and Development (R&D)

# 成大中鋼產學大聯盟第一期成果發表暨第三期啓動

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Presentation of results (Phase 1) and the kick-off meeting for Phase 2 of the Grand Industry-academia Alliance Project between CSC and NCKU

# **Research & Development (R&D)**

# The Trends of the Patent Applications and Certification



# **R&D** Strategies

Abundant R&D results had been accomplished in 2018. Thirty-seven new products were developed in 2018. All these new products propelled CSC to continue to strengthen its competitive advantage in promoting product differentiation.

Regarding patent applications and certificates, CSC filed applications for 214 patent cases and ranked the 7th, and was granted patent certification for 215 cases, which ranked the 7th among the top 100 patent recipients in 2018 according to the Intellectual Property Office, MOEA. CSC, the only corporation in the traditional industry, was on the list of the top 10 patent recipients. CSC was granted one gold medal and two silver medals in the 2018 National Invention and Creation Awards, demonstrating its effectiveness in intellectual property endeavors.

According to the operational development strategies and industrial trends, planning for five R&D themes, namely, core technology for the electric vehicle industry, smart production technology, technologies for environmental protection and reduction of carbon emissions, development of key industrial materials, and development of key materials for the government's "5+2" Innovative Industrial Plan, was completed to focus on CSC's R&D resources on key research projects for its sustainable development. CSC had displayed outstanding results in 2018, and the more significant ones are listed as follows:



An exchange seminar on hot rolling technologies at the CSC Group

# Core Technology of the Electric Vehicle Industry

- Development of the electrical steel: With the establishment of key technology, CSC had developed thin electrical steel sheets with lower iron loss, higher magnetic flux, and higher strength, such as 25CS1250HF and many others with ultra-specifications, which could be applied to manufacture drive-motors in electric vehicles. CSC had become the only supplier of electrical steel to a well-known international electric vehicle plant which adopted CSC's electrical steel and set up specifications in their production.
- Hot stamping techniques and applications: In order to meet the requirements of lightweighting and safety, hot stamping has become the most important technical development trend in manufacturing automotive structural parts. CSC has been developing hot stamping techniques since 2010. It has had techniques in manufacturing hot stamping parts, entered the automobile manufacturing supply system, and completed the gap in the industrial chain. At present, domestic mass production and applications of hot stamping products have been introduced.

# Smart Production Technology

Development of driverless cranes: The transportation of steel products in the production lines relies heavily on cranes. Driverless cranes can not only greatly reduce the manpower requirements, but it is also the basis for the development of smart storage and transportation systems. CSC has conducted R&D on driverless cranes since 2014. It has established the complete techniques and passed the test runs. Driverless cranes will be gradually promoted and installed in the CSC plants in the future.

- Smart decision-making assistance systems for steelmaking scheduling: Continuous casting was established according to different variables, such as delivery dates, equipment conditions, steel grades, sizes, etc., to optimize steelmaking scheduling, make full use of the capacity of the converters, meet the order demand, reduce the waiting time for various equipment, and maximize the utilization of the molten iron in the blast furnaces.
- The dynamic control system of the metallurgical processing for BH steel: According to the measured composition of the upstream steelmaking, the annealing temperature of the hot-dip galvanizing line was dynamically fine adjusted to eliminate the variations of the product properties caused by the variations of the composition so that the product quality could be improved, and the product rejection rate was reduced.

# Energy and Environmental Protection Technology

- Development of highly efficient microbial denitrification technique for coking wastewater: The bio-denitrification system for coking wastewater was successfully developed to accelerate the activity of the culture, which not only maintained a high removal rate of chemical oxygen demand (COD) and ammonia nitrogen pollutants but also greatly reduced the impact of water inflow at a high load. The technique had been successfully applied and in line with the regulations for discharged effluents.
- The establishment and applications of power-saving technique for cooling towers: The energy consumption of cooling water from the production end to the downstream end was identified, and new technologies, such as of the Internet of Things (IoT), big data, and artificial intelligence (AI) development were combined with the thermal fluid theory to develop the corresponding analytical techniques and provide scientific energy-saving improvements and countermeasures. The effectiveness of cumulative applications reached 7.07 million kWh per year, reduction of 20.20 million tons of circulating water, and reduction of the emissions of 7,427 metric tons of CO<sub>2</sub>.

In terms of R&D issues, such as circular economy, energy, and environmental protection, CSC will cooperate with the domestic industry, academia, and research institutions to conduct research. It will also make good use of external R&D resources, inject greater R&D energy, and pursue the economic model for sustainable development.



Ceremony for the Awards of R&D Results and Patent Promotion by Excellent Departments



Mass production of B-pillars with the hot stamping technique for the first time in Taiwan

# Employee Relations and Human Resource Development



# Employee Relation and Human Resource Development



As of the end of 2018, there were 10,424 employees at CSC. Their average age was 45.77 years. Among the 10,424 employees, 10,284 (99.35%) of the employees were eligible for membership in the CSC Labor Union.

It is estimated that over 2,425 senior employees will retire in the next five years. By upholding CSC's excellent corporate culture, future manpower development will be focused on succession of manpower, strengthening of talent training and education, employee relations, etc.

# Succession of manpower

- 1. Succession in advance: CSC has mapped out appropriate employment plans according to its corporate development strategies and investment plans, which are supplemented by the retirement and resignation forecasts as well as the periodic manpower requirement reviews by each of the departments. Employees are hired as reserve personnel in advance to facilitate the succession of manpower.
- 2. Implementation of mentor-apprenticeship and knowledge management: Senior employees are appointed to act as mentors for new recruits and impart their experiences for effective succession in conjunction with knowledge communities, knowledge management systems, e-Learning, knowledge sharing, etc.
- **3. Promotion of cooperative education programs:** To reduce the gap between schooling and applications, CSC has formed cooperative education programs with National Cheng Kung University, Kaohsiung Municipal Chung-Cheng Industrial High School, and Municipal Kaohsiung Industrial High School to meet its manpower need. As of the end of 2018, 84 students had been hired officially to undertake the business of various departments.

# Strengthening of talent training and education

The Development Roadmap of the CSC Group's Talent Training and Education was established to nurture manpower and carry out tasks related to talent training and education, including those for the Group's management talents, dispatched personnel, and new recruits as well as those regarding general education, e-Learning and knowledge management, and professional expertise and quality control. The details are listed as follows:

- Training abroad: High-ranking executives of the Group took part in short-term overseas management programs. Selected engineers were sent abroad to conduct special research projects on engineering. Selected technicians were sent to College of Industrial Technology in Japan to attend programs. 58 employees in total had been sent abroad for training between 2011 and 2018.
- 2. Talent training for middle- and high-ranking management executives of the Group: Management programs have been held for these executives in renowned domestic universities since 2012, the themes of which include corporate culture and leadership, in the hope of enhancing their understanding of the corporate culture. As of 2018, 468 executives had been trained in these programs. Moreover, the "Management Training Program" and "Assessment Center" will be held continually. A total of 988 reserve executives had been trained in the past eight years, 516 of whom had qualified.
- **3. Training for internal instructors:** To strengthen the succession of experience within the company and enhance the autonomy of the training programs, a total of 66 internal TWI instructors, nine MTP instructors, 38 AC instructors, 17 instructors on management skills, ten instructors on problem analysis and decision-making, and 23 instructors on performance management had been trained between 2011 and 2018 in preparation for conducting future training courses for second-,third-, and fourth-echelon executives. Furthermore, 133 instructors on the maintenance of mechanical and electrical equipment had also been trained.
- 4. Training for new recruits: Training courses for new recruits include new entry basic training, new technical training, practical training on steel production, steel simulation contests, etc. 7,239 employees (person-times) have been trained in the past seven years.
- 5. Strengthening the culture and management of industrial safety: In order to enhance fourth-echelon executives' and engineers' understanding of industrial safety management, perspectives regarding how to strengthen the establishment of disaster prevention measures, and willingness to take active industrial safety measures, industrial safety training programs in the form of seminars were developed and held. Different sessions with teaching, mutual discussions of industrial safety cases, and hands-on practice had been conducted to demonstrate the effectiveness of implementing industrial safety training. 408 employees (person-times) in total had been trained between 2016 and 2018.
- 6. Professional expertise and quality control: Programs regarding autonomous management, statistical quality control, and advanced mechanical and electrical engineering were conducted. Moreover, in response to the Group's new businesses, special programs about quality management of public works and offshore wind power

# Breakdown by employees' position level

(as of December 31, 2018)





(as of December 31, 2018)



generation were also conducted. 133 sessions with 3,892 participants (person-times) took part in these programs in 2018.

- 7. General education: 42 sessions of corporate culture classes were held for executives and new recruits in 2018. 12 sessions of CSC Lectures related to arts, technology, and new management knowledge were held in the hope of establishing the concept of empathic thinking, which would help the establishment of consensus as well as enhance the executives' management and innovative capabilities. Moreover, knowledge management forums and sharing of training knowledge were held to strengthen the culture of knowledge sharing as well as the professional expertise of employees at CSC.
- **8.** In 2018, each employee averaged 24.6 hours of classroom work and 4.2 hours of e-Learning.

In 2018, CSC reaped approximately NT\$52 million in cumulative benefits from its Creative Development Activities (CDA) and NT\$51 million in estimated tangible benefits from its Employee Suggestion System. These time-honored activities aim at encouraging employees to discover problems at their workplaces and to make suggestions and offer concrete solutions created by group endeavors. In 2018, CDA involved 595 "quality control circles" with 5,778 participants (87.0% of the blue-collar personnel of the departments concerned and 468 completed themes). They made 24,756 suggestions, 23,268 (97.6%) of which were adopted.

In order to spell out fair and reasonable labor conditions for both the Management and Labor to observe, CSC has maintained a collective agreement with the Labor Union. Moreover, multiple communication channels have been provided, including (1) regular communication meetings are held in each department/ unit for opinion exchanges so that problems can be explored, and reasonable solutions can be found jointly. (2) the Staff Grievance Committee, in which employees can voice their complaints if those complaints aren't reasonably handled through the administrative channels when their rights are violated or mismanaged, and (3) the Sexual Harassment Grievance Committee, which deals with complaints so that an environment free of such annoyances could be provided to CSC employees and job applicants.

To offer good working conditions to satisfy CSC employees' welfare needs, the management of CSC and its employees jointly formed the CSC Employee Welfare Committee, which consists of 27 representatives chosen from both sides. Facilities such as employee canteens, restaurants, including Mingbang Restaurant, the recreation center of the CSC group, dormitories for singles, gyms, 22 shuttle bus lines, self-service laundry centers, and reading rooms have been established for employees. Among them, employee canteens, restaurants, gyms, and reading rooms are also open to contractors and their employees and neighboring residents. The Welfare Section is responsible for all the matters related to employee welfare, including large-scale outings, clubs and recreational activities, applications of fiduciary loans for employees, allocations of bonuses on the Chinese New Year, Dragon Boat Festival, Mid-Autumn Festival, and Labor Day, birthday cash gifts, marriage subsidies, cash gifts for employees' newborns, scholarships for employees' children, emergency care and subsidies, year-end lucky draws, subsidies of flexible welfare points, purchases at franchised stores, etc.

CSC has encouraged its employees to take part in club activities which will help them relax physically and mentally. As of the end of 2018, there were 43 clubs. Based on the concept of investing in employees, taking care of them, and facilitating them to live in a healthy manner, CSC has set up a recreation center for leisure and sports activities. In response to the addition of new recruits, CSC holds group weddings for them regularly. In addition, CSC holds large-scale outings and anniversary celebration annually and commissions each department/unit to hold activities for good neighborliness purposes and year-end dinner parties to enhance a sense of unity.

As of the end of 2018, there are about 3,850 CSC retirees. To assist them to adapt to their new life after their retirement, keep them identified with CSC, and enhance their cohesiveness, it set up a retiree service department to serve them. Two sessions of LOHAS seminars, four farewell tea parties, and two health related lectures were held for them in 2018. Retirees are always invited to take part in CSC's annual anniversary celebration.



Senior executives visited on-site staff on duty on the Chinese New Year's Eve.



Training for sales and technical personnel dispatched overseas



Al training for selected personnel



A farewell party held for retirees

### Cases completed by creative development Cases completed by creative activities by subject matter, 2018 development activities Safety 45.7 % Maintenance 20.3 % 2016 486 Production 12.6 % Cost 8.1 % 2017 452 Quality 4.7 % Morale 3.2 % 2018 468 Energy 1.3 % Others 4.1 %

# CSC' 47th anniversary celebrations and group weddings



CSC group wedding ceremony



A charitable fair



The crawling contest for babies



The Dragon Boat Racing

# Environmental Protection, Industrial Safety and Hygiene, and Fulfillment of Social Responsibilities



# Environmental Protection, Industrial Safety and Hygiene, and Fulfillment of Social Responsibilities

Key tasks and results of energy conservation and environmental protection in 2018 were listed as follows:

- Energy conservation services: The CSC Energy Conservation Service Corps was established in 2007 to offer energy conservation services outside CSC. In 2018, it collaborated with the Kaohsiung Municipal Energy Conservation and Carbon Reduction Technology Counseling Corps to offer counseling services to Chang Chun Plastics Co., Ltd., the Sugar Business Division of Taiwan Sugar Corporation, North Kaohsiung (Dashun) Branch of Costco Wholesale Corporation, and Taiwan Chlorine Industries Ltd. about energy conservation and reduction of carbon emissions.
- Continuous promotion of the Energy Conservation Action Plan 2020, the third five-year plan: CSC has aimed at saving 100,000 kiloliters of oil equivalents between 2016 and 2020. 113 projects were completed in 2018; 31,000 kiloliters of oil equivalents were saved.
- 3. In response to MOEA's campaign to save electricity consumption by 1% annually between 2015 and 2019, CSC has actively implemented several electricity conservation projects, including improvement of electricity consumption in heating furnaces, fans, pumps, cooling towers, air conditioners, lighting fixtures as well as adoption of natural lighting in factories, etc.
- Water consumption had been decreased from 10.33m<sup>3</sup>/ton of crude steel at the establishment of CSC to 4.42 m<sup>3</sup>/ton of crude steel in 2018; the recycling rate was 98.5%.
- CSC continued the GHG Inventory and management of internal auditing and external certification. CSC completed its organizational GHG Inventory in 2017 and was verified by a third party certification agency.

### Air quality

Kg/mt of crude steel

### **Particulate emission**



### SOx emission



### **NOx emission**



- 6. CSC actively promotes the applications of basic oxygen furnace slag (BOFS) in asphalt concrete aggregates as well as maritime engineering projects, participates in the revisions of national standards, and invites domestic scholars and experts in the marine industry to form research teams to test the plan to verify the manuals.
- 7. Continuous reutilization of CSC's waste resources by water quenching: The operation of reutilization of the waste resources, including BF/BOF sludge, sludge from hot rolling, sludge from cold rolling, used refractories, waste acid liquids, EP dusts, BF/BOF dusts, IWI fly ash and bottom ash, zinc sludge, chromium sludge, and waste grinding wheels, was carried out.
- 8. Continuous assistance to the reutilization of the bi-products of the Group: Assistance had been provided to CSC's subsidiaries in reutilizing their bi-products and/or wastes, including oily waste from C. S. Aluminium Corporation, waste vessel oil from China Steel Express Corporation, sludge from hot rolling in Chung Hung Steel Corporation, crystallized calcium carbonate from China Ecotek Corporation, and waste acid liquids from China Steel Machinery Corporation and Chung Hung Steel Corporation.
- 9. The tests and reports for particulates, SOx, and NOx were completed. The total emission amounts matched the requirements of the environmental impact assessment in 2018. CSC will continue to promote greening inside the plants. The total area of greening has reached 442,103 m<sup>2</sup>; the greening rate is 8.39%.



**Occupational Accident Record of CSC** 

# **Industrial Safety**

# Number of cases with disabling injuries CSC Contractors 2016 6 2017 6 2018 7 16

# 

Frequency ratio <sup>12</sup>

<sup>12</sup> FR = Number of cases with disabling injuries  $\times$  10<sup>6</sup> ÷ Total number of working hours of the entire company

Major tasks and results of industrial safety programs for 2018 were listed as follows:

- CSC was granted the follow-up certification of the OHSAS 18001, TOSHMS, ISO 14001, and ISO 50001 systems verified by BSI.
- ISO 45001, Occupational Safety and Health Management Systems - Requirements, was released on March 12, 2018. The business unit has a threeyear buffer period for conversion. CSC started the transfer program in the second half of 2018. It is expected to complete the verification of conversion in 2020.
- In collaboration with the authorized institutions, implementation of (1) the regular inspections of 1,083 pieces of hazardous machinery and equipment and (2) thorough inspections of 12 pieces of hazardous machinery and equipment have been completed.

The reassessment of the safety of the production processes in 16 type-C hazardous workplaces was carried out.

- 4. Educational training: (1) CSC held 10 training classes with 67 sessions of various safety licenses for 2,415 licensees on its own. (2) Five physical simulated training classes with 75 sessions were held for 830 participants. (3) The propagation on industrial safety, including briefings on backfire prevention devices, mechanical equipment safety information, briefings on dangerous area divisions, on-the-job training for radiation workers, traffic safety training for large vehicle drivers, etc., had been held. (4) Six sessions of educational training on traffic safety were held for 729 participants.
- Plans for the 2018 operational environment testing were completed. Items for the testing included dust, noise, integrated WBGT (Wet Bulb Globe Temperature) indices, carbon dioxide, and chemical substances.



The Cheers Magazine ranked CSC to be one of the Top 10 most desirable corporations among the new generations.



"Engineer E-week, Kaohsiung" was held by CSC in collaboration with IBM

# Employee Health and Hygiene

Complied with the laws and regulations, CSC continues to hold physical check-ups for its employees, including special physical check-ups for those who work in special operating sites. Health management was conducted to those with abnormal physical check-up results. To promote the health of the employees, CSC has held a series of programs, such as management of health examinations, weight loss, health columns, psychological counseling, quarterly lectures on health, special health campaigns for both female and male employees, and implementation of the Maternal Health Protection Plan, with approximately 5,683 participants in 2018. Among them, 618 employees who took part in the weight loss program lost a total of 268.2 kg; the average lost weight was about 0.43 kg per person.



Cellist Chen-Chieh Chang's charitable concert in the Kaohsiung Prison



The Fashion  $\boldsymbol{x}$  Classic Concert jointly held by CSC and KRTC



Recognition of filial piety and granting of meritorious scholarships in Hsiao Kang District



The 2018 King of Wisdom Summer Camp held by CSC

# Social Responsibilities

To fulfill its corporate social responsibility, CSC has continued to take action to provide assistance to the nearby communities for their development and sponsor charitable activities in Hsiao Kang District for a long period of time.

CSC, a corporation engaged in environmental protection, community care, and charity, has continued to make its contributions to the society, communities, and disadvantaged groups. Its contributions are as follows: (1) It sponsors equipment and facility upgrades to enhance the students' learning efficiency and greening of the elementary schools in Hsiao Kang District to slow down global warming. (2) It provides scholarships for meritorious students and tuition assistance to students from disadvantaged families in Hsiao Kang District. (3) It also sponsors various social activities for the communities and associations in Hsiao Kang District. (4) It offers funds for social relief of emergencies and gifts of money during the Chinese New Year, Dragon Boat Festival, and Mid-Autumn Festival to assist lowincome families in Hsiao Kang District. (5) The ceremony for recognition and promotion of filial piety is held to celebrate Mother's Day in Hsiao Kang District. (6) Graduating elementary school students in Hsiao Kang District are invited to participate in the Steel Journey Activity to get a sense of how steel is produced and the measures taken by CSC in environmental protection. (7) Elementary school students in Hsiao Kang District, especially those from disadvantaged families, are invited to participate in summer camps.

CSC actively assisted local cultural and artistic activities, some of which included the 2018 Grassland Concerts, "Jurassic Park in Concert" and "Love Actually," both of which were part of the 2018 Kaohsiung Spring Arts Festival, and the 2018 Kaohsiung Lantern Festival. All of the aforementioned activities injected an impetus into quality arts and culture in Kaohsiung.

Domestic and international honors and awards granted to CSC in 2018 included: (1) the Gold Class of the Sustainability Award by RobecoSAM, (2) a constituent of the DJSI-Emerging Markets, (3) the Sustainability Leaders Award by BSI, (4) a winner of the CDP's Climate B-List companies of the Climate Change Leaders Index and water program, (5) the highest two-star ranking in

the "Recycling and Circular Economy Assessment" by EPA, and (6) the Ten Most Sustainable Corporate Award for the fifth time by TAISE, which was the highest honor. Furthermore, CSC was also granted the Top 50 Platinum Award in the traditional manufacturing category, English Reportage Award, Sustainable Water Management Award, Climate Leadership Award, Growth through Innovation Award, Circular Economy Leadership Award, and Talent Development Award.

To be involved in social activities in a broader and more diversified manner, CSC established the CSC Group Education Foundation. Activities conducted by the foundation in 2018 consisted of:

- Six general lectures for citizens in Kaohsiung, six seminars on campus jointly organized with the United Daily, and four lectures on spiritual growth organized by the Teacher-Chang Foundation.
- The Environment Education Touring Bus had been dispatched to conduct lectures on environmental education in rural schools in Tainan, Kaohsiung, and Pingtung.
- Eco-education camps were organized for elementary school students. On-site ecological observations were arranged to enhance the students' educational competence in ecological protection.
- "Engineer E-week, Kaohsiung" was held to enhance high school students' abilities to solve problems and teamwork.
- CSC Camps were held, and college students were invited to visit the upstream and downstream sectors of the steel industry to attract them to engage in metal-related industries.
- In collaboration with National Taiwan University, National Tsinghua University, National Cheng Kung University, National Sun Yat-sen University, and National Chung Hsing University, CSC has continued to offer related courses about steelmaking in those universities.

CSC upholds the concept that what is taken from the society must be returned to it, and sincerely takes action to care about and contribute to the society, communities, and disadvantaged groups from the aspects of environment protection, community care, and charity.



The 2018 Forum on Occupational Safety and Health at the CSC Group



The "Steel Journey" Activity held by CSC in 2018

# Capital Expenditures and Engineering Business


# Capital Expenditures and Engineering Business

### **Capital expenditures**

(in hundred million of New Taiwan Dollars)



The investment of capital expenditure projects amounted to NT\$11.514 billion in 2018. The projects were listed as follows:

### Projects related to equipment revamp:

- 1. Revamp of the program control and electronic control systems of the No. 2 Hot Strip Mill of Rolling Mill Dept. II
- 2. Revamp of the Nos. 1 and 2 heat furnaces of the No. 1 Hot Strip Mill
- 3. Revamp of the second major campaign of the No. 3 Blast Furnace
- Revamp of the main motors, electrical control system, and welders of the No.1 Pickling and Cold Rolling Mill of Rolling Mill Dept. III
- 5. Revamp of the shells and linings of the Nos. 34 hot stoves in the No. 3 Blast Furnaces
- 6. Revamp of the LDG holders in BOF Plant I
- 7. Revamp of the iron ore and coal transport system and demolish of the existing transport equipment
- Projects related to upgrades of production capacity or quality:
- 8. Addition of the No.3 ladle refining furnace in the No.1 Steelmaking Plant
- Projects related to resource recycling or environmental protection equipment:
- Equipment revamp for reduction of effluent ammonia nitrogen (NH<sub>3</sub>-N)

Among the aforementioned projects, Projects 3, 4, 8, and 9 were completed in 2018; the rest have been carried out on schedule. Major projects, which were expected to increase production capacity or effectiveness, with the investment amount of over NT\$2 billion were listed as follows:

1. Revamp of the program control and electronic control systems of the No. 2 Hot Strip Mill of Rolling Mill Dept. II	The estimated reduction of $CO_2$ emissions is 2,989 tons per annum because of the saved electricity consumption and low-temperature rolling, which is due to the reduction of delay rates and enhancement of equipment performance.
3. Revamp of the second major campaign of the No. 3 Blast Furnace	The introduction of the best available technology (BAT) and the adoption of innovative campaign practices will not only prolong the expiration date of the campaign, but also enhance and stabilize production, which will reduce CSC's operational costs and enable CSC to become more competitive.
7. Revamp of the iron ore and coal transport system and demolish of the existing transport equipment	This project is to revamp the exisitng material transport system and enhance environmental protection.
9. Equipment revamp for reduction of effluent ammonia nitrogen (NH <sub>3</sub> -N)	After the revamp is completed, the discharged concentration of effluent ammonia nitrogen will be reduced to 20 ppm, which will meet IPA's discharge standards for chemical effluents. CSC's daily ammonia nitrogen discharge will be reduced by 1,328 kg, which will effectively improve the quality of the environment and fulfill its

corporate social responsibility.



The Supplier Conference of the Wind-Team, an international cooperative alliance for the localization of producing components of the offshore wind turbines

### **Engineering Businesses**

Revenue generated from engineering businesses from outside parties amounted to NT\$1.170 billion in 2018, which was 42.76% less than that in 2017. CSC will continue to actively expand its engineering and technical services businesses. Key tasks and results in 2018 were listed as follows:

- The EPC construction project (Phase 1) of the Danhai Light Rail Transit System: The construction was initiated on November 23, 2014. As of December 31, 2018, the overall project was 87.07% on schedule. Moreover, the Green Mountain Line had been completed ahead of schedule and approved for operations.
- The EPC Project (Phase II) of the Circular Line (KMRT): The construction was initiated on October 11, 2016. As of December 31, 2018, the overall project was 49.69% on schedule.
- The EPC project of the electromechanical systems of the Ankeng Light Rail Transit System: The construction was initiated on May 1, 2017. As of December 31, 2018, the overall project was 12.57% on schedule.
- The manufacturing and supply project of maintenance vehicles for Taiwan High Speed Rail Corporation (THSRC) was initiated on September 27, 2018. As of December 31, 2018, the overall project progress was 8.60%.
- 5. With respect to the other engineering businesses from outside parties, the revenue exceeded the annual target value, which was mainly due to the increase on demand for (long-term) resident and short-term consultancy services, technical assistance agreements, and technical services on power supply engineering from customers.



The contract for the manufacturing and supply of maintenance vehicles for Taiwan High Speed Rail Corporation (THSRC)



The Groundbreaking Ceremony for the construction of Sing Da Marine Structure Corporation's plant

# **Investments and Other Equity Interests**

Completion of the construction of CSCC's carbon mater

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THE OF STREET

37

f CSCC's carbon material production plant in the Pingnan Industrial Park

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# Investments and Other Equity Interests

### CSC recognized income from invested companies in the past three years

(in hundred million of New Taiwan Dollars)



As of the end of 2018, newly added companies were Sing Da Marine Structure Corporation, a jacket foundation manufacturer, China Steel Power Holding Corporation, an investor in wind farm development, and Taiwan International Windpower Training Corporation, a personnel training provider for the offshore wind power business.

### **Operating Performance**

Because the steel market was stable in 2018, CSC's recognized reinvestment gains in 2018 amounted to NT\$10.570 billion, including the dividend income of NT\$0.363 billion, and the amount demonstrated an increase compared with those in 2017. The operating performance of the subsidiaries was listed as follows:

1. Steel Business: The profit before income tax of Dragon Steel Corporation in 2018 was NT\$6.720 billion, which was NT\$3.817 billion more than that in 2017 mainly due to the increases in sales volume, sales prices, and operating gross profit. The profit before income tax of Chung Hung Steel Corporation in 2018 was NT\$3.033 billion, which was NT\$0.427 billion more than that in 2017 due to the increases in sales volume, sales prices, operating gross profit, export, and freight for export. Regarding CSC' s overseas operations, the profit before income tax of CSC Steel Sdn. Bhd. in 2018 was RM21.32 million, which was RM50.21 million less than that in 2017 due to the increase in material costs, resulting in the decrease in operating gross profit. The loss before income tax of China Steel Sumikin Vietnam Joint Stock Company in 2018 was US\$4.79 million, which was US\$6.71million less than that in 2017 due to the increase in material costs, resulting in the decrease in operating gross profit, as well as the increase in interests due to hikes in interest rates. The loss before income tax of China Steel Corporation India Pvt. Ltd. in 2018 was INR941 million, which was INR 1.078 billion

less than that in 2017 due to the fact that although both the sales prices of steel products and the operating margin were increased, the exchange loss was increased due to the sharp depreciation of the Indian rupee against the US dollar.

- 2. Engineering Business: The profit before income tax of China Steel Machinery Corporation in 2018 was NT\$193 million, which was NT\$91 million more than that in 2017. With the recognized engineering losses, resulting in the decrease in operating gross profit, and recognized investment income and exchange interests in 2018, the profit before income tax of China Ecotek Corporation was NT\$123 million, which was NT\$91 million more than that in 2017. The profit before income tax of China Steel Structure Corporation in 2018 was NT\$105 million, which was NT\$40 million more than that in 2017. The profit before income tax of InfoChamp Systems Corporation in 2018 was NT\$203 million, which was NT\$71 million less than that in 2017 as the gross profit margin of the engineering projects was decreased in the highly competitive engineering environment. Sing Da Marine Structure Corporation was established in April, 2018. The factory is currently under construction. Its loss before income tax was NT\$66.86 million.
- 3. Industrial Material Business: The loss before income tax of C. S. Aluminium Corporation in 2018 was NT\$554 million, which was NT\$318 million more than that in 2017 mainly due to the fact that the increase of the sales prices of aluminium products was less than that of the costs of goods sold, and that there were recognized losses in investment income and the fallen prices of inventory. The profit before income tax of China Steel Chemical Corporation in 2018 was NT\$1.869 billion, which was NT\$0.554 billion more than that in 2017. The profit before income tax of CHC Resources Corporation in 2018 was NT\$1.050 billion, which was NT\$0.150 billion more than that in 2017. The profit before income tax of HIMAG Magnetic Corporation in 2018 was NT\$42.02 million, which was NT\$5.49 million less than that in 2017 due to the increase of recognized losses in re-investment income. The profit before income tax of Changzhou China Steel Precision Materials Corporation in 2018 was RMB\$20.77 million, which was



Employees of CSC Steel Sdn. Bhd.



CSE's purchase of bulk carriers from CSBC Corporation

RMB\$7.83 million more than that in 2017. The profit before income tax of China Steel Resources Corporation in 2018 was NT\$14.11 million, which was at about the same level as that in 2017. The loss before income tax of CSC Precision Metal Industrial Corporation in 2018 was NT\$2.99 million, which was NT\$15.10 million less than that in 2017 mainly due to its official operations in July, 2017, which generated operating income.

- 4. Trading and Logistics Business: The profit before income tax of China Steel Express Corporation in 2018 was NT\$2 billion, which was NT\$58 million more than that in 2017. The profit before income tax of China Steel Global Trading Corporation in 2018 was NT\$687 million, which was NT\$62 million more than that in 2017. The profit before income tax of Qingdao China Steel Precision Metals Co., Ltd. was RMB\$9.52 million, which was RMB\$3.32 million less than that in 2017 mainly due to the increase in costs, resulting in decreased operating gross profit. The loss before income tax of China Steel Precision Metals Kunshan Co., Ltd. in 2018 was RMB\$1.42 million, which was RMB\$3.9 million less than that in 2017 mainly due to the decrease in sales volume, resulting in decreased operating gross profit, increase in recognized disposal of assets, etc.
- 5. Service and Investment Business: The profit before income tax of Gains Investment Corporation in 2018 was NT\$372 million, which was NT\$109 million less than that in 2017 mainly due to the intensified volatility of the financial market, affecting the effectiveness of investment operations, and the implementation of IFRS 9. From 2018 on, the gain on the disposal of available-for-sale financial assets could not be included in the net profit. The profit before income tax of China Steel Security Corporation in 2018 was NT\$114 million, which was NT\$6 million less than that in 2017. The profit before income tax of China Prosperity Development Corporation in 2018 was NT\$231 million, which was NT\$17 million less than that in 2017. The profit before income tax of China Steel Management Consulting Corporation was NT\$3.44 million, which was roughly at the same level as that in 2017. The profit before income tax of CSC Solar Corporation was NT\$76.78

million, which was NT\$79.18 million more than that in 2017 mainly due to its operating income from power generation, resulting in increased operating gross profit.

### **Business Development**

In terms of the investment in raw material sources, CSC seeks prudent investment in valuable raw material sources to increase its self-sufficiency rates to reach the target by taking the advantage of the market dynamics. As of the end of 2018, the selfsufficiency rates of metallurgical coal and iron ore were 1.8% and 15%, respectively. CSC's average self-sufficiency rate of raw materials was 10.8%. In the future, CSC will form strategic alliances with other steel plants or steel trading companies to raise the stakes for raw material investment. Moreover, CSC will adjust its raw material investment flexibly according to the pulse of the steel market.

In collaboration with the demand for expanded sales from overseas production bases and existing and potential overseas customers, the CSC Group actively expands its sales bases and sets up coil centers in its main and potential markets to provide services to local customers in real time to extend its supply service chain in order to consolidate its overseas sales distribution channels.

From the perspective of the CSC Group's overall deployment and cross-support capabilities among its production and sales basis as well as the specific steel demands in emerging Asian countries with relatively higher growth of steel demands and its products with comparative advantages in various markets, it will expand the operational territories of its overall steel business to achieve the goal of the sound development of the CSC Group by utilizing the advantage of the Group's operational synergy to promote the operational efficiency of its non-steel businesses.



The supply contract for jacket foundations signed by Sing Da Marine Structure Corporation and Ørsted



A visit to China Steel Corporation India Pvt. Ltd. (CSCI) by high-ranking executives

# **Customer Services**



# **Customer Services**

A total of 48 new enterprises became CSC's customers in 2018. New customers accounted for 4.59% of the total customers while the old ones accounted for 99.34% of the total operating revenue. On the basis of technological services, CSC not only offers steel products with the appropriate quality, at the adequate amount, and at the appropriate time by providing multi-stage, multi-layer pre-sale, sale, and after-sale services, but it also assists customers to solve their problems in material utilization and processing techniques to promote the growth of the steel-consuming industries.

CSC obtains feedback, which serves as a reference for improvement or development of marketing policies, from its customers by holding regular production and sales confabs with trade associations (or professional groups) in the downstream steel industry, visiting its customers, and holding technological seminars.

### **Sales Services**

In 2018, 40 confabs regarding domestic sales and four confabs regarding export sales had been held. Overall sales supporting services are provided through e-business and initiation to the supply chain. Moreover, executives and personnel in related businesses visit CSC's customers actively and take orders according to the scheduled production capacity to promote punctual delivery. To offer even better services, marketing resources from CSC's subsidiaries, e.g. DSC and Chung Hung Steel Corporation, are integrated to mutually support and extend the scope of CSC's services to its customers.



A technical seminar on hot stamping



A technical seminar on non-oriented electrical steel sheets

### **Technical Services**

Key activities of technical services in 2018 included: (1) Technical assistance to customers with a total of 197 cases in improving their manufacturing processes were completed, which boosted the customers' confidence in using CSC's products. Twentyeight surveys of market quality feedback were obtained to effectively promote quality improvement. (2) Certification of 11 steel products for automobile use was granted. Moreover, CSC has been granted certification of a total of 247 items so far by 25 automobile manufacturers, which is a necessary threshold for CSC's steel products to be used in automobile manufacturing. (3) Eleven domestic and international technical symposia and seminars were held. (4) Representatives from CSC paid 121 visits to key customers. Moreover, professional staff (603 persons/days) were sent abroad to conduct technical interaction and promote CSC's products in Mainland China, Japan, Europe, the United States, Mexico, Southeast Asia, the Middle East, and India. (5) To have a full grasp of the customers' demands and explore the opportunities for new product development, 11 surveys of material applications and quality trends according to industries as well as nine surveys of new products and quality functions were completed.

### The Supply Chain System of Production & Sales

The purpose of CSC's Supply Chain System is to effectively match CSC's production and sales with its customers' order demands by bilateral coordination. With standard ordering procedures and allocation of its production capacity, CSC provides timely and flexible responses to the customers online regarding their orders, which closely meets the demand of the market and promotes the overall efficiency of the production and sales in the supply chain.

Operation flexibility and efficiency have markedly increased by the constant optimization and improvement of CSC's Supply Chain System regarding production and sales. Customers can get instant answers in regard to the delivery dates, quantities, and prices of their orders by linking up with CSC's Supply Chain System, which keeps track of the planning of sales and production, quotations, order entries and revisions, production plans and schedules, follow-ups of existing orders, storage and transportation, and delivery in a smooth and fast manner. The results and benefits of the system are listed as follows: (1) Assistance of the linking service of the ERP information systems between CSC and its customers has been offered. The operation of customers'purchases, receipt of their orders, inspection, and requests of reimbursement can be interacted with CSC's information on orders, production, delivery, and invoices. Efficiency and precision have been enhanced, and tasks have been simplified. Product value has been raised because there are no borders for accompanying experts, and CSC offers instantaneous information responses. (2) CSC has established the Metallurgical Technology Service Cloud to offer differentiated services to its customers. A mobile knowledge databank and the apps for handling customer complaints instantaneously have also been established to further service its customers. (3) In accordance with the government's policy on the cloud computing industry and the CSC Group's promotion of its private service cloud, CSC has applied cloud technology in the fastener industry to enhance the overall competitiveness, which will facilitate relevant fastener enterprises to enhance the effectiveness, sales, and succession of knowledge of the industry chain. (4) CSC's customer service cloud mobilizes the daily services that customers need so that they can utilize their mobile devices to issue bills of lading, confirm guotations, and track the progress of their orders. Price spreadsheets are also offered so that salespeople at CSC can respond to customers' inquiries immediately. (5) CSC has raised its ontime delivery rates by improving order preparations, rationalizing delivery, tracking overdue delivery, coordinating production, sales, shipping of export products, etc. (6) Based on production at the lowest costs and the e-commerce information which meets customers'requirements, CSC will gradually establish its smart production and sales to further cut costs to meet the customers' demand.

### **Customer Satisfaction**

CSC always commissions an academic institution to conduct a domestic and overseas customer satisfaction survey every year. Results of the 2018 survey were satisfaction indices of 73.6 points, which was a decrease of 1.8 points compared with those of 2017, from domestic customers and 72 points, which was a decrease of 3.8 points compared with those of 2017, from overseas customers. The top three items of the domestic satisfaction index were the service attitudes of the salespeople, the speed of the salespeople's responses to customers' inquiries, and the technical staff's expertise in products. The top three items of the overseas satisfaction index were the service attitudes of the salespeople, the technical staff's expertise in products, and the speed of the salespeople's responses to customers' inquiries.

# **Risk Management**

# ridsteel

# CLIMATE ACTION Member

dsteel

CLIMATE

# orldsteel

China Steel Corporation (CSC)

CSC was granted the Climate Action Recognition by worldsteel

# **Risk Management**

### Market Risk Control

To disperse liable risks of concentrated sales in the steel market, CSC has managed its risk control in two areas. In terms of sales, CSC has adopted the distribution channel strategy of regarding the domestic market as its principal outlet and supplementing it with export sales and adjusted their ratios according to the changes in the market. New product development has been significantly enhanced to create new value at CSC. Moreover, CSC has a full grasp of the dynamics of related industries, expands the range of its supplies, and seeks investment opportunities in the downstream steel industry or industries which consume steel products. Overseas coil centers have been established to have a full grasp of sales channels. In terms of production, on the basis of the amount of estimated orders, sales and production plans are simulated to avoid the risks of economic fluctuations. Concrete measures include coordination of the allocation of slab purchase quotas among the subsidiaries in the CSC Group, reduction of production in the furnaces and campaign adjustments, adjustments of the schedules of seasonal/annual maintenance of the production plans can be adjusted by various means whenever necessary.

### An emergency response drill of the gas leakage in the converter



Repairs carried out by technical personnel



Emergency response measures taken in a simulated fire in a plant

### Risk Control of Raw Material Supply

### 1. Procurement of Raw Materials

To avoid the disruptions of the supply of raw materials, such as coal, iron ore, and limestone, due to the weather or the conditions of the mines, railways, and loading ports, CSC has adopted the following countermeasures:

- The sources and suppliers are cautiously evaluated.
- Safe inventory levels are properly maintained.
- The sources of the raw material supply are diversified; short-term, medium-term, and long-term contracts, ranging from one to five years, are signed with various suppliers in different countries.
- Contracts are executed in good faith; relationships with mutual trust and assistance are maintained with the suppliers.
- Some of the retained amounts are retailed in the spot markets in response to the flexibility in production demand so that opportunities to reduce costs can be sought.
- New sources of the raw material supply are actively developed to intensify competition and avoid domination by only a few suppliers.
- CSC has its own vessels for raw material transportation so that it can control and reduce its transportation costs when there is a price hike in freight; nonetheless, it will also charter vessels for timely transportation of some of its raw materials when necessary.

### An emergency response drill of a leakage in a gas storage tank of a coke oven



Cooling of the temperature by spraying water from fire engines



The rescue personnel wearing breathing apparatuses conducted repairs in a drill.

### 2. Development of Raw Material Sources

- Cooperative investment projects are carefully carried out only with prestigious miners with the experiences of coal and iron mining and exploration or joint venture partners, including steel plants and trading companies.
- Investigation on the spot is carried out with due diligence so that CSC can fully grasp the status of its raw material investment.
- Professional consultants in geology, finance, taxation, and law are commissioned to help carry out feasibility assessment.
- Overall assessment and reviews are conducted by related departments internally when necessary.
- Decision-making meetings of raw material joint ventures are attended to protect CSC's investment interests.
- The development and operations of raw material joint ventures are closely monitored and fully controlled.

### Transportation Risk Control

CSC's ultimate objective in the management of raw material transportation is the uninterrupted supply. Its weekly review of all material inventories serves as the basis for the determination of the optimal shipping plan. Depending upon the sizes of the needed vessels and their economic benefits, special vessels or provisional chartered ones are flexibly deployed, and their movements are continuously tracked until their discharge is completed. The risks of marine transportation are borne by overseas buyers. As for inland transportation, all of the trucking companies have to present both their signed letters of guarantee and bankers' irrevocable letters of guarantee on fixed amounts to CSC to ensure that products will be delivered to CSC' s customers according to agreed-upon schedules and in perfect conditions. If the steel products in delivery are damaged, lost, or delayed, CSC maintains the right to deduct the loss from the freight or the guarantee deposits from the transportation companies to control transportation risks.



CSC took part in purchasing the reclaimed water and the urban sewage recycling program.



CSC was granted the TWAEO Certificate by Kaohsiung Customs, Customs Administration, Ministry of Finance.

### **Risk Control of Utilities**

Joint energy systems, including the water, electricity, oil, steam, and gas systems, are monitored and dispatched by the Utility Dispatching Center (UDC) at CSC. Besides the implementation of economic dispatching to control system safety by UDC, PDAs are also utilized to facilitate the examination of the facilities in periodic patrol checks. Revamp of pipelines and power distribution facilities has been conducted continuously to ensure the safety of all systems. Emergency drills in regard to facility failures are held every year to reduce the risks of energy supply. The measures in risk control of utilities taken by CSC include:

### 1. Electricity and gas:

- Replacement of the old equipment used for power generation will be continued, and professional inspections will also be arranged to promote the reliability of power supply.
- Replacement of the old gas pipelines will be carried out to reduce risks.
- Testing operations of gas pipelines in the underpasses were conducted.

### 2. Water:

Emergency limited water usage administrative regulations were established to avoid the damage in the furnaces and coke ovens caused by the tightening of water supply by Taiwan Water Corporation in dry seasons. CSC hopes to reduce the damage in production or facilities caused by the lack of water supply; therefore, it actively takes part in the municipal project of recycling waste water from the Fongshan Creek Sewage Treatment Plant, which serves as the second source of water supply, to reduce the risk of water supply. 22,000 m<sup>3</sup>/day of recycled water was generated in 2018, and it will be increased to 41,000 m<sup>3</sup>/day in the end of 2019. It is estimated that 20,000 m<sup>3</sup>/day of reclaimed water coming out of the Linhai Sewage Treatment Plant can be generated by 2022.

### **Risk Control of Information Systems**

To avoid adverse effects on CSC's business operations due to computer software, hardware, and network irregularities, it has drawn up standard operating procedures and implemented education and training programs as well as instituted strict control measures to effectively reduce the risk of abnormalities, including implementation of (1) multiple backup mechanisms of computer software, hardware, and networks; when activated, the time difference of the taking over of the backup mechanisms can be shortened, (2) backup and restoring mechanisms of files with multi-version support, (3) online control of application systems and version changer mechanisms, (4) prevention of virus and network intrusions, (5) uninterrupted power supply systems and automatic fire suppressing systems, and (6) entrance control with closed circuit televisions. In addition, drills are held periodically.

### **Risk Control of Facility Maintenance**

### 1. Machinery:

- Spare management: Proper inventory levels are maintained according to past maintenance experience and the amounts of spare consumption. When the insured materials are lower than the safety stock, the material management system will immediately notify the material management unit to carry out procurement operations as soon as possible to avoid the risk of downtime in production lines caused by lack of materials.
- Maintenance résumés: Abnormalities in mechanical and electrical equipment and facilities are looked for through downtime management; the records of the equipment résumés are kept. The tracking mechanisms for handling measures and improvement of maintenance strategies were strengthened to ensure maintenance techniques and experience were fully kept and passed down to reduce the maintenance time at downtime.
- Establishment of the online monitoring center: The operational data of equipment in important production lines was monitored through systematic mechanisms to deliver daily and weekly reports about abnormalities. Countermeasures to handle abnormalities were researched to give early warnings and prevent possible sudden downtime of the production equipment.

### 2. Electrical Control Facilities:

- Risk management of the IATF 16949 and ISO 9001 quality management systems is carried out.
- Preparation of the off-site backups of the process control systems and operations of backup and restoring mechanisms of files are implemented.
- Fault-tolerant master systems are installed in part of the important process control systems to reduce the frequencies of hardware downtime and increase the reliability of system operations.
- Uninterruptible power systems are applied in all process control systems. Entrance control is implemented, and so are fire and emergency evacuation response drills and preparation of the off-site backups of the process control systems.
- The computers for program control are equipped with anti-virus software, and the virus codes are updated regularly to ensure information security and normal operations of the computer systems.

### **Risk Control of Construction Management**

Standardization is carried out in accordance with the ISO 9001 quality management systems. Standard documents such as "Management regulations for the establishment of engineering projects," "Management regulations of engineering contracts," and "Management regulations for submitting project profit and loss statements" have been established to strengthen engineering organizations, contracts, and cost control of projects.

In terms of the implementation of requirements beyond the scope of the contracts, all documents between CSC and related parties are completely preserved, and the professional advice of the engineering and legal consultants are sought as a basis for future contract changes, including claims for project costs and extensions of work periods.

The construction costs of projects are strictly controlled. The utilization of the budget for each project is regularly reviewed, and the project expenditure is also strictly controlled by each subsystem. Project budget control systems are developed to integrate personnel management costs, project revenue and expenditure details, cash flow estimates of projects, warnings of abnormalities, etc.

In order to have a full grasp of the contractors' financial statuses, CSC commissions domestic credit reporting agencies to conduct credit checks on registered contractors/subcontractors on a regular basis. If the checks of the persons in charge (contractors/subcontractors) bounce, or when they are classified as dishonored account holders by banks, they will be considered as suspended and/or disqualified contractors/subcontractors and prohibited from bidding, or their maximum bidding amounts will be limited.

### Risk Control of Environmental Protection, Safety, and Hygiene

Hazard identification and risk assessment are carried out to promote the culture of industrial safety. Measures are taken to reduce the risks in the high and major categories, and emergency drills are held periodically.

CSC has been actively devoted to reducing the emissions of air pollutants and waste water; moreover, it has reinforced water conservation and recycling of waste water.

CSC has taken proper action in response to the trend of environmental protection and reduction of carbon emissions and reduced the risk of climate change.

### Risk Control of Climate Change

Based on the concept of sustainable development, the goal of the reduction of carbon emissions and promotional strategies are set. The performance of the reduction of carbon emissions is enhanced by best available technology, development and applications of lowcarbon energy, the expansion of regional energy integration, etc.

Steel products which conserve energy consumption and reduce carbon emissions will be developed and their life cycles will be assessed to expand the effectiveness of external reduction of carbon emissions.

CSC will be actively involved in the new green businesses, domestic and overseas cooperative projects regarding reduction of carbon emissions, carbon capture and storage (CCS), and operations of carbon rights.

Low carbon lifestyles and consumption will be promoted within CSC in the hope of developing a low carbon society.

In collaboration with the government's targets for the reduction of carbon emissions at different phases, CSC has formulated the corresponding roadmap for the reduction of carbon emissions and implemented related projects for energy conservation and reduction of carbon emissions.

### Financial Risk Control

CSC keeps close watch on the daily balance of foreign currency transactions. In accordance with its demand for foreign exchange funds and the trends of the foreign exchange market, it adjusts its holdings of strong and weak foreign currencies flexibly to promote the effectiveness of foreign currency manipulation. For short-term foreign exchange funds, natural hedging is adopted by offsetting revenue and expenses. If there is a demand (mainly in international currencies) in a new foreign investment project or procurement of imported equipment, CSC will, in principle, hedge against exchange rate risks by taking out an equivalent long-term loan in foreign currencies or undertaking forward foreign exchange trading. Relevant practices can be adjusted at all times depending upon the costs of currency hedging and exchange rate trends. Occasionally, when there is a need for capital injection, the funds are raised in the New Taiwan Dollar if it is a strong currency in terms of its exchange rates.

Clear interest rate risk tolerances are set to control floating interest rate debts. When interest rates in the financial markets turn around significantly, CSC will apply early repayments or interest rate swaps (IRS) to convert the interest rates to fixed rates. In regard to the mediumand long-term demand of NT dollars, corporate bonds will be issued to lock in medium- and long-term capital costs when the capital market is loose to avoid the risks of the increases of interest rates in the future.

CSC assists its customers to increase their credit lines in banks to utilize the operation of AR (accounts receivable) factoring. By means of e-commerce and digital signature security systems, CSC simplifies the payment procedures for its customers to ensure them that their ordered products will be delivered according to normal delivery practice.

CSC also keeps close watch to ensure the faultless operation of its electronic business and security mechanisms and the accuracy and timeliness of the information at all times; it raises the degree of customer satisfaction by offering services through the e-commerce financial operation.

Various indicators are regularly used to analyze CSC's and its subsidiaries' financial structures, solvency, operating capability, profitability, cash flow, and degrees of leverage. Early warning mechanisms are set to prevent the occurrence of any risk. The value of CSC's financial assets is monitored in real time; recommendations of investment or reduction of investment are proposed. Moreover, capital allocation among the companies within the CSC Group will be strengthened to increase the efficiency of capital utilization.

### Authorized Ecnomic Operator (AEO)

There are four themes in CSC's AEO risk management, namely, prevention of illegal entries, physical cargo security, risk management of business partners, and information security. In addition to the annual and regular external audits of business partners and the internal self-examination, CSC strongly recommends its subsidiaries and business partners in the supply chain to obtain their AEO certification so that the control of cargo security can be horizontally and vertically promoted from CSC alone to its partners in the upstream and downstream industries. CSC was certified again and granted the TWAEO Certificate by Kaohsiung Customs, Customs Administration, Ministry of Finance in 2018.

# **Corporate Governance**

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# **第十一屆台灣企業永續獎** Taiwan Corporate Sustainability Awards

CSC was granted the 2018 Taiwan Corporate Sustainability Award.

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# **Corporate Governance**



### Shareholders' structure<sup>13</sup>

0	Domestic natural person and other juristic person	51.75%
0	Government (official) institution	20.10%
0	Overseas foreign investment of juristic person, nature person, and trust fund (GDR included)	17.92%
0	Domestic securities investment trust fund	6.33%
0	Domestic financial institution	3.90%

<sup>13</sup> As of August 1, 2018, the record date for ex-right/dividend.

### Annual Shareholders' Meeting

Starting from 2011, every motion was discussed and voted, and the results of all motions were announced at the regular annual shareholders' meeting first and openly posted on the Market Observation Post System and CSC Website afterwards as references for investors. 2018 was the seventh year when electronic voting was adopted. Approximately 54.78% of all the totaled issued shares were voted in such a manner by shareholders when exercising their rights. The foreign shareholders' voting rights were approximately17.36% of the total number of shareholders' voting rights. On the Book Closure date, 18.14% of all the totaled issued shares were foreign-owned; in particular, over 95% of foreign shareholders also exercised their rights by voting electronically. The aforementioned facts helped to promote the public's assessment of CSC's corporate governance.

# dividend payout NT\$/share 2015 0.5 2016 0.85 2017 0.88 Earnings per share NT\$/share 2016 1.04

**Common stock cash** 

2017

2018

1.09

1.58



Earnings conferences/conference calls are held.



CSC was granted the Sustainability Leaders Award by BSI.



CSC's 2018 shareholders' meeting

CSC has paid much attention to its shareholders' rights and interests. To ensure that investors and shareholders have smooth communication channels to voice their opinions and maintain their rights to be fully aware of and participate in decision-making regarding major events taking place at CSC, special personnel from the Finance Department have been designated to be responsible for relevant matters. The following measures have been adopted: (1) Shareholders' service channels, such as a toll-free telephone line and an e-mail address, have been established to answer their suggestions and doubts. (2) Significant and instant information regarding CSC's monthly consolidated operating revenue, consolidated operating income, and consolidated income before income tax as well as its sales volume and domestic price adjustments is e-mailed to analysts and investors. Furthermore, relevant data are always updated on CSC's corporate website with transparency and a high degree of timeliness. (3) Designated staff will receive domestic and foreign investors, answer their questions, and make factory tours. The management will also take part in earnings conferences/conference calls actively to let domestic and foreign investors have a better understanding of CSC. (4) Financial, business, and corporate governance information is fully disclosed in the "Shareholders' services" and "Corporate governance" sections on CSC's corporate website; moreover, CSC's CSR Report Section, which posts major issues related to energy and environment management and CSC's annual CSR reports over the years and serves as a reference for investors, is also available on the same website.

### The Board of Directors

There are currently 11 directors in the Board of Directors, three of whom are independent directors. "Rules Governing the Election of Directors" have been established, and nominated candidates who are elected will be appointed as directors. In 2018, seven board meetings were held.

Under the Board of Directors are two functional committees, the Audit Committee and the Remuneration Committee, which enhance the operations of the Board of Directors. The Audit Committee consists of three independent directors, one of whom should have accounting and finance expertise. The functions of the Audit Committee include the supervision of the following items: (1) fair presentation of CSC's financial reports, (2) the hiring (and dismissal), independence, and performance of CSC's certified public accountants, (3) the effective implementation of CSC's internal control systems, (4) compliance with relevant laws and regulations by CSC, and (5) management control of the existing or potential risks of CSC. Seven meetings were held in 2018, and the minutes of the resolutions were presented to the Board of Directors.

The Remuneration Committee consists of three independent directors. Four meetings of the Remuneration Committee were convened in 2018, the key points of which were the discussion of the performance evaluation system for commissioned senior managers and their pay adjustments and the implementation of performance management, and the proposals drawn from the resolutions of the meetings were presented to the Board of Directors.

To implement vigorous energy conservation and reduction of carbon emissions, CSC established the paperless meeting management system in June 2013. Notices, agendas, information, and proceedings of the meetings of the Board were uploaded to the system; attendees were notified electronically to browse the aforementioned information by logging in the system.

### **Independent Directors**

### 1. Communication with the Internal Auditor

- The Internal Auditor explains to the independent directors on matters, such as asset protection, account management, and efficiency of asset utilization in the audit report.
- Elaborations on the effectiveness for the establishment of the audit improvement tracking system.
- Elaborations on the handling principles of offence reports and the signing mechanism of the internal control declarations.
- Communication and discussions on risk assessment in the self-assessment report.

### 2. Communication with the Certified Public Accountants

- CSC's certified public accountants attend the quarterly audit committee meetings as well as board meetings to communicate matters related to the financial statements. Based on their professional judgment, they may meet with the independent directors to conduct communication by means of the Audit Committee.
- Quarterly financial reports reviewed by the certified public accountants are submitted to the Audit Committee for communication and discussion. Annual financial statements will be presented to the Audit Committee after being audited by the certified public accountants, who will obtain the Audit Committee's issued consent for reporting.
- The certified public accountants communicate and discuss the key audit items of the audit report with the Audit Committee annually according to regulations.

### **Internal Auditing**

To forestall irregularities and strengthen the effectiveness of corporate administration, key point activities of the Internal Auditor for 2018 were to test and assess whether the operational procedures in the eight operational cycles, which included business of: (1) sales and receipt, (2) purchase and payment, (3) production, (4) labor and wage, (5) finance, (6) property, plant, and equipment, (7) investment, and (8) research and development, were adequately comprehensive and precise. Moreover, issues such as whether there were risks involved and whether the systems were designed with a cross-checking function were also assessed.

The Internal Auditor conducted the audits required by the Regulations Governing Establishment of Internal Control Systems by Public Corporations promulgated by the Financial Supervisory Commission, Executive Yuan, on a number of controls, which included the following: (1) compliance with regulations, (2) management of the use of seals, (3) management of the receipt and use of negotiable instruments, (4) management of budgets, (5) acquisitions and disposal of assets, (6) management of assets, (7) management of endorsements and guarantees, (8) derivative financial products, (9) management of liabilities, commitments, and contingencies, (10) implementation of authorization and deputy systems, (11) management of loans to others, (12) management of financial and non-financial information, (13) management of related parties' transactions, (14) management of

the procedures for preparation of financial statements, (15) supervision and management of subsidiaries, (16) management of the operation of board meetings, (17) management of the operation of the audit committee meetings, (18) management of shareholder services, (19) management of the protection of personal information, (20) control of information flow security inspection, (21) management of prevention of insider trading, and (22) IFRS management. Furthermore, the Internal Auditor also assessed the internal control systems of CSC's 21 subsidiaries with due diligence.

In 2018, 49 audit reports and 439 items for improvement were presented by the Internal Auditor. The audited units/departments and subsidiaries were notified in regard to the items for improvement. The suggestions for improvement were then keyed into CSC's audit management system; the progress of improvement was followed up. Each audit, when completed, is sent by letter to the Independent Directors for examination and perusal according to regulations.

### Performance of Corporate Governance

The Financial Supervisory Commission has published the "Corporate Governance Roadmap 2013," which will be modified periodically on a rolling basis in the next five years. "Evaluation of corporate governance" has been implemented since 2015; the scope of evaluation has expanded from merely information disclosure to corporate governance. CSC's ranking has always been among the top 20% of the exchange-listed or OTC-listed companies. Furthermore, in 2018, the Taiwan Stock Exchange (TWSE) released the results of the fourth corporate governance evaluation, and CSC was among the top 5% listed companies again and belonged to the TWSE Corporate Governance 100 Index. With recognized information transparency, CSC has been awarded the highest rating of A++ in information disclosure assessment among the listed companies for many years.

In terms of CSC's performance in the environmental, social, and corporate governance aspects, it has been listed as a constituent of the FTSE4Good Index, showing recognition of CSC's efforts in corporate governance and corporate social responsibility by the FTSE Group and FTSE Russell.

CHINA STEEL CORPORATION

### Organization Chart





### CHINA STEEL CORPORATION

### **Board of Directors**

(as of March 31, 2019)



Chairman of the Board Chao-Tung Wong Representing Ministry of Economic Affairs, R. O. C.



Director Wen-Sheng Tseng Representing Ministry of Economic Affairs, R. O. C.



Director Feng-Sheng Wu Representing Ministry of Economic Affairs, R. O. C.



Director Horng-Nan Lin Representing Chiun Yu Investment Corporation



Director Shyi-Chin Wang Representing Ever Wealthy International Corporation



Director Cheng-I Weng Representing Hung Kao Investment Corporation



Director Yueh-Kun Yang Representing Gau Ruei Investment Corporation



Director Chun-Sheng Chen Representing Labor Union of China Steel Corporation



Independent Director Shyue-Bin Chang



Independent Director Min-Hsiung Hon



Independent Director Lan-Feng Kao

### CHINA STEEL CORPORATION

### Senior Management

(as of March 31, 2019)



President

Horng-Nan Lin



Executive Vice President (Concurrently Spokesman for the Corporation)

Shyi-Chin Wang



Vice President -Administration

Chiu-Po Chang



Vice President -Commercial

Chien-Chih Hwang



Vice President -Finance

Yueh-Kun Yang



Vice President -Corporate Planning (Concurrently Company Secretary)

Pai-Chien Huang



Vice President -Technology

Song-Jau Tsai



Vice President -Engineering

Hsin-Chin Kuo



Vice President -Production

Chih-Tai Charng

## Five-Year Summary of Selected Financial Data and Operating Results

(In thousands of New	Taiwan Dollars,	unless stated	otherwise)
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	2018	2017	2016	2015	2014 (Restated)
Operating revenues	235,403,151	207,098,630	168,927,075	160,909,464	205,159,602
Operating costs	210,430,943	187,568,805	147,174,784	148,511,291	183,377,897
Gross profit	24,972,208	19,529,825	21,752,291	12,398,173	21,781,705
Realized (unrealized) gain on transactions with subsidiaries and affiliates	(63,751)	147,162	(384,546)	225,679	(293,861)
Operating expenses	8,591,826	8,101,943	8,286,601	7,469,515	8,263,257
Profit from operations	16,316,631	11,575,044	13,081,144	5,154,337	13,224,587
Non-operating income and expenses	10,080,759	6,945,620	4,952,067	3,161,977	10,431,496
Profit before income tax	26,397,390	18,520,664	18,033,211	8,316,314	23,656,083
Net profit for the year	24,454,152	16,905,588	16,038,369	7,604,721	22,132,134
Other comprehensive income (loss) for the year, net of income tax	(1,450,139)	(2,475,273)	(87,519)	(2,531,685)	3,561,821
Total comprehensive income for the year	23,004,013	14,430,315	15,950,850	5,073,036	25,693,955
Current assets	85,311,954	73,703,417	65,458,991	63,791,939	65,977,147
Property, plant and equipment	155,897,997	162,042,223	167,632,162	175,420,761	185,285,861
Other assets	239,872,226	236,681,872	237,184,216	225,187,698	212,986,584
Total assets	481,082,177	472,427,512	470,275,369	464,400,398	464,249,592
Current liabilities	68,011,905	65,066,190	45,556,399	57,914,294	51,998,443
Noncurrent liabilities	100,162,235	103,351,259	122,159,084	112,165,285	107,576,551
Total liabilities	168,174,140	168,417,449	167,715,483	170,079,579	159,574,994
Share capital	157,731,290	157,731,290	157,731,290	157,731,290	157,731,290
Capital surplus	38,545,884	38,211,082	37,807,466	37,612,027	37,217,876
Retained earnings	122,682,396	109,227,145	106,917,266	99,630,738	108,150,878
Other equity	2,595,167	7,372,935	8,680,706	7,924,408	10,162,015
Treasury shares	(8,646,700)	(8,532,389)	(8,576,842)	(8,577,644)	(8,587,461)
Total equity	312,908,037	304,010,063	302,559,886	294,320,819	304,674,598
Total liabilities and equity	481,082,177	472,427,512	470,275,369	464,400,398	464,249,592
Equity per common share (NT\$)	20.25	19.67	19.58	19.04	19.72
Earnings per common share (NT\$)	1.58	1.09	1.04	0.49	1.43
Earnings per common share (NT\$) <sup>14</sup>	-	-	1.04	0.49	1.43

<sup>14</sup> Recalculated using retroactively adjusted earnings and common shares after taking compensation paid to employees by shares and stock dividends into account.

### Five-Year Summary of Selected Financial Ratios and Percentages

		2018	2017	2016	2015	2014
Current ratio	(%)	125	113	144	110	127
Ratio of long-term liabilities and equity to property, plant and equipment	(%)	265	241	244	223	214
Total liabilities to total assets	(%)	35	36	36	37	34
Net profit ratio	(%)	11	8	10	5	11
Return on total assets	(%)	5	4	4	2	5
Return on equity	(%)	8	6	5	3	7
Revenue growth rate, year to year	(%)	13.67	22.60	4.98	(21.57)	2.21
Equity growth rate, year to year	(%)	2.93	0.48	2.80	(3.40)	5.18

### Analysis of the Financial Status and Operating Results

		2018	2017	Increase (Decrease)(%)
Cash flow ratio	(%)	57	36	58
Cash flow adequacy ratio <sup>15</sup>	(%)	122	117	4
Cash reinvestment ratio	(%)	3.24	1.28	153

### 1. Two-year analysis of flow ratios

<sup>15</sup> Based on the data over the past five years.

### Analysis of the increase (decrease) of percentages:

- (1) The cash flow ratio: The 58% increase in the cash flow ratio over the previous year was mainly attributable to the increase in the pre-tax income, resulting in the increase in the net cash flow from the operation activities.
- (2) The appropriate cash flow ratio: The 4% increase in the appropriate cash flow ratio over the previous year was mainly attributable to the increase in the net cash flow from the operation activities.
- (3) The cash reinvestment ratio: The 153% increase in the cash reinvestment ratio over the previous year was mainly attributable to the increase in the net cash flow from the operation activities.

### 2. Analysis of operating results

- (1) The NT\$28,304,521 thousand increase in the operating revenue was mainly attributable to the increase of the unit sales prices of steel products.
- (2) The NT\$22,862,138 thousand increase in the operating costs was mainly attributable to the increase in the unit costs of steel products.
- (3) The NT\$5,442,383 thousand increase in the gross profit was mainly attributable to the fact that the increase of the unit sales prices was more than that of the unit costs of steel products.
- (4) The NT\$210,913 thousand decrease in the realized (unrealized) gain on the transactions with subsidiaries and associates was mainly attributable to the fact that the unrealized gross profit of the steel products sold to the subsidiaries and affiliates this year was increased in comparison with those over the previous year.
- (5) The NT\$489,883 thousand increase in the operating expenses was mainly attributable to the increase of fees for repairs, maintenance, and warranty, and personnel expenditure.
- (6) The NT\$4,741,587 thousand increase in the operating income was mainly attributable to the causes in (1) $\sim$ (5).
- (7) The NT\$3,135,139 thousand increase in the non-operating net income was mainly attributable to the increase of the share of profits from the subsidiaries and affiliates recognized under the equity method.
- (8) The NT\$7,876,726 thousand increase in the profit before income tax was mainly attributable to the causes in (1)  $\sim$  (7).
- (9) The NT\$7,548,564 thousand increase in the net income was mainly attributable to the increase of the profit before income tax, the causes of which were listed in (1)  $\sim$  (7), and the NT\$328,162 thousand increase in income tax expenses.

### Terms and Conditions of Corporate Bonds

Issue	1st Unsecured Corporate Bonds-B Issue in 2011	1st Unsecured Corporate Bonds-A Issue in 2012	1st Unsecured Corporate Bonds-B Issue in 2012	1st Unsecured Corporate Bonds-A Issue in 2013	1st Unsecured Corporate Bonds-B Issue in 2013
IssueDate	From October 19, 2011 to October 19, 2018	From August 10, 2012 to August 10, 2019	From August 3, 2012 to August 3, 2022	From July 12, 2013 to July 12, 2020	From July 12, 2013 to July 12, 2023
Face Amount	NT\$1 million	NT\$1 million	NT\$1 million	NT\$1 million	NT\$1 million
Issue Price	At par value	At par value	At par value	At par value	At par value
Amount	NT\$10,400 million	NT\$5,000 million	NT\$15,000 million	NT\$6,300 million	NT\$9,700 million
Coupon	1.57%	1.37%	1.50%	1.44%	1.60%
Maturity	Seven years	Seven years	Ten years	Seven years	Ten years
Trustee	Taipei Fubon Bank,Trust Department	Taipei Fubon Bank,Trust Department	Taipei Fubon Bank,Trust Department	Mega International Commercial Bank, Head Office-Trust Department	Mega International Commercial Bank, Head Office-Trust Department
Lead Manager	-	-	-	-	-
Legal Advisor to the Issuer	Chien Yeh Law Offices	Chien Yeh Law Offices	Chien Yeh Law Offices	Chien Yeh Law Offices	Chien Yeh Law Offices
Auditor of the Issuer	Deloitte & Touche	Deloitte & Touche	Deloitte & Touche	Deloitte & Touche	Deloitte & Touche
Repayment	Repay 50% of the principal at the end of the 6th and 7th year; interest shall be paid annually against interest coupon commencing from the issue date.	Repay 50% of the principal at the end of the 6th and 7th year; interest shall be paid annually against interest coupon commencing from the issue date.	Repay 50% of the principal at the end of the 9th and 10th year; interest shall be paid annually against interest coupon commencing from the issue date.	Repay 50% of the principal at the end of the 6th and 7th year; interest shall be paid annually against interest coupon commencing from the issue date.	Repay 50% of the principal at the end of the 9th and 10th year; interest shall be paid annually against interest coupon commencing from the issue date.

### Terms and Conditions of Corporate Bonds

Issue	1st Unsecured Corporate Bonds-C Issue in 2013	1st Unsecured Corporate Bonds-A Issue in 2014	1st Unsecured Corporate Bonds-B Issue in 2014	1st Unsecured Corporate Bonds-C Issue in 2014
IssueDate	From July 12, 2013 to July 12, 2028	From January 23, 2014 to January 23, 2021	From January 23, 2014 to January 23, 2024	From January 23, 2014 to January 23, 2029
Face Amount	NT\$1 million	NT\$1 million	NT\$1 million	NT\$1 million
Issue Price	At par value	At par value	At par value	At par value
Amount	NT\$3,600 million	NT\$6,900 million	NT\$7,000 million	NT\$9,000 million
Coupon	1.88%	1.75%	1.95%	2.15%
Maturity	Fifteen years	Seven years	Ten years	Fifteen years
Trustee	Mega International Commercial Bank, Head Office-Trust Department	Taipei Fubon Bank,Trust Department	Taipei Fubon Bank,Trust Department	Taipei Fubon Bank,Trust Department
Lead Manager	-	-	-	_
Legal Advisor to the Issuer	Chien Yeh Law Offices	Chien Yeh Law Offices	Chien Yeh Law Offices	Chien Yeh Law Offices
Auditor of the Issuer	Deloitte & Touche	Deloitte & Touche	Deloitte & Touche	Deloitte & Touche
Repayment	Repay 30% 30% 40% of the principal at the end of the 13th 14th 15th year; interest shall be paid annually against interest coupon commencing from the issue date.	Repay 50% of the principal at the end of the 6th and 7th year; interest shall be paid annually against interest coupon commencing from the issue date.	Repay 50% of the principal at the end of the 9th and 10th year; interest shall be paid annually against interest coupon commencing from the issue date.	Repay 30% 30% 40% of the principal at the end of the 13th 14th 15th year; interest shall be paid annually against interest coupon commencing from the issue date.
Issue	1st Unsecured Corporate Bonds Issue in 2018	2 nd Unsecured Corporate Bonds Issue in 2018	1st Unsecured Corporate Bonds-A Issue in 2018	1st Unsecured Corporate Bonds-B Issue in 2018
-----------------------------------	---	--	--	--
IssueDate	From May 28, 2018 to May 28, 2025	From August 8, 2018 to August 8, 2028	From October 9, 2018 to October 9, 2025	From October 9, 2018 to October 9, 2028
Face Amount	NT\$1 million	NT\$1 million	NT\$1 million	NT\$1 million
Issue Price	At par value	At par value	At par value	At par value
Amount	NT\$6,000 million	NT\$5,600 million	NT\$4,150 million	NT\$2,250 million
Coupon	0.95%	1.10%	0.90%	1.05%
Maturity	Seven years	Ten years	Seven years	Ten years
Trustee	Hua Nan Commercial Bank	Taipei Fubon Bank,Trust Department	Taipei Fubon Bank,Trust Department	Taipei Fubon Bank,Trust Department
Lead Manager	8 underwriters including Capital Securities, etc.	12 underwriters including KGI Securities, etc.	11 underwriters including Capital Securities, etc.	8 underwriters including Capital Securities, etc.
Legal Advisor to the Issuer	Chien Yeh Law Offices	Chien Yeh Law Offices	Chien Yeh Law Offices	Chien Yeh Law Offices
Auditor of the Issuer	Deloitte & Touche	Deloitte & Touche	Deloitte & Touche	Deloitte & Touche
Repayment	Repay 50% of the principal at the end of the 6th and 7th year; interest shall be paid annually against interest coupon commencing from the issue date.	Repay 50% of the principal at the end of the 9th and 10th year; interest shall be paid annually against interest coupon commencing from the issue date.	Repay 25% and 75% of the principal at the end of the 6th and 7th year; interest shall be paid annually against interest coupon commencing from the issue date.	Repay 50% of the principal at the end of the 9th and 10th year; interest shall be paid annually against interest coupon commencing from the issue date.

# CHINA STEEL CORPORATION

# Preferred Stocks

Item	Issuance date	Nov. 18, 1974	Jan. 31, 1980	Nov. 30, 1980	Dec. 31, 1981				
Face value	(NT\$)	10	10	10	10				
Issue price	(NT\$)	10	10 10						
Number of	shares	50,000,000	21,887,000	797,000	4,006,000				
Total amou	nt (NT\$)	500,000,000	218,870,000	7,970,000	40,060,000				
Rights and	Dividend policy	legal reserve app follows: (1) Preferred stoc (2) Common stock (3) The rest of the	he accounts are settled, taxes paid, deficits offset, and th rve appropriated, the remaining earnings will be distributed a red stock dividends at 14% of the par value on stock dividends at no more than 14% of the par value st of the remaining earnings will be appropriated proportional preferred stockholders and common stockholders as bonuses						
liabilities	Appropriation of residual property	Same as those of	common sharehol	ders					
	Voting rights	No right to vote in	the elections of bo	oard directors					
	Others	Other rights and shareholders.	obligations are t	he same as those	e of the common				
	Retrieved / converted shares	0 shares (2018 ar	nd the first three me	onths of 2019)					
Preferred stock in	Unretrieved / unconverted shares	38,267,999 share	s (as of March 31,2	2019)					
circulation	Retrieving or converting clause	proceeds from sh	may retrieve the plare issuance. Pref shares into commo	erred shareholders					
		High	42.30						
	2015	Low	36.70						
		Average(closing)	40.33						
		High	41.85						
Market	2016	Low	38.60						
price		Average(closing)	ng) 40.50						
(NT\$)		High	44.00						
	2017	Low	41.55						
		Average(closing)	y) 42.44						
		High	43.40						
	2018	Low	40.20						
		Average(closing)	42.58						

# Issuance of Global Depositary Shares

			·		
Issuanc	ce date	May 28, 1992	Feb. 10, 1997	Oct. 22, 2003	Aug. 1, 2011
Issuance and Lis	ting	Asia, Europe, America	Asia, Europe, America	Asia, Europe, America	Asia, Europe, America
Total Amount (US	\$\$)	US\$327,600,000	US\$186,607,572.50	US\$936,086,488	US\$751,067,478
Offering Price Pe	r GDS	US\$18.2/1 unit	US\$18.35/1 unit	US\$15.56/1 unit	US\$19.67/1 unit
Units Issued		18,000,000 units	10,169,350 units	60,159,800 units	38,183,400 units
Underlying Secu	rities	CSC Common Shares	CSC Common Shares	CSC Common Shares	CSC Common Shares
Common Shares Represented		360,000,000	203,387,000	1,203,196,000	763,668,000
Rights and Oblig of GDS Holders	ations		ation is the same as C lated in Depositary A		Other rights and
Trustee		Not Applicable	Not Applicable	Not Applicable	Not Applicable
Depositary Bank		Citibank, N.A New York	Citibank, N.A New York	Citibank, N.A New York	Citibank, N.A New York
Custodian Bank		Citibank, N.A- Taipei	Citibank, N.A- Taipei	Citibank, N.A- Taipei	Citibank, N.A- Taipei
GDS Outstanding	]	16,180,710 shares	(as of March 31, 201	9)	
Apportionment o Expenses for Iss and Maintenance	uance	Issuance-related expenses were borne by Ministry of Economic Affairs.	Issuance-related expenses were borne by Ministry of Economic Affairs.	Issuance-related expenses were borne by Ministry of Economic Affairs.	Issuance-related expenses were borne by the Company, CSC.
Terms and Condi in the Depositary Agreement & Cus Agreement	,	Omitted	Omitted	Omitted	Omitted
Closing		High		US\$ 17.27	
price Per 2	e Per 2018 Low			US\$ 15.21	
GDS(US\$)		Average		US\$ 16.05	

# Market Price of Stock over Past Three Years

				(in NT\$ / share)
Stock	Price	2018	2017	2016
	Highest	25.55	26.40	25.90
Common	Lowest	23.20	23.65	17.05
	Average(closing)	24.20	24.92	21.80

Source of Information: Taiwan Stock Exchange Corporation

# Principal Products and Uses

Steel Pro	oduct	Major Uses
	Plates	Shipbuilding, bridges, steel structures, oil country tubular goods (OCTGs), storage tanks, boilers, pressure vessels, die, truck chassis, general construction, etc.
	Bars	Nuts and bolts, hand tools, loudspeaker parts, automobile and motorcycle parts, suspension spring, bearing, machinery parts, free cutting rod, gear, and polished bar, etc.
	Wire rods	Nuts and bolts, steel wire and rope, P. C. wire and strand, hand tools, welding electrodes, tire cord, bearing, free cutting rod, umbrella parts, polished bar, etc.
	Hot rolled coils, platesand sheets	Steel pipes and tubes, vehicle parts, containers, pressure vessels, building structures, hydraulic jacks, cold rolled and galvanized substrate, hand tools, light shapes and formed parts, etc.
	Cold rolled coils	Steel pipes and tubes, steel furniture, kitchenware, home appliances, oil barrels, automobile panels and parts, enamelware, substrate for galvanized and coated steel sheets, and hardware, etc.
	Electro-galvanized coils	Computer cases/parts and accessories, home appliance panels/parts and accessories, LCD TV back plates/parts, motor cases, construction materials, furniture hardware and components, and motorcycle fuel tanks, etc.
	Hot-dip galvanized coils	Automobile panels and parts, home appliance panels/parts and accessories, computer cases/parts and accessories, PPGI substrate, construction materials, furniture hardware and components, etc.
	Electrical steel coils	EV Motors, compressors, home appliance motors, servomotors, industrial motors, machinery motors, generators, transformers, reactors, traditional ballast, etc.
Special	Alloy Product	Major Uses
	Ti-Ni plates	Storage tanks, pressure vessels, flanges, target material, high temperature furnace lined material, electronic equipment parts, bone plates, missile parts, aircraft, chemical resistant hooks, electrode plates, etc.
	Ti-Ni bars and wire rods	Nuts and bolts, glasses frame, valve, welding consumables, bone screw, guide template, transfer abutment, artificial root, spring, coke furnace rack, turbo fastener, etc.
	Hot rolled Ti-Ni coils, plates and sheets	Pressure vessels, electrode plates, high temperature furnace lined material, chemical tanks, flanges, electroplated Baskets, etc.
	Cold rolled Ti-Ni coils and sheets	Construction material, furniture and home appliances, heat exchangers, thermal reactors, flue pipes, kitchenware (cups, bowls, tableware), filters, etc.

# Three-Year Summary of Production and Sales Volumes

				(in tons)
Product	Volume	2018	2017	2016
Plates	Production	959,739	870,478	953,060
Fidles	Sales	968,031	882,917	939,831
Pore	Production	683,745	616,330	572,621
Bars	Sales	776,079	703,774	627,911
Wire rods	Production	1,288,107	1,318,994	1,294,015
Wile lous	Sales	1,530,206	1,497,478	1,422,983
Het rolled steel products	Production	2,689,845	2,389,443	2,301,603
Hot rolled steel products	Sales	3,099,588	3,001,523	2,754,220
Cold rolled steel products <sup>16</sup>	Production	3,317,014	3,419,413	3,291,372
	Sales	3,406,755	3,394,432	3,346,243
Commercial slabs	Production	184,655	103,690	637,410
	Sales	1,455,795	1,358,146	2,017,343
Dig iton	Production	10,439	10,909	9,875
Pig iron	Sales	846	1,132	1,314
Others <sup>17</sup>	Production	106,793	102,413	92,864
	Sales	4,828	6,155	25,266
Total	Production	9,240,337	8,831,670	9,152,820
Total	Sales	11,242,128	10,845,557	11,135,111

<sup>16</sup> Including electrogalvanized, hot-dip galvanized products and electrical steel coils

 $^{\rm 17}$  Including alloy products, stainless steels, blooms, and billets



# STANDALONE FINANCIAL STATEMENTS

for the Years Ended December 31, 2018 and 2017 and

# **Independent Auditors' Report**



# Deloitte.

### INDEPENDENT AUDITORS' REPORT

China Steel Corporation

### Opinion



勤業眾信聯合會計師事務所 11073 台北市信義區松仁路100號20樓

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We have audited the accompanying standalone financial statements of China Steel Corporation (the Corporation), which comprise the standalone balance sheets as of December 31, 2018 and 2017, and the standalone statements of comprehensive income, changes in equity and cash flows for the years then ended, and the notes to the standalone financial statements, including a summary of significant accounting policies.

In our opinion, based on our audits and the report of other independent auditors (refer to the other matter paragraph below), the accompanying standalone financial statements present fairly, in all material respects, the standalone financial position of the Corporation as of December 31, 2018 and 2017, and its standalone financial performance and its standalone cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers.

### **Basis for Opinion**

We conducted our audits in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Standalone Financial Statements section of our report. We are independent of the Corporation in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China, and we have fulfilled our other ethical responsibilities in accordance with these requirements. Based on our audits and the report of other independent auditors, we believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### **Emphasis of Matter**

As disclosed in Note 3 to the standalone financial statements, the Corporation has applied the revised Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) endorsed and issued into effect by the FSC starting from 2018. Our opinion is not modified in respect of this matter.

### **Key Audit Matters**

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the standalone financial statements for the year ended December 31, 2018. These matters were addressed in the context of our audit of the standalone financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters of the Corporation's standalone financial statements for the year ended December 31, 2018 are stated as follows:

### Inventory Valuation

As of December 31, 2018, inventories of the Corporation amounted to NT\$50,931,887 thousand, representing 11% of the Corporation's total assets. Due to the drastic fluctuations in the prices of raw materials and finished goods in the steel industry, inventory valuation, which involved critical accounting estimates, is deemed to be a key audit matter. Refer to Notes 4, 5 and 12 to the Corporation's financial statements for the related accounting policies and disclosures on inventory valuation.

We focused on inventory valuation, and the audit procedures we performed included the following:

- 1. We evaluated the appropriateness of the approach applied to the inventory valuation.
- 2. We verified the completeness of inventory included in inventory valuation.
- We tested the net realizable value of inventory items on a sample basis and evaluated the underlying assumptions and supporting documents, re-performed and calculated the appropriateness of net realizable value and the value written-off.

Valuation of Financial Assets At Fair Value Through Other Comprehensive Income - Formosa Ha Tinh (Cayman) Limited

As of December 31, 2018, the Corporation's investment in Formosa Ha Tinh (Cayman) Limited (FHC) amounted to NT\$29,358,000 thousand, representing 6% of the Corporation's total assets. Such investment is an unlisted investment with no active market. Therefore, the Corporation engaged an appraiser who made an appraisal and issued a valuation report, which was used as the basis for determining the fair value of the investment. Assets of FHC were mainly from its wholly-owned subsidiary, Formosa Ha Tinh Steel Corporation (FHS). The appraiser adopted the market approach to appraise FHS which involved various assumptions and unobservable inputs, including comparable companies, market multiplier, discount for lack of marketability and control premium. As a result, the fair value of the investment in FHC is deemed to be a key audit matter. Refer to Notes 4 and 5 to the Corporation's standalone financial statements for the related accounting policies on valuation of financial assets.

The audit procedures we performed included the following:

- We assessed the professional qualifications, competence, objectivity and independence of the appraiser hired by the Corporation.
- We discussed with the management the scope of work performed by the independent appraiser, reviewed the contract terms and conditions signed by the Corporation and the appraiser, and we identified no concerns over the appraiser's objectivity or any restriction imposed on the scope of the work.
- 3. We confirmed the valuation method adopted by the independent appraiser is complied with IFRSs.

We also consulted our internal valuation experts in the assessment of the appropriateness of the appraisal and in verifying the key assumptions and the reasonableness of key inputs, including the comparable companies, market multiplier, discount for lack of marketability and control premium.

### Other Matter

Certain investments accounted for using the equity method in the Corporation's standalone financial statements for the year ended December 31, 2017 were based on financial statements audited by other independent auditors. The share of comprehensive income amounted to loss of NT\$875,298 thousand, representing 6% of the Corporation's total comprehensive income, for the year ended December 31, 2017.

# Responsibilities of Management and Those Charged with Governance for the Standalone Financial Statements

Management is responsible for the preparation and fair presentation of the standalone financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers, and for such internal control as management determines is necessary to enable the preparation of the Corporation's financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the standalone financial statements, management is responsible for assessing the Corporation's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Corporation or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including the audit committee, are responsible for overseeing the Corporation's financial reporting process.

### Auditors' Responsibilities for the Audit of the Standalone Financial Statements

Our objectives are to obtain reasonable assurance about whether the standalone financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the auditing standards generally accepted in the Republic of China will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these standalone financial statements.

As part of an audit in accordance with the auditing standards generally accepted in the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the standalone financial statements, whether due to
  fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is
  sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement
  resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery,
  intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Corporation's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- 4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Corporation's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the standalone financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Corporation to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the standalone financial statements, including the disclosures, and whether the standalone financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

6. Obtain sufficient and appropriate audit evidence regarding the financial information of entities or business activities within the Corporation to express an opinion on the standalone financial statements. We are responsible for the direction, supervision, and performance of the Corporation audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the standalone financial statements for the year ended December 31, 2018 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partners on the audit resulting in this independent auditors' report are Lee-Yuan Kuo and Cheng-Hung Kuo.

Deloitte & Touche Taipei, Taiwan Republic of China

March 25, 2019

### Notice to Readers

The accompanying standalone financial statements are intended only to present the standalone financial position, financial performance and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdictions. The standards, procedures and practices to audit such standalone financial statements are those generally applied in the Republic of China.

For the convenience of readers, the independent auditors' report and the accompanying standalone financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' report and standalone financial statements shall prevail.

# **Standalone Balance Sheets**

(In Thousands of New Taiwan Dollars)

	Decembe	er 31, 2018		December 31,	2017
ASSETS	Amount	%		Amount	%
CURRENT ASSETS					
Cash and cash equivalents	\$ 7,619	,772 2	\$	2,923,910	1
Financial assets at fair value through other comprehensive income - current	112	,155 -		-	-
Available-for-sale financial assets - current				111,603	-
Derivative financial assets for hedging - current				44,469	-
Financial assets for hedging - current	811	,156 -		-	-
Contract assets - current	204	,993 -		-	-
Notes receivable	686	,507 -		681,901	-
Notes receivable - related parties	428	,768 -		223,073	-
Accounts receivable, net	2,872	,455 1		2,246,631	1
Accounts receivable - related parties	1,893	,989 1		2,526,127	1
Other receivables	1,356	,235 -		805,299	-
Other receivables - loans to related parties	10,794	,160 2		7,356,950	2
Inventories	50,931	,887 11		48,024,231	10
Noncurrent assets held for sale	594	,606 -		-	-
Other financial assets - current	6,070	,843 1		6,869,408	1
Other current assets	934	,428		1,889,815	
Total current assets	85,311	,95418		73,703,417	16
NONCURRENT ASSETS					
Financial assets at fair value through profit or loss - noncurrent	1,651	,808 -		-	-
Financial assets at fair value through other comprehensive income - noncurrent	46,868	,501 10		-	-
Available-for-sale financial assets - noncurrent				16,418,690	3
Derivative financial assets for hedging - noncurrent				12,583	-
Financial assets for hedging - noncurrent		767 -		-	-
Debt investments with no active market - noncurrent				1,761,421	-
Investments accounted for using equity method	180,223	,533 38		207,523,641	44
Property, plant and equipment	155,897	,997 32		162,042,223	34
Investment properties	6,532	,164 1		7,129,792	2
Intangible assets	34	,847 -		44,810	-
Deferred tax assets	4,500	,087 1		3,371,609	1
Refundable deposits	60	,519 -		100,092	-
Other financial assets - noncurrent		<u> </u>	_	319,234	
Total noncurrent assets	395,770	,223 82		398,724,095	84
TOTAL	<u>\$ 481,082</u>	<u>,177 100</u>	<u>\$</u>	472,427,512	100

		December 31,	2018		December 31,	2017
LIABILITIES AND EQUITY		Amount	%		Amount	%
CURRENT LIABILITIES						
Short-term borrowings and bank overdraft	\$	17,328,763	4	\$	10,722,766	
Short-term bills payable		-	-		6,296,753	
Derivative financial liabilities for hedging - current		-	-		20,674	
Financial liabilities for hedging - current		4,192,300	1		-	
Contract liabilities - current		1,788,593	-		-	
Accounts payable		7,205,398	1		4,145,456	
Accounts payable - related parties		2,277,200	-		1,813,858	
Other payables		18,238,258	4		16,253,268	
Current tax liabilities		2,857,677	1		2,103,954	
Provisions - current		4,933,753	1		2,239,559	
Current portion of bonds payable		5,649,340	1		7,698,974	
Current portion of long-term bank borrowings		-	-		9,860,615	
Refund liabilities - current		3,040,059	1		-	
Other current liabilities		500,564			3,910,313	
Total current liabilities		68,011,905	14		65,066,190	1
NONCURRENT LIABILITIES						
Derivative financial liabilities for hedging - noncurrent		-	-		8,112	
Financial liabilities for hedging - noncurrent		4,350,730	1		-	
Bonds payable		72,304,214	15		59,967,190	1
Long-term bank borrowings		-	-		20,653,020	
Long-term bills payable		5,897,729	1		5,899,102	
Deferred tax liabilities		10,722,181	2		10,715,281	
Net defined benefit liabilities		6,887,381	2		6,048,974	
		0,007,301	2			
Other noncurrent liabilities Total noncurrent liabilities		100 162 225	<u>-</u> 21		59,580	
Total honcurrent habilities		100,162,235	1		103,351,259	2
Total liabilities		168,174,140	35		168,417,449	3
EQUITY						
Share capital						
Ordinary shares		157,348,610	33		157,348,610	3
Preference shares		382,680			382,680	
Total share capital		157,731,290	33		157,731,290	3
Capital surplus		38,545,884	8		38,211,082	
Retained earnings						
Legal reserve		63,228,774	13		61,538,216	1
Special reserve		27,649,488	6		27,655,869	
Unappropriated earnings		31,804,134	6		20,033,060	
Total retained earnings		122,682,396	25		109,227,145	2
Other equity		2,595,167	1		7,372,935	
Treasury shares	(	8,646,700)	(2)	(	8,532,389)	(
Total equity		312,908,037	65		304,010,063	6

# **Standalone Statements of Comprehensive Income**

(In Thousands of New Taiwan Dollars, Except Earnings Earnings Per Share)

		For the	Year E	nded	December 31	
		2018			2017	
		Amount	%		Amount	%
OPERATING REVENUES	\$	235,403,151	100		\$ 207,098,630	100
OPERATING COSTS		210,430,943	89		187,568,805	90
GROSS PROFIT		24,972,208	11		19,529,825	10
REALIZED (UNREALIZED) GAIN ON TRANSACTIONS WITH SUBSIDIARIES AND	,	60 751)			447.400	
ASSOCIATES	(	63,751)			147,162	
REALIZED GROSS PROFIT		24,908,457	11		19,676,987	10
OPERATING EXPENSES						
Selling and marketing expenses		3,093,162	1		2,836,946	1
General and administrative expenses		3,715,086	2		3,544,812	2
Research and development expenses		1,783,578	1		1,720,185	1
Total operating expenses		8,591,826	4		8,101,943	4
PROFIT FROM OPERATIONS		16,316,631	7		11,575,044	6
NON-OPERATING INCOME AND EXPENSES						
Other income		1,587,435	1		1,383,476	1
Other gains and losses	(	61,193)	-		268,918	-
Finance costs	(	1,652,214)	(1)	(	1,919,054)	(1)
Share of profit of subsidiaries and associates		10,206,731 10,080,759	5 5		7,212,280	3
Total non-operating income and expenses		10,060,759			0,945,020	3
PROFIT BEFORE INCOME TAX		26,397,390	12		18,520,664	9
INCOME TAX EXPENSE		1,943,238	1		1,615,076	1
NET PROFIT FOR THE YEAR		24,454,152	11		16,905,588	8

		For the	Year En	ded De	ecember 31	
		2018			2017	
		Amount	%		Amount	%
OTHER COMPREHENSIVE INCOME (LOSS)						
Items that will not be reclassified subsequently to profit or loss						
Remeasurement of defined benefit plans	(\$	757,319)	-	(\$	1,179,124)	-
Unrealized gains and losses on investments in equity instruments at fair value through other	(	1,154,367)	(1)		-	-
comprehensive income Gains and losses on hedging instruments	(	117,906)	-		-	-
Share of the other comprehensive income of	,	,,				
subsidiaries and associates		432,420	-	(	188,829)	-
Income tax benefit relating to items that will not be reclassified subsequently to profit or loss		158,592	-		200,451	-
Items that may be reclassified subsequently to profit or loss						
Exchange differences on translating foreign operations		92,177	-	(	1,726,614)	( 1)
Unrealized gains and losses on available-for-sale financial assets		-	-		895,527	-
The effective portion of gains and losses on hedging instruments in a cash flow hedge		-	-	(	30,552)	-
Gains and losses on hedging instruments	(	207,788)	-		-	-
Share of the other comprehensive income of subsidiaries and associates		104,052	-	(	451,326)	-
Income tax benefit relating to items that may be reclassified subsequently to profit or loss					5,194	
Other comprehensive income (loss) for the year, net of income tax	(	1,450,139)	(1)	(	2,475,273)	(1)
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	\$	23,004,013	10	\$	14,430,315	7
EARNINGS PER SHARE						
Basic	\$	1.58		\$	1.09	
Diluted	<u>\$</u>	1.57		<u>\$</u>	1.09	

# **Standalone Statements of Changes in Equity**

(In Thousands of New Taiwan Dollars, Except Dividends Per Share)

	Share	Capital		F	Retained Earn	ings
	Ordinary Shares	Preference Shares	Capital Surplus	Legal Reserve	Special Reserve	Unappropriated Earnings
BALANCE AT JANUARY 1, 2017	<u>\$ 157,348,610</u>	\$ 382,680	\$37,807,466	<u>\$59,934,379</u>	\$ 29,786,846	<u>\$ 17,196,041</u>
Appropriation of 2016 earnings Legal reserve Special reserve (reversal) Cash dividends to ordinary shareholders - NT\$0.85 per share Cash dividends to preference shareholders - NT\$1.4 per share	 				( <u>2,130,614</u> )	( 1,603,837) 2,130,614 ( 13,374,632)
Reversal of special reserve					(363)	( <u>53,575</u> ) <u>363</u>
Net profit for the year ended December 31, 2017 Other comprehensive income (loss)	-	-	-	-	-	16,905,588
for the year ended December 31, 2017, net of income tax Total comprehensive income (loss) for						(1,167,502)
the year ended December 31, 2017 Purchase of the Corporation's shares						15,738,086
by subsidiaries Disposal of the Corporation's shares						
held by subsidiaries Adjustment to capital surplus arising			28,066			
from dividends paid to subsidiaries Adjustment from changes in equity of			267,245			
subsidiaries and associates	<u> </u>		108,305	<del>_</del>	<u>-</u>	<u>-</u>
BALANCE AT DECEMBER 31, 2017 Effect of retrospective application	157,348,610	382,680	38,211,082	61,538,216	27,655,869	20,033,060 3,842,218
Balance after adjustments at January 1, 2018	157,348,610	382,680	38,211,082	61,538,216	27,655,869	23,875,278
Appropriation of 2017 earnings Legal reserve				1,690,558		(1,690,558)
Special reserve (reversal) Cash dividends to ordinary					(5,992)	5,992
shareholders - NT\$0.88 per share Cash dividends to preference	e					( <u>13,846,677</u> )
shareholders - NT\$1.4 per share Reversal of special reserve						( <u>53,575</u> ) 389
Net profit for the year ended December 31, 2018					(000)	24,454,152
Other comprehensive income (loss) for the year ended December 31,	-	-	-	-	-	
2018, net of income tax Total comprehensive income (loss) for						( <u>826,559</u> )
the year ended December 31, 2018 Purchase of the Corporation's shares by subsidiaries						23,627,593
Disposal of the Corporation's shares held by subsidiaries			262			
Adjustment to capital surplus arising from dividends paid to subsidiaries			281,424			
Disposal of investments in equity instruments at fair value through other comprehensive income						(110,083)
Adjustment from changes in equity o subsidiaries and associates	f		53,116			(4,225)
BALANCE AT DECEMBER 31, 2018	\$ 157,348,610	\$ 382,680	\$38,545,884	\$63,228,774	\$ 27,649,488	<u>\$ 31,804,134</u>

			Other Equity						
Total Equity	Treasury Shares	Total Other Equity	Gains and Losses on Hedging Instruments	The Effective Portion of Gains and Losses on Hedging Instruments in a Cash Flow Hedge	Unrealized Gains and Losses on Financial Assets at Fair Value Through Other Comprehensive Income	Unrealized Gains and Losses on Available- For-Sale Financial Assets	Exchange Differences on Translating Foreign Operations		
\$ 302,559,886	\$( 8,576,842)	\$ 8,680,706	<u>\$                                    </u>	\$ 62,181	\$	\$ 8,650,573	\$ ( 32,048)		
(13,374,632						<u>-</u>			
( 53,575	-	-	-	-	-	-	-		
16,905,588	-	-	-	-	-	-	-		
(2,475,273		(1,307,771)		(193,516)		964,290	( 2,078,545)		
14,430,315		(1,307,771)		(193,516)		964,290	( 2,078,545)		
(19,595	<u>( 19,595</u> )								
92,114	64,048	<u>-</u>		<u> </u>			<u> </u>		
267,245	-	-		-	-	-	-		
108,305			-	_			_		
304,010,063	( 8,532,389)	7,372,935	-	( 131,335)	-	9,614,863	( 2,110,593)		
(422,053		(4,264,271)	3,972,776	131,335	5,251,741	(9,614,863)	( 4,005,260)		
303,588,010	( 8,532,389)	3,108,664	3,972,776	<del>_</del>	5,251,741	<u>-</u>	( 6,115,853)		
(13,846,677									
(53,575									
24,454,152	-	-	-	-	-	-	-		
(1,450,139	<del>_</del>	(623,580)	131,102	<u>-</u>	(950,911)	<u>-</u>	196,229		
23,004,013		(623,580)	131,102		(950,911)		196,229		
(115,054	<u>( 115,054</u> )								
640	378			<u>-</u>			<u>-</u>		
281,424		<del>_</del>		<del>_</del>	<u>-</u>	<u>-</u>	<u>-</u>		
		110,083			110,083				
49,256	365						_		
\$ 312,908,037		\$ 2,595,167		\$	\$ 4,410,913	\$ -	\$ ( 5,919,624)		

# **Standalone Statements of Cash Flows**

(In Thousands of New Taiwan Dollars)

	For the Year Ended December 31			
		2018		2017
CASH FLOWS FROM OPERATING ACTIVITIES	\$	26,397,390	\$	18,520,664
Profit before income tax				
Adjustments for:				
Depreciation		17,609,689		17,394,877
Amortization		9,963		9,975
Net gain on financial assets at fair value through profit or loss	(	3,802)		-
Finance costs		1,652,214		1,919,054
Interest income	(	197,865)	(	146,636)
Dividend income	(	363,401)	(	335,909)
Share of profit of subsidiaries and associates	(	10,206,731)	Ì	7,212,280)
Loss on disposal of property, plant and equipment	,	51,676		9,721
Gain on disposal of investments		-	(	771,464)
Impairment loss recognized on financial assets		-	,	532,792
Impairment loss recognized on nonfinancial assets		-		40,311
Write-down (reversal of) inventories		42,812	(	551,871)
Unrealized (realized) gain on the transactions with		12,012	(	001,011)
subsidiaries and associates		63,751	(	147,162)
Recognition of provisions		1,783,317		774,194
Others	(	154,575)		49,800
Changes in operating assets and liabilities	,	. ,		
Financial assets for hedging		118,500		-
Contract assets	(	137,438)		-
Notes receivable	(	4,606)	(	209,708)
Notes receivable - related parties	(	205,695)	(	101,384
Accounts receivable	(	625,824)	(	988,974)
Accounts receivable - related parties	(	632,138	(	710,728)
Other receivables	(	543,113)	(	321,472
Inventories	(	2,790,464)	(	4,988,766)
Other current assets	(	955,387	(	1,071,405)
	(	814,399)	(	1,071,403)
Contract liabilities	(	3,059,942		3,396
Accounts payable				
Accounts payable - related parties		463,342		844,470
Other payables		3,277,721	(	1,377,976
Provisions		-	(	939,437)
Other current liabilities		46,449		584,464
Net defined benefit liabilities		81,088		84,024
Refund liabilities		1,215,587		
Cash generated from operations		41,413,053		24,494,234
Income taxes paid	(	2,369,887)	(	1,355,517)
Net cash generated from operating activities		39,043,166		23,138,717
ASH FLOWS FROM INVESTING ACTIVITIES				
Acquisition of financial assets at fair value through other comprehensive income	(	15,000)		-
Proceeds from disposal of financial assets at fair value through other comprehensive income		16		-
Proceeds from the capital reduction on financial assets at fair value through other comprehensive income		107,527		-

	For the Year Ended December 31			
		2018		2017
Proceeds from the capital reduction on available-for-sale financial assets	\$	-	\$	1,284
Acquisition of financial liabilities for hedging		3,642,472		-
Derecognition of financial liabilities for hedging	(	18,406,432)		-
Acquisition of investments accounted for using equity method Proceeds from the capital reduction on investments accounted for using equity method	(	826,000) 1,529,916	(	779,498)
Acquisition of property, plant and equipment	(	10,914,218)	(	11,701,039)
Proceeds from disposal of property, plant and equipment	,	-	,	419
Decrease (increase) in refundable deposits		39,573	(	44,404)
Increase in other receivables - loans to related parties	(	3,437,210)	Ì	145,141)
Decrease in other financial assets		198,391	,	466,929
Interest received		190,042		144,903
Dividends received from subsidiaries and associates		5,859,772		4,963,105
Other dividends received		363,401		350,463
Net cash used in investing activities	(	21,667,750)	(	5,901,729)
	\		\	<u> </u>
CASH FLOWS FROM FINANCING ACTIVITIES				
Proceeds from short-term borrowings		21,006,626		17,971,900
Repayments of short-term borrowings	(	17,508,172)	(	16,590,000)
Proceeds from short-term bills payable		80,103,247	,	122,646,753
Repayments of short-term bills payable	(	86,400,000)	(	116,350,000)
Issuance of bonds payable	,	18,000,000	,	-
Repayments of bonds payable	(	7,700,000)	(	5,200,000)
Repayments of long-term bank borrowings	í	7,598,710)	(	4,242,113)
Dividends paid	ć	13,892,306)	(	13,428,207)
Interest paid	ì	1,797,782)	(	2,088,514)
Net cash used in financing activities	(	15,787,097)	(	17,280,181)
	(		\	
NET INCREASE (DECREASE) IN CASH AND CASH				
EQUIVALENTS		1,588,319	(	43,193)
		.,,	(	,,
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF				
THE YEAR		829,222		872,415
		· · · · · · · · · · · · · · · · · · ·		· · · · · ·
CASH AND CASH EQUIVALENTS AT THE END OF THE				
YEAR	\$	2,417,541	\$	829,222
Reconciliation of the amounts in the standalone statements of cash				
flows with the equivalent items reported in the standalone balance				
sheets as of December 31, 2018 and 2017:				
Cash and cash equivalents in the standalone balance sheets	\$	7,619,772	\$	2,923,910
Bank overdraft	(	5,202,231)	(	2,094,688)
Cash and cash equivalents in the standalone statements of cash	<b>^</b>	0 447 544	•	000 000
flows	<u>\$</u>	2,417,541	<u>\$</u>	829,222

# **Ownership of Subsidiaries and Other Equity Interests**

December 31, 2018

Companies	Amount (NT\$1,000)	Ownership (%)
Investments Accounted for using Equity Method		
Investments in Subsidiaries		
Listed companies		
Chung Hung Steel Corporation	6,083,601	41
China Steel Chemical Corporation	2,094,831	29
China Steel Structure Corporation	1,270,135	33
China Ecotek Corporation	1,161,560	45
CHC Resources Corporation	896,440	20
Less:Shares held by subsidiaries accounted for as treasury stock	2,076,756	
Subtotal	9,429,811	
	-,	
Unlisted companies		
Dragon Steel Corporation	105,260,525	100
China Steel Australia Holdings Pty Ltd.	16,010,187	100
China Steel Express Corporation	11,840,131	100
C. S. Aluminium Corporation	8,151,379	100
China Steel Sumikin Vietnam Joint Stock Company	7,034,874	56
Gains Investment Corporation	7,016,034	100
China Steel Asia Pacific Holdings Pte Ltd.	4,142,730	100
China Prosperity Development Corporation	3,706,884	100
China Steel Global Trading Corporation	2,189,379	100
China Steel Corporation India Pvt Ltd.	1,688,762	100
Kaohsiung Rapid Transit Corporation	1,334,447	43
China Steel Machinery Corporation	1,070,002	74
China Steel Resources Corporation	994,965	100
Sing Da Marine Structure Corporation	754,140	100
InfoChamp Systems Corporation	742,119	100
CSC Solar Corporation	692,176	55
China Steel Security Corporation	530,435	100
HIMAG Magnetic Corporation	386,104	69
CSC Precision Metal Industrial Corporation	289,338	100
United Steel International Co., Ltd.	266,381	80
White Biotech Corporation	19,220	87
China Steel Management Consulting Corporation	16,957	100
China Steel Power Holding Corporation	4,928	100
Less:Shares held by subsidiaries accounted for as treasury stock	6,569,944	100
Subtotal	167,572,153	
Investments in Associates		
Unlisted companies		
Taiwan Rolling Stock Co., Ltd.	1,007,233	48
Honley Auto Parts Co., Ltd.	569,839	38
		30
Kaohsiung Arena Development Corporation <sup>18</sup>	510,552	18
Eminent II Venture Capital Corporation	394,784	46
Hsin Hsin Cement Enterprise Corp.	370,263	31
Dyna Rechi Co., Ltd.	296,830	25
Overseas Investment & Development Corp.	58,761	6
TaiAn Technologies Corporation <sup>19</sup>	13,307	17
Subtotal	3,221,569	
Total	180,223,533	
	100,220,000	

Companies	Amount (NT\$1,000)	Ownership (%)	
Financial Assets at Fair Value Through			
Other Comprehensive Income -Current			
Domestic investments			
Listed shares			
ADIMMUNE CORPORATION	112,155	2	
Total	112,155		
Financial Assets at Fair Value Through			
Other Comprehensive Income -Noncurrent			
Domestic investments			
Listed shares			
Taiwan High Speed Rail Corporation	7,397,621	4	
TANG ENG IRON WORKS CO., LTD.	1,373,592	9	
RECHI PRECISION CO., LTD.	557,799	5	
CSBC Corporation Taiwan	196,884	2	
O-Bank Co., Ltd.	830,782	4	
Subtotal	10,356,678		
Unlisted shares			
CDIB & Partners Investment Holding Corporation	816,826	5	
CDIB BioScience Ventures I, Inc.	10,172	5	
Mega I Venture Capital Co., Ltd.	1,549	3	
PHALANX BIOTECH GROUP, INC.	3,199	2	
Taiwan International Windpower Training Corporation	13,740	15	
Subtotal	845,486		
Foreign investments			
Listed shares			
Maruichi Steel Tube Ltd.	1,927,926	2	
Yodogawa Steel Works, Ltd.	243,147	1	
Subtotal	2,171,073		
Unlisted shares			
CSN Mineracao S.A.	2,533,532	0	
DB Metal Co Ltd	0	4	
Sakura Ferroalloys Sdn. Bhd.	1,281,120	19	
Sakura Ferroalloys Sdn. Bhd. (Preferred Shares)	322,612	19	
Formosa Ha Tinh (Cayman) Limited	29,358,000	20	
Subtotal	33,495,264		
Total	46,868,501		
Financial Assets at Fair Value Through Profit or Loss - Noncurr	ent		
Unlisted preference shares – overseas	om		
East Asia United Steel Corporation - preference A	1,651,808	19	
Total	1,651,808	ı ی	
	1,001,000		
TOTAL	228,855,997		

<sup>18</sup> The Corporation's total equity in Kaohsiung Arena Development Corporation is 29%, including 18% directly owned and 11% indirectly owned through United Steel Engineering and Construction Corporation and China Prosperity Development Corporation.

<sup>19</sup> The Corporation's total equity in TaiAn Technologies Corporation is 22%, including 17% directly owned and 5% indirectly owned through China Steel Chemical Corporation.

# Businesses and Addresses of Main Subsidiaries

(as of March 31, 2019)

# CA3 C. S. Aluminium Corporation

Chairman: S. M. Lan President: J. L. Lee

Main business: Production and sale of aluminum and nonferrous metal products

Address: 17 Tong Lin Road, Hsiao Kang District, Kaohsiung City 81260, Taiwan, R.O.C.

Tel: 886-7-871-8666

Fax: 886-7-872-1852

CSC Ownership: 99.98%



## China Steel Express Corporation

Chairman: S. M. Lee President: H. J. Chen Main businesses: Shipping services for raw materials Address: 24F., No.88, Chenggong 2nd Rd., Qianzhen District, Kaohsiung City 80661, Taiwan, R.O.C. Tel: 886-7-337-8888 Fax: 886-7-338-1296 CSC Ownership: 100%



# China Steel Chemical Corporation

Chairman: T. Y. Ho President: M. D. Fang Main business: Manufacture of coal chemistry and speciality chemical Address: 25F., No.88, Chenggong 2nd Rd., Qianzhen District, Kaohsiung City 80661, Taiwan, R.O.C. Tel: 886-7-338-3515 Fax: 886-7-338-3516 CSC Ownership: 29.04%



# China Steel Global Trading Corporation

Chairman: C. C. Hwang President:Y. J. Kuo Main businesses: Buy and sell, and act as an agency for steel products Address: 10F., No.88, Chenggong 2nd Rd., Qianzhen District, Kaohsiung City 80661, Taiwan, R.O.C.

Tel: 886-7-332-2168

Fax: 886-7-335-6411

CSC Ownership: 99.99%



# CHC Resources Corporation

Chairman: C. T. Charng

President: J. J. Ou

Main businesses: Manufacture and sale of GBFS powder, surveys and remediation of soil and groundwater, BOFS and air-cooled BFS, intermediate solidification, reutilization of resources

Address: 22F., No.88, Chenggong 2nd Rd., Qianzhen District, Kaohsiung City 80661, Taiwan, R.O.C.

Tel: 886-7-336-8377

Fax: 886-7-336-8433 CSC Ownership: 19.83%



# China Ecotek Corporation

Chairman: C. T. Chen President: T. A. Wu Main businesses: Environmental engineering, M&E engineering, and O&M engineering Address: 8F., No.88, Chenggong 2nd Rd., Qianzhen District, Kaohsiung City 80661, Taiwan, R.O.C. Tel: 886-7-330-6138 Fax: 886-7-339-4016

CSC Ownership: 44.76%



# China Steel Structure Co., Ltd.

Chairman: T. M. Chen President: J. T. Chen Main businesses: Manufacture and sale of products of steel structure Address: No.500, Zhongxing Rd., Yanchao District, Kaohsiung City 824, Taiwan, R.O.C. Tel: 886-7-616-8688 Fax: 886-7-616-8680 CSC Ownership: 33.24%



# **Chung Hung Steel Corporation**

Chairman: Y. C. Han President: T. C. Lee Main business: Manufacture and sale of steel products Address: No.317 Yuliao Road, Chiaotou District, Kaohsiung City 82544, Taiwan, R.O.C. Tel: 886-7-611-7171 Fax: 886-7-611-0594 CSC Ownership: 40.59%



# China Steel Machinery Corporation

Chairman: C. C. Cheng President: C. C. Chang

Main businesses: Manufacture and sale of products for iron and steel equipment, vehicle transportation equipment, power generation and other mechanical equipment

Address: No.3 Taichi Road, Hsiao Kang District, Kaohsiung City 81246, Taiwan, R.O.C. Tel: 886-7-802-0111 Fax: 886-7-806-3833

CSC Ownership: 73.97%



### Gains Investment Corporation

Chairman: P. C. Huang President: C. H. Wu Main business: General investment Address: 26F., No.88, Chenggong 2nd Rd., Qianzhen District., Kaohsiung City 80661, Taiwan, R.O.C.

Tel: 886-7-338-2288 Fax: 886-7-338-7110 CSC Ownership: 99.99%

## China Steel Security Corporation

Chairman: J. S. Yeh President: K. Y. Wu Main businesses: On-site security, systematic security Address: 17F.-1, No.247, Minsheng 1st Rd., Sinsing District, Kaohsiung City 80046, Taiwan, R.O.C Tel: 886-7-229-9678 Fax: 886-7-226-4078 CSC Ownership: 99.96%

### China Prosperity Development Corporation

Chairman: C. T. Wong President: Y. C. Hsu Main businesses: Real estate development Address: 23F., No.88, Chenggong 2nd Rd., Qianzhen District, Kaohsiung City 80661, Taiwan, R.O.C. Tel: 886-7-536-2500 Fax: 886-7-536-2413

CSC Ownership: 99.99%



# InfoChamp Systems Corporation

Chairman: C. H. Liang

President: J. K. Kuo

Main business:

-Establish strategic targets of overall information system -Establish frame of overall information system and operation model

-Establish plan of overall information system

-Help clients to reduce risk and improve production efficiency

-Providing optimal business process for clients to get improvement, and overcome problems possibly to occur during importing process

Address: 19F., No.88, Chenggong 2nd Rd., Qianzhen District, Kaohsiung City 80661, Taiwan, R.O.C.

Tel: 886-7-535-0101

Fax: 886-7-535-0110

CSC Ownership: 99.99%



### China Steel Management Consulting Corporation

Chairman: Y. T. Liang

President: H. J. Tseng

Main business: Business management and management consulting services

Address: No.88, Chenggong 2nd Rd., Qianzhen District, Kaohsiung City 80661, Taiwan, R.O.C.

Tel: 886-7-805-1088

Fax: 886-7-803-7819 CSC Ownership: 99.99%



### HIMAG Magnetic Corporation

Chairman: C. S. Chen

President: C. T. Chen

Main business: Production and sale of industrial magnetic, chemical, and iron oxides

Address: No.24-1, Chienkuo Rd., Fengtien Vill., Neipu Township, Pingtung Country 912, Taiwan, R.O.C

Tel: 886-8-778-0222

Fax: 886-8-778-0227

CSC Ownership: 69.49%



# **Businesses and Addresses of Main Subsidiaries**

(as of March 31, 2019)



## **Dragon Steel Corporation**

Chairman: S. C. Wang

President: D. S. Chen

Main business: Hot-rolled products, H beams, billets, flat steels

Address: No.100, Longchang Rd., Longjing District, Taichung City 43445, Taiwan, R.O.C.

Tel: 886-4-2630-6088

- Fax: 886-4-2630-6066
- CSC Ownership: 100%



# China Steel Resources Corporation

Chairman: H. W. Wang

Main business: Other non metallic mineral products manufacturing

Address: No.38, Yanhai 3rd Rd., Hsiao Kang District, Kaohsiung City 81264, Taiwan, R.O.C.

Tel: 886-7-802-1111#6262

Fax: 886-7-805-1529

CSC Ownership: 100%

# CSC Precision Metal Industrial Corporation

Chairman: L. C. Pan

Main business: Other non-ferrous metal basic industries

Address: 28F., No.88, Chenggong 2nd Rd., Qianzhen District, Kaohsiung City 80661, Taiwan, R.O.C.

Tel: 886-7-802-1111#2766

Fax: 886-7-805-1296

CSC Ownership: 100%



## CSC Steel Sdn. Bhd. 20

Managing Director: I. H. Lee

Main business: Manufacture and sale of steel products Address: 180, Kawasan Industri Ayer Keroh, 75450 Melaka, Malaysia Tel: 60-6-231-0169 Fax: 60-6-231-0167 CSC Ownership: 46.30%



### China Steel Sumikin Vietnam Joint Stock Company

Chairman& President: J. Y. Lee

Main business: Manufacture and sale of steel products Address:My Xuan A2 Industrial Zone, My Xuan Ward, Phu My Town, Ba Ria-VungTau Province, Vietnam

Tel: 84-64-3931168 Fax: 84-64-3932188

CSC Ownership: 56%



# Changzhou China Steel Precision Materials Corporation<sup>20</sup>

Chairman: R. Y. Hsieh

President: B. T. Hung

Main business: Production and sale of titanium and titanium alloys, nickel and nickel alloys

Address: No.18, Changyang Road, Wujin Economic Development Zone, Changzhou, Jiangsu Province, China

Tel: 86-519-89616168

Fax: 86-519-89616098

CSC Ownership: 70%



# China Steel Corporation India Pvt. Ltd.

Chairman: W. Y. Fu President: C. H. Lin Main business: Electrical steel Address: Office No.204, 2F., Iscon Atria, Tower-2, Gotri Road, Vadodara Gujarat, India Tel: 91-922-7989880 Fax: 91-264-1277511 CSC Ownership: 100%



## Qingdao China Steel Precision Metals Co., Ltd.<sup>20</sup>

Chairman: Y. J. Kuo President: P. C. Chang Main business: Cutting and processing of steel products Address: No.500, Fenjin Rd., Economic & Technological District, Qingdao, Shandong, China Tel: 86-532-58718558 Fax: 86-532-58718576 CSC Ownership: 60%



# China Steel Precision Metals Kunshan Co., Ltd.<sup>20</sup>

Chairman: Y. J. Kuo President: S. H. Liou Main business: Cutting and processing of steel products Address: No.168, ShuangHua Rd., HuaQiao Kunshan Jiangsu Province, China Tel: 86-512-57601373 Fax: 86-512-57603567 CSC Ownership: 80%



### **CSC Solar Coporation**

Chairman: T. A. Wu President: D. S. Tin Main business: Solar energy generation Address: 9F., No.88, Chenggong 2nd Rd., Qianzhen District, Kaohsiung City 80661, Taiwan, R.O.C. Tel: 886-7-333-6138 Fax: 886-7-536-2955

CSC Ownership: 55%



# Sing Da Marine Structure Corporation

Chairman: Y. C. Wang President: W. H. Lu Main business: Foundation of offshore wind power Address: 14F., No.88, Chenggong 2nd Rd., Qianzhen District, Kaohsiung City 80661, Taiwan, R.O.C. Tel: 886-7-337-1111#27249 Fax: 886-7-337-1373 CSC Ownership:100%

<sup>20</sup> China Steel Corporation's investment is through China Steel Asia Pacific Holdings Pte. Ltd.



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