



中鋼碳素
CHINA STEEL CHEMICAL

China Steel Chemical Corp.

2017 / 10 / 27



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Company overview: Business snapshot

Major business

Steel Core Businesses

- China Steel Corporation
- Chung Hung Steel Corporation
- Dragon Steel Corporation
- CSC Steel Sdn. Bhd.
- China Steel Sumikin Vietnam (CSVC)
- China Steel Corporation India Pvt. Ltd (CSCI)

Other Group Businesses

Engineering Businesses

- China Steel Machinery Corporation
- China Steel Structure Co., Ltd.
- China Ecotek Corporation
- Info-Champ Systems Corporation
- CSC Solar Corporation

Logistic Businesses

- China Steel Express Corporation
- China Steel Global Trading Corporation
- China Steel Precision Metals Qingdao Co., Ltd.
- United Steel Engineering and Construction Co., Ltd (Kunshan coil center)

Industrial Materials Businesses

- C. S. Aluminum Corporation
- China Steel Chemical Corporation (1723, CSC holds 29.04%)
 - Ever Glory International Co., Ltd. (100%)
 - Ever Wealthy International Co., Ltd (100%)
 - Formosa Ha Tinh CSCC (Cayman) Limited (50%)
 - Changzhou China Steel New Materials Technology Co.,Ltd (100%)

- CHC Resources Corporation
- Himag Magnetic Corporation
- China Steel Precision Materials
- China Steel Resources Corporation
- CSC Precision Metal Industrial Corporation

Service and Investments Businesses

- Gains Investment Corporation
- China Steel Security Corporation
- China Prosperity Development Corporation
- China Steel Management Consulting Corporation



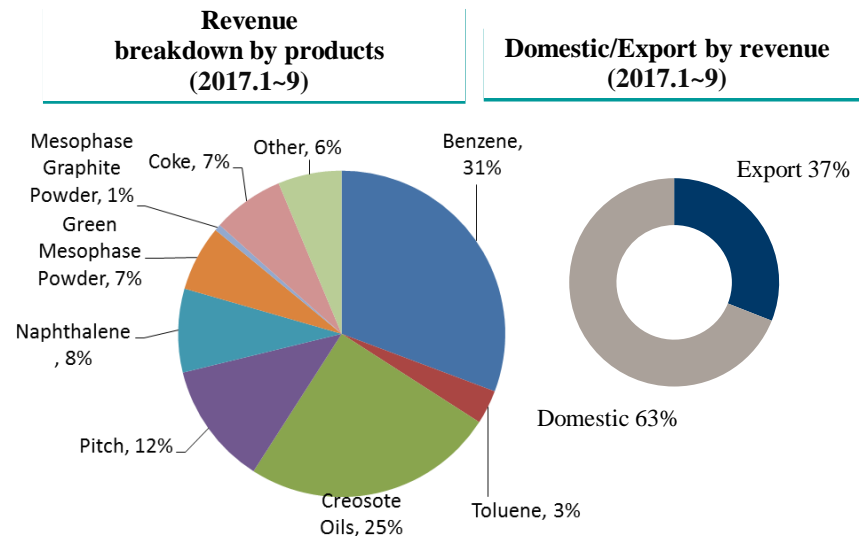
Company overview: Business snapshot

Overview

- China Steel Chemical Corporation (CSCC) is the only coal chemical industry in Taiwan incorporated for processing the coking by-product, coal tar and light oil produced by the integrated steel mills.
- The headquarters and primary plant are based in Kaohsiung City. Further, CSCC also erected a new graphite chemical plant in the Ping Nan Industrial Park in southern Taiwan.
- Coal 270 tmt/year, Light Oil 120 tmt/year
- Mesophase 5 tmt/year, ACS 30 mt/year

Major business

- **Light oil** : Benzene (Domestic 100%)
- **Coal Tar** : Soft Pitch (Export 40% , Domestic 60%)
Naphthalene (Export)
Creosote Oils (Export)
- **Mesophase** : Green Mesophase Powder (Export)
Mesophase Graphite Powder (Export & Domestic)
- **Coke** : Domestic

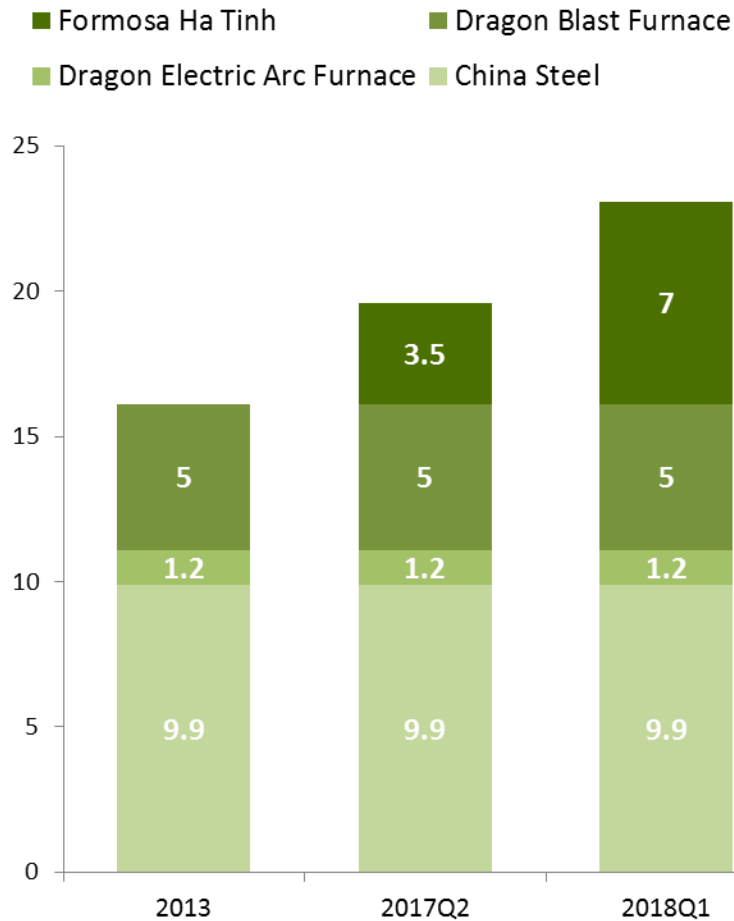


Company overview: The relationship between Coal Tar, Light Oil and Crude Steel

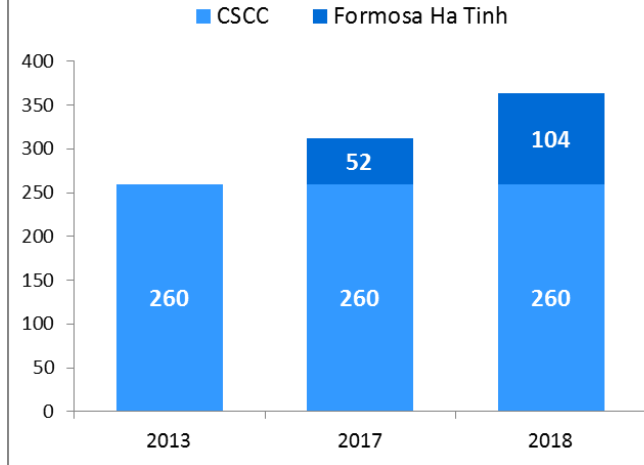


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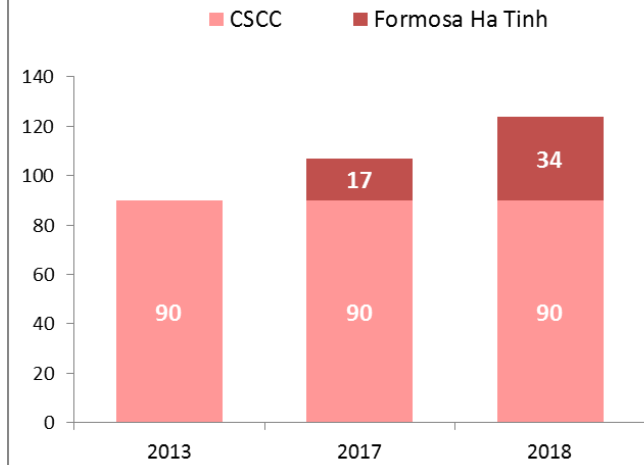
Crude steel capacity (mmt)



Coal Tar capacity (tmt)



Light Oil capacity (tmt)



Performance

Amount: NT\$ million

Item	2012	2013	2014	2015	2016	2017 /1~9
Revenue	8,257	8,820	8,904	5,737	5,143	4,765
Income after Tax	1,974	2,221	2,189	1,239	1,038	*982
EPS	8.58	9.60	9.50	5.37	4.45	*4.24
Oil Price	105	104	96.2	50.9	42.8	50.8

*preliminary result



Performance

Unit : NTD Thousands

	2015Q1	2015Q2	2015Q3	2015Q4	Total
Revenues	1,586,707	1,591,788	1,394,042	1,164,662	5,737,544
Operating Income	355,560	391,055	256,911	196,392	1,199,917
Operating Profit Margin	22%	25%	18%	17%	21%
Income Before Tax	449,198	412,011	349,674	230,980	1,441,863
Earning Before Tax Margin	28%	26%	25%	20%	25%
Oil Pirce	52	61	49	43	51
	2016Q1	2016Q2	2016Q3	2016Q4	Total
Revenues	1,225,971	1,340,731	1,309,864	1,266,876	5,143,442
Operating Income	259,247	261,719	294,328	284,505	1,099,799
Operating Profit Margin	21%	20%	22%	22%	21%
Income Before Tax	278,813	290,701	296,488	335,337	1,201,339
Earning Before Tax Margin	23%	22%	23%	26%	23%
Oil Pirce	33	45	45	49	43
	2017Q1	2017Q2	2017Q3	2017Q4	Total
Revenues	1,687,246	1,514,443	1,563,442		4,765,131
Operating Income	330,754	256,006	323,263		910,023
Operating Profit Margin	20%	17%	21%		19%
Income Before Tax	326,138	303,166	352,661		981,965
Earning Before Tax Margin	19%	20%	23%		21%
Oil Pirce	53	49	50		51

*preliminary result



Performance: financial review (Consolidated Basis)

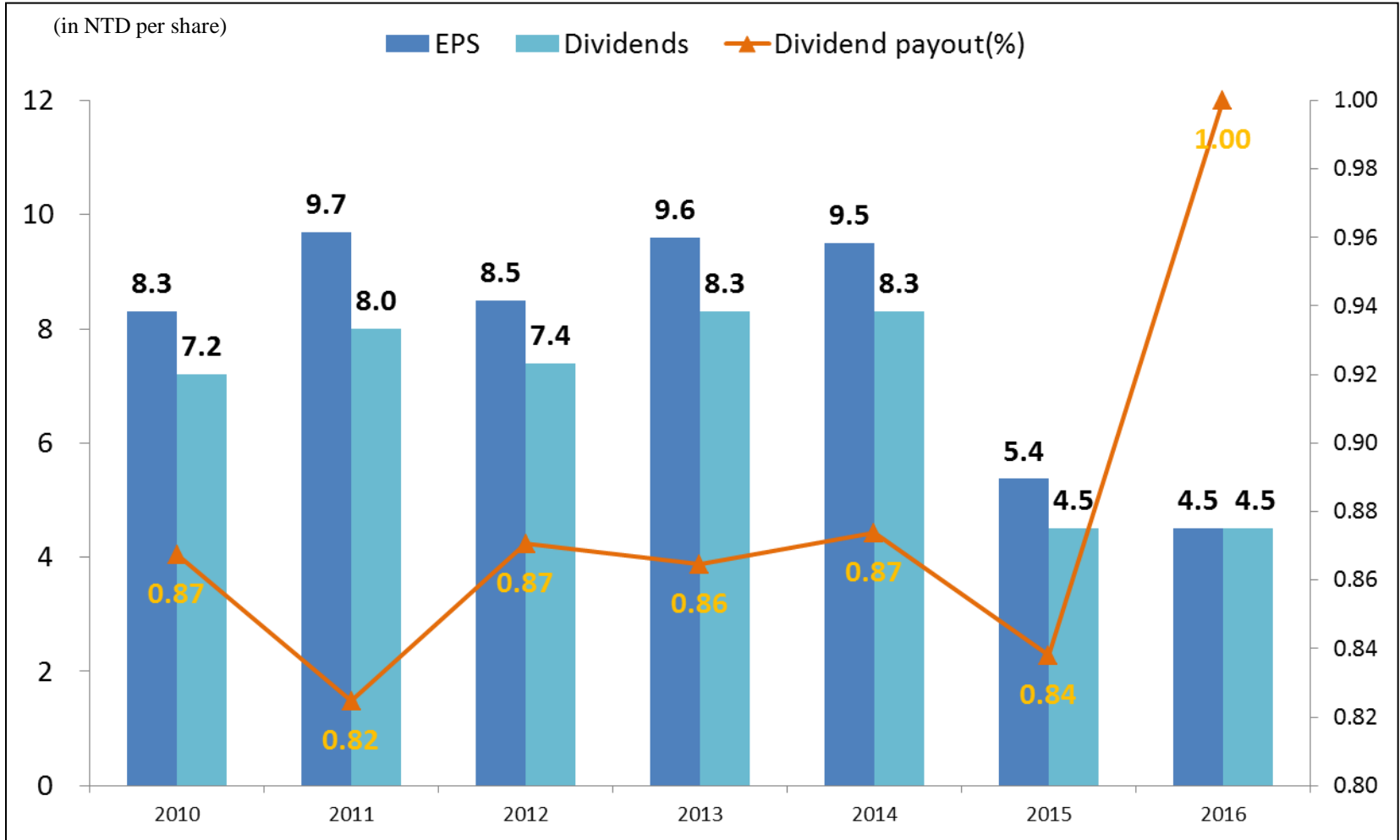
Units: NT\$ millions

	2012	2013	2014	2015	2016	2017/1~9
Debt	1,028	1,123	1,090	1,539	2,731	3,921
Debt/Equity	16.17%	16.07%	14.63%	23.89%	42.02%	63.01%
Asset	7,532	8,270	8,685	7,978	9,562	10,485
Debt/Asset	13.64%	13.58%	12.54%	19.28%	28.56%	37.39%
Net Debt *	-824	-1,298	-1,576	-336	402	1,079
Net Debt/Asset	-10.94%	-15.70%	-18.14%	-4.21%	4.21%	10.29%

* Net debt = debt – cash & cash equivalents – (*financial assets at fair value through profit or loss-current* + *available-for-sale financial assets-current* + *held-to-maturity financial assets-current* + *derivative financial assets for hedging-current*)



Performance- Historical EPS and dividends paid



Key Strategies



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1

Expansion of existing Coal Tar and Oil revenue profit.

2

Expanding and improving the production value of cathodic materials.

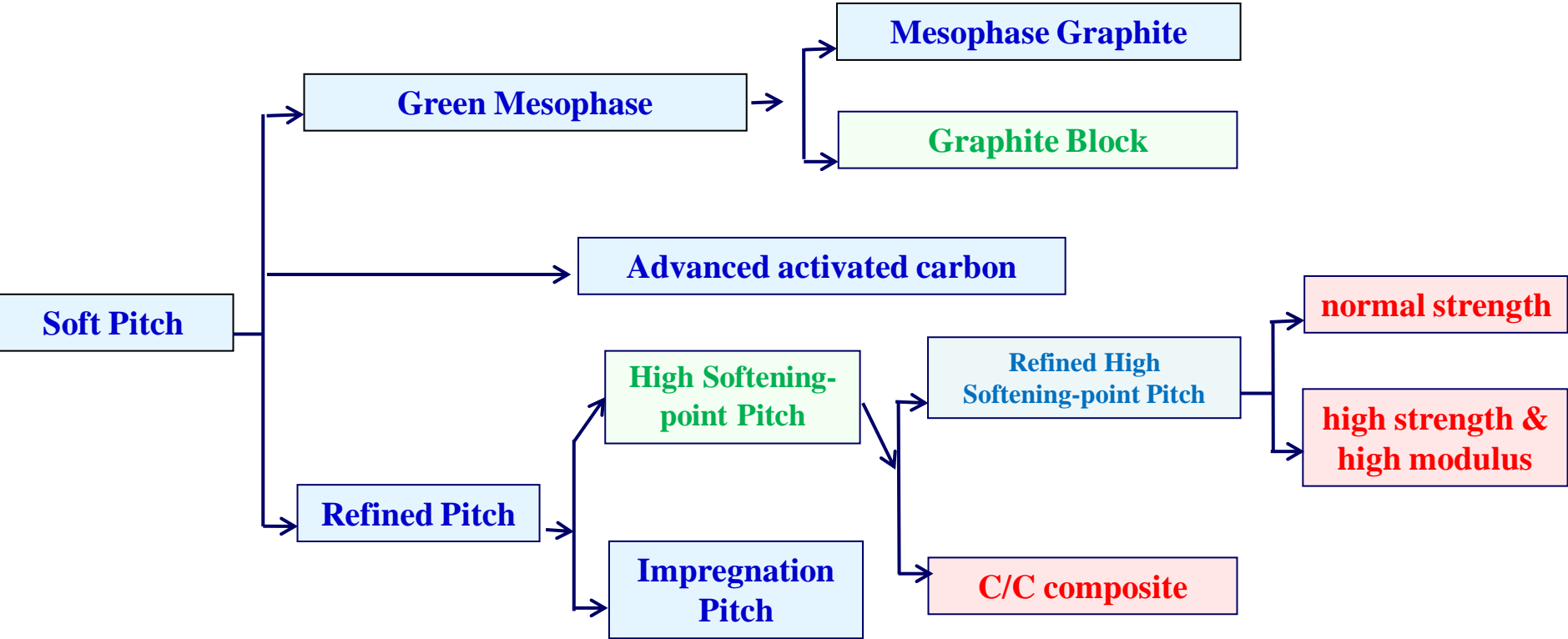
3

Invigorating the participation of assets in the investment of green energy and biological industries being developed by the Group.

Cooperation Agreement with Formosa Ha Tinh Steel Corporation

1. We signed a Cooperation agreement with the Ha Tinh Steel Corporation for the organization of a joint venture company with 50% (equivalent to US\$10 million) of shares equally contributed by both parties respectively. The joint-venture company will be engaging in the production and sales of coal tar and light oil.
2. The first blast furnace has been ignited for launching the production (yearly output will be 3,500,000 tons of steel, 52,000 tons of coal tar and 17,000 tons of light oil), and the second blast furnace will be ignited as scheduled.
3. Until now, the joint-venture company has sold 27,000 tons of coal tar and 12,000 tons of light oil in which, the light oil is mainly purchased by CSCC for processing and sales in order to enhance the capacity utilization rate of the existing equipment.
4. By estimate, doubled capacity could be achieved for the coal tar and the light oil after putting both blast furnaces of Formosa Plastics Group's into production.
5. In the meantime, we will launch the construction of carbon black oil plant. After being erected, the carbon black oil will be put into production for selling in order to enhance the production value and the revenue.
6. When the third blast furnace is erected in Formosa Plastics Group's Ha Tinh Plant, we will construct the coal tar distillation and light oil purification plant.
7. The planned final target for Formosa Plastics Group's Ha Tinh Plant will be 30,000,000 tons of coarse steel (15,000,000 tons from CSC).

Carbon Materials



- Goods on-shelf
- Test in process
- Goods off-shelf
- Developing

Ratio of value per weight : BP:RBP:GP:MG:ACS = 1 : (1~2) : (6~10) : (20~30) : (80~120) ◦



Expanding and improving the production value of cathodic materials

-(1) Erection of Mesophase Graphite production line

The Mesophase Graphite Plant will be constructed, and it will yield 2,000 tons per year.

1. Facing the declining of crude oil price and the sliding of revenue and profit, a budget was resolved by the Board of Directors in December 2014 in order to increase the weight of non-oil price related revenue and to catch up with the future trend in electric automobiles. By estimate, such a project will be completed in two stages for a period of 4 years and the budget was also revised as \$1.105 billion in December 2015. It has also been resolved that the Mesophase Graphite production line will be completed in one construction process by the end of December 2017.
2. This investment plan will be completed by the end of this year and then put into production next year. Because it belongs to the first unit of graphite furnace operating at 3,000°C, we will speed up the pace in order to shorten the learning curve.
3. After launching the private graphite production line, it will be able to shorten the outsourced production process executed by the plant in China. In this way, it is hoped to reduce the cost of outsourced production, enhance the management of product quality, control over the techniques and the delivery time in order to supply the domestic and non-China customers.
4. The new Ping Nan Mesophase Graphite Plant will be located in the Ping Nan Industrial Park in which, the future capacity expansion space has been reserved for the site.
5. After the production of Mesophase Graphite, the cathode materials will be directly supplied to the battery cell manufacturers, supported by the selling of Mesocarbon Microbeads for supplying to cathodic material plant.



Expanding and improving the production value of cathodic materials

-(2) Expanding Green Mesophase production line

Expanding the Green Mesophase of the Xiao Gang Plant 2,400 ton/year (total output will be 7,500 ton/year).

1. To expand the Mesophase Graphite development space and maintain the original raw bead distribution channel, the Expansion Plan was approved by the Board of Directors in December 2015 and the total investment will be \$5.8 billion.
2. In this investment case, two more lines will be expanded for the existing 6 production lines in the Xiao Gang Plant (yearly output 5,000 tons) and the required material, i.e. asphalt, will also be sufficiently supplied. With a sophisticated technical level, it is hoped that each production line can be expanded to 1,200 ton/year in the future.
3. In this investment case, we have fully considered the common demands of facilities required for further expansion of the Green Mesophase production line.



Expanding and improving the production value of cathodic materials -(3) Expanding the Super Capacitor Active Carbon Production Line

Expanding the Super Capacitor Active Carbon Production Line

1. Until now, we have developed high-ratio surface area (1500, 2000, 2500m²/g) active carbon. It has also been successfully applied in super capacitors and lead-carbon batteries. On this basis, it will be continuously promoted for using as the energy-storing or power components required for starting/stopping the battery of light-rail trams, electric buses, wind turbine generators and automobiles, etc.
2. The sales amount is 0.6 ton in 2015, 4.1 tons in 2016 and it is expected to exceed 9 tons in 2017. In the meantime, the number of customers and the consumption are also steadily growing.
3. The existing production line would be insufficient when facing the increasing demand in the super capacitor market. Therefore, a new production line will be planned to satisfy the expanding demand in customer's consumption.



Expanding and improving the production value of cathodic materials -(3) Introducing the impregnated asphalt in high-end application

Introducing the Impregnation Pitch in high-end application

1. With its features of low quinolone insoluble matters (QI) and high coking value, the Impregnation Pitch can be used as the impregnating agent for graphite electrode and carbon blocks.
2. RBP has excellent impregnating mass, higher density, enhanced tensile strength and lower product resistance. After being impregnated, less asphalt will remain on the blank surface.
3. Being supported by the soaring price due to the short supply of upstream coal tar and owing to the stimulation of strong demand for downstream graphite electrodes and cathodic materials, the climbing of price and sales amount of Impregnation Pitch is being experienced. The sales amount in 2016 is about 2000 tons and that of 2017 up to September is nearly reaching 7,000 tons. In addition, its selling price is also higher than the soft pitch.



3

Invigorating the participation of assets in the investment of green energy and biological industries being developed by the Group.

1. Participation in the investment of solar power generation

In August 2016, a resolution was approved by the Board of Directors that a certain amount fund will be allocated for incorporating the solar power electrical concession business (CSC Solar Corporation) together with China Steel Corporation. For this project, an amount of NT\$261,600,000 will be contributed (NT\$90,000,000 for Phase 1) in holding 15% of share. For this case, the construction of Phase 1 has been completed with the electricity sold as well. Therefore, profit will be recognized in 2017.

2. Participation in the investment of biological venture business

In September 2016, a resolution was approved by the Board of Directors to participate in the raising of funds for Chi-Hang-II Venture Investment Foundation and an amount of NT\$160,000,000 (in separate terms, but not remitted yet) will be contributed. In participating in the Chi-Hang-I Investment Venture Foundation, profit has been earned and it is now close to closing. By estimation, the performance of the Chi-Hang-II Investment Venture Foundation would be higher than Chi-Hang-I and we will take part in such investments in order to disperse the non-operation profit for the venture business.

A photograph of an industrial refinery or chemical plant. The scene is dominated by a tall, red and white striped distillation column on the left. To its right, there are several large, silver cylindrical storage tanks. In the background, a complex network of pipes, ladders, and smaller distillation columns is visible against a blue sky with scattered white clouds. The overall image has a slightly faded or semi-transparent appearance, serving as a background for the text.

Thank You