

1. Business Policies and Operation

Overview of business and vision

For over 100 years, SCG has committed itself to continuous business development and corporate adjustment with prime concern for customers. SCG was established in 1913 following a royal decree of His Majesty King Rama VI to produce cement, a main building material for infrastructure projects, which was vital to the nation's development back then, and to reduce reliance on imports. Today, SCG comprises 3 core business units, namely, Cement-Building Materials Business, Chemicals Business, and Packaging Business.

Cement-Building Materials Business was founded to help propel the country's development to be on par with other developed nations, building upon SCG's cement production. The cement properties have been constantly developed to be used for the construction of strong and safe buildings as well as infrastructure such as bridges, train stations, stadiums, etc. that make life easier. Today, Cement-Building Materials Business has transformed its business model to become a "Solution Provider" dedicated to delivering prompt and timely services backed by a broad spectrum of innovative products and services to take the construction industry to new heights.

Chemicals Business was established some 30 years ago following the discovery of a natural gas reserve off the Gulf of Thailand. Natural gas has been used as a feedstock in the petrochemical industry to manufacture chemicals products that accommodate the application needs in various industries such as medicine, public health, automotive and home appliances. As part of its transformation ambitions, Chemicals Business has evolved into a "creator of high value-added products and innovations", partnering with world-class organizations to research and develop innovations that can satisfy the future needs of customers promptly.

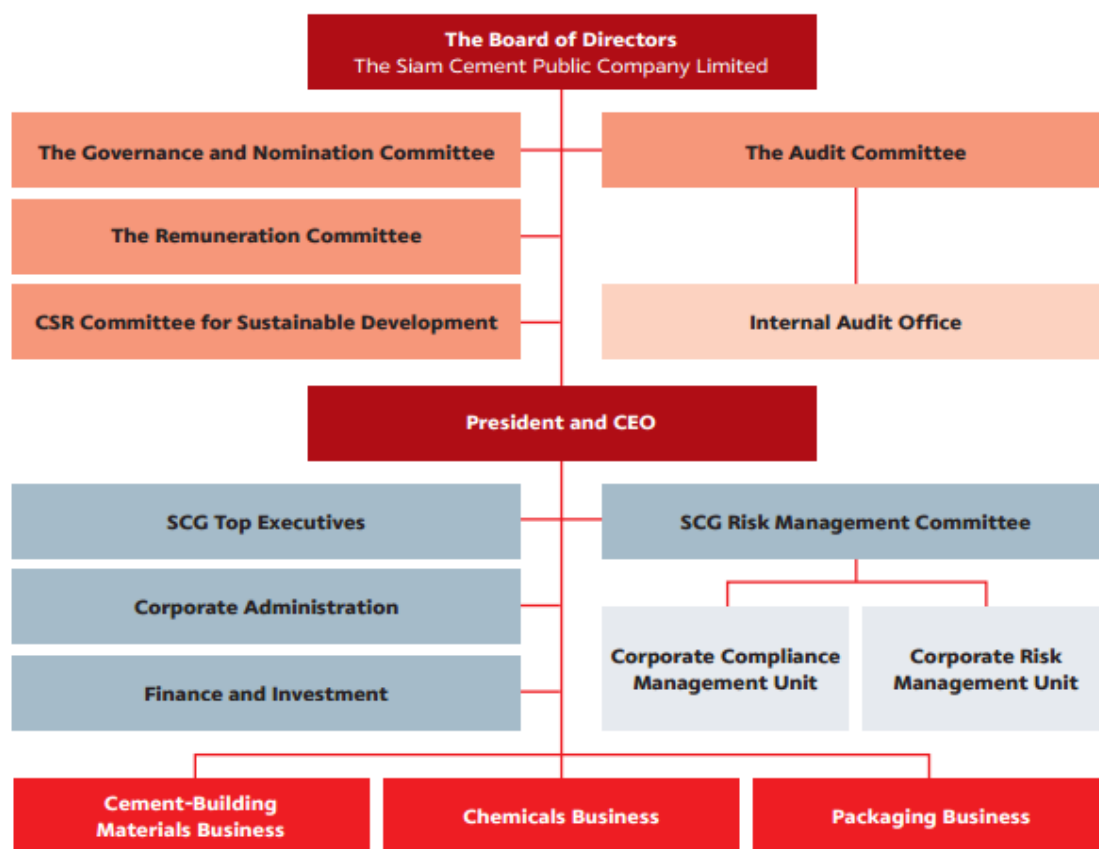
Packaging Business has transformed itself from a manufacturer of high quality paper into a "Total Packaging Solutions Provider", encompassing design, production, transportation, and raw material inventory in anticipation of the upward trends in the packaging industry brought on by the accelerated growth of e-commerce and food & beverage business. The Packaging Business also plans for stock market listing under the name SCG Packaging Public Company Limited.

SCG's sustainable growth amid constant change could be attributed primarily to operating business under the principles of good corporate governance, adopting technologies and innovations with high safety standards, and conducting business in line with the sustainable development approach. The concerted efforts have resulted in SCG being the first in ASEAN to have been included in the Dow Jones Sustainability Indices* (DJSI) as the Global Industry Leader in Construction Materials for 15 consecutive years since 2004.

Vision

Our vision is to become a regional business leader with a relentless commitment to driving innovative products, services, and solutions that meet the diverse needs of consumers whilst creating business success in accordance with the circular economy concept to contribute to the sustainable growth of each and every society and community where we operate under our promise "Passion for Better".

Organization Structure of SCG



As at December 31, 2019

Please refer to page 7-17 for shareholding structure of direct and indirect ownership of company, subsidiaries, joint ventures, associates and other companies.

Significant developments during 2017 – 2019 are as followed:

2019

Cement – Building Materials business

- Restructuring of the Indonesian ceramic business in order to improve the company's competitiveness by ceasing the ceramic wall tiles operation of PT Keramika Indonesia Assosiasi in Cileungsi, West Java, whereby the operation will be consolidated at the other plant in Karawang, West Java, and dissolving and liquidating PT KIA Serpih Mas which is located in Cileungsi and Karawang, West Java.
- Establishing a port-related logistics joint-venture with PSA Thailand by transferring SCC stakes in Thai Connectivity Terminal Co., Ltd. (or "TCT") (formally : Thai Prosperity Terminal Co., Ltd.) and Bangkok Interfreight Forwarding (or "BIFC") to this newly established joint venture company having a registered capital of not exceeding 300 million Baht. SCC's investment in TCT and BIFC will come down from currently 100% to 51%.
- Acquisition of all Shares in Jumbo Barges (Cambodia) (or "JBC"), the combined investment of these transactions is approximately 17 million Baht. The acquisition of JBC will strengthen SCC's logistics business expansion in Cambodia.

Chemicals business

- The company is in progress to debottleneck Map Ta Phut Olefins Company Limited (MOC), which will enable MOC for more feedstock flexibility and allow opportunity to tap into competitive propane to be used as feedstock. MOC's annual olefins production capacity will be boosted by 350,000 tons. The project is expected to complete in the second quarter of 2021
- The company has established PT. Berjaya Nawaplastic Indonesia (BNI) to produce PVC finished products in Indonesia, 51% of shares is hold by subsidiary Nawaplastic Industries Co., Ltd. (NPI)
- The company has invested in startups related to deep technology in order to access and speed up innovation for new high value added products
- The company has established and opened I2P (Idea to Products) Innovation Center in Rayong to accelerate new innovation and product development process
- The company has divested 25% stake in GTC Technology US, LLC and GTC Technology International which are technology licensor and engineering services provider in petrochemicals and refinery industries

Packaging business

- Acquired 55.24% stake in PT. Fajar Surya Wisesa Tbk, a leading Indonesian packaging paper company. The acquisition of Fajar will allow Packaging business to continue expanding in ASEAN, especially in Indonesia where future growth opportunity is tremendous.
- Expanded our Rigid plastic packaging business through the acquisition of 80% stakes in Visy Packaging (Thailand) Limited. Visy is a leading producer of thermoformed barrier food packaging, serving established global brand owners that require high quality packaging products. Also, Visy possesses global scale with a highly-automated production facility, including proprietary technology to produce packaging that can preserve food and fruit.
- Restructured Rigid plastic packaging business by forming a joint venture partnership with Toppan Printing Company Limited ("Toppan"), a Japanese packaging company, in SCGP-T Plastics Company Limited ("SCGP-T"). SCGP-T is a holding company for the rigid plastic packaging business which holds 75% stakes in Conimex Company Limited. With Toppan's renowned capability in packaging technics, the restructuring will help Conimex to strengthen its operation and expand its customer base.
- The Board of Directors' has approved the plan to issue and offer newly issued ordinary shares in SCG Packaging Public Company Limited ("SCGP") as an initial public offering (IPO) and to list the ordinary shares in SCGP on the Stock Exchange of Thailand. The portion of the shares to be offered for sale in the IPO will not exceed 30 percent of SCGP's paid-up capital after its capital increase, whereby the proceeds will be used by SCGP for investment in business expansions domestically and internationally, as well as for the purposes of financial restructuring and working capital of SCGP.

2018

Cement – Building Materials business

- JV with JUSDA Supply Chain Management formed an integrated logistics and supply chain management company in southern China (Guangxi province) with linkages to ASEAN.
- In Q3/18, invested in “CSA” -- the operator of the modern retailer (“Mitra 10”) and distributor of home products in Indonesia.
- JV with Boonthavorn towards the home-related design solutions retail outlets.
- Approved the amalgamation of five companies and a new name as SCG Ceramics Public Company Limited, using the symbol "COTTO" From 1 August 2018 and started trading from 3 August 2018 onward.

Chemicals business

- The company has increased indirectly stake from 71% to 100% in Long Son Petrochemicals Company Limited (LSP), Vietnam’s first petrochemicals complex.
- The company has approved capacity debottlenecking of Map Ta Phut Olefins Company Limited (MOC), a joint venture company of SCG Chemicals Company Limited and The Dow Chemical Company (DOW) with an approximate budget of 15,500 million Baht. The project will enable MOC for more feedstock flexibility and allow opportunity to tap into competitive propane to be used as feedstock. MOC’s annual olefins production capacity will be boosted by 350,000 tons.
- The company has increased stake to 54.29% in Binh Minh Plastics Joint Stock Company (BMP), a plastic pipes and fittings market leader in Vietnam, holding by Nawaplastic Industries (Saraburi) Company Limited.
- The company has co-invested in 50% shares of PT Nusantara Polymer Solutions (NPS), a newly established plastics trading company for High Value Added (HVA) products in Indonesia, holding by SCG Performance, a wholly-owned subsidiary of SCG Chemicals Company Limited.
- Expanded new business, Energy Business, developed the first “Floating Solar Farm” in Thailand with capacity of 1 megawatt at SCG’s complex in Rayong, which is an environmental innovation readily applicable to the industrial sector. The key strengths are well-thought-out design offering simple and quick installation, space efficiency, and streamlined setup compatible with various area types. The floating pontoons are made from durable and weather-proof plastic, which is environmental-friendly and recyclable.
- Invested in startup and venture capital funds related to deep technology as a way to speed up innovation in various areas involving circular economy.
- The company has divested entire 60% stake in Siam Stabilizers and Chemicals Company Limited (SSC), a manufacturer of stabilizers for PVC.
- The company has divested all of 64.68% stake in Alliance Petrochemical Investment (Singapore) Pte. Ltd. (API), a holding company in Singapore.

- The company has divested entire 50% stake in Siam Mitsui PTA Company Limited (SMPC), a Purified Terephthalic Acid (PTA) manufacturer and distributor, and entire 20% stake in Thai PET Resin Company Limited (TPRC), a manufacturer and distributor of polyethylene terephthalate (PET).

Packaging business

- Packaging business has acquired additional stakes from existing shareholders from 75% to 100% in two packaging companies in Thailand, namely Dyna Packs Company Limited and Orient Containers Company Limited. Dyna and Orient are producers of high-quality corrugated containers, that are used in a packaging of consumer products, mainly food and beverages. Furthermore, Packaging business has completed the acquisition of a 68.3% stake in Interpress Printers Sendirian Berhad (IPSB). IPSB is a sector-leading food-grade paper packaging company, highly accredited and vetted by the global leading fast food restaurant chain, located in Selangor state, Malaysia. Its main products include folding cartons, formed trays, clamshells, wrappers and bags, where its primary clients are well-established global quick service restaurant chains. This acquisition emphasizes Packaging business's commitment in becoming a total packaging solutions provider in ASEAN countries and will further enhance the overall portfolio while exhibiting its potential to serve the burgeoning region's fast food consumption, evolving lifestyle and preferences of consumers.
- Moreover, SCG Packaging proceeded to expand packaging paper line in United Pulp and Paper Co., Inc. (or "UPPC"), a subsidiary of SCC in Philippines, with additional capacity of approximately 230,000 tons per annum to tap Philippines' continuous growth in demand of packaging paper. The new production facility is scheduled to start up in the fourth quarter of 2020.

2017

Cement – Building Materials business

- Acquisition of Cement Operations in Central Vietnam with capacity of 3.1 million tons, for the amount of 15,400 million baht which includes net debt and additional efficiency improvement investment to the acquired assets. VCM is potential for further efficiency enhancements to the total capacity.
- Establish Logistics Company in Indonesia, there is joint venture company between SCG Cement – Building Materials Company Limited with stake 49% and PT Barito Investa Prima with stake 51%. This investment has an enterprise value (EV) of approximately 162 million Baht and the operations are expected to commence within the fourth quarter of 2017.
- Approve the restructuring will be contemplated through the amalgamation of five Thai-based ceramic tile companies, which are currently separate entities with varying shareholding structures and indirectly held by SCC through Cementhai Ceramics Company Limited ("CCCL") (the "Amalgamation").

Chemicals business

- The company has delisted Thai Plastic and Chemicals Public Company Limited (or “TPC”) from the Stock Exchange of Thailand
- The company has increased stake to 71% in Long Son Petrochemicals Company Limited (LSP), Vietnam’s first petrochemicals complex. While Vietnam Oil and Gas Group (PetroVietnam) hold 29%.
- The company has subscribed Rights Issue of PT Chandra Asri Petrochemical Tbk to maintain stake.
- The company has divested entire 23.8% stake in Tien Phong Plastic Joint Stock Company (or “NTP”), a manufacturer of PVC pipes, located in Northern Vietnam, on The Hanoi Stock Exchange.
- The company has established two new wholly owned companies in Europe, SENFI UK Limited and SENFI Swiss GmbH, to extend the open innovation network while exploring opportunities to market new products from our proprietary technology.

Packaging business

- Acquired 80% stake in PT Indocorr Packaging Cikarang, an Indonesian producer of high quality corrugated containers which serves consumer products of multinational corporations (MNC), with a combined capacity of 32,000 tons per year. Following this transaction, SCG Packaging’s combined production capacity of corrugated containers increased to 1,045,000 tons per year across ASEAN. Moreover, SCG Packaging has expanded its business portfolio in Display Packaging to serve premium packaging market. This is achieved by acquiring a 75% stake in Precision Print Company, specializes in Offset Printing of folding cartons which are used in industries ranging from cosmetics and supplementary food. Furthermore, SCG Packaging has invest in rigid plastic packaging business by acquiring 75% stake in Conimex Company Limited. Conimex is Thailand’s leading manufacturer of rigid plastic packaging products including plastic bottle, plastic tube, cap and closure. Its market coverage includes both domestic and international manufacturers in cosmetic, personal care, consumer products and industrial liquid industries. These investments illustrate SCG Packaging’s strong commitment in becoming a total packaging solution provider in ASEAN and strengthening its footstep in premium packaging segment

Furthermore, SCC has divested all of its 29.91% stake in Maxion Wheels (Thailand) Co., Ltd. (or “Maxion”) to lochpe-Maxion S.A (Brazil).

Supplementary Information

Investment in subsidiaries, joint ventures, associates and other companies of which their operations are significant.

			Location (Head Office / Factory)	Telephone	Facsimile	Type of shares	Number of paid-up shares (Million shares)	Issued and paid-up shares (Million Baht)	Direct / Indirect Company and Subsidiaries Holding (Percent)	Total Direct / Indirect Holding * (Percent)
Name	Principal Business / Products									
Cement-Building Materials Business Subsidiaries										
1	SCG Cement Co., Ltd.	Holding company / Energy service / Research and development	Bangkok	66-2586-3060-1	66-2586-3072	Ordinary shares	178	7,132	100	100
2	The Concrete Products and Aggregate Co., Ltd.	Holding company / ready-mixed concrete	Bangkok	66-2555-5000	66-2555-5003	Ordinary shares	104	10,416	100	100
3	The Siam Cement (Kaeng Khoi) Co., Ltd.	Cement and dry mortar	Saraburi	66-3624-0000-98	66-3624-0099	Ordinary shares	6	625	100	100
4	The Siam Cement (Ta Luang) Co., Ltd.	Cement, dry mortar and white cement	Saraburi	66-3628-8900	66-3628-8909	Ordinary shares	6	575	100	100
5	The Siam Cement (Thung Song) Co., Ltd.	Cement and dry mortar	Nakorn Sri Thamaraj	66-7553-8222	66-7553-8111	Ordinary shares	35	700	100	100
6	The Siam Cement (Lampang) Co., Ltd.	Cement and dry mortar	Lampang	66-5423-7500	66-5423-7501	Ordinary shares	94	589	100	100
7	Khammouane Cement Co., Ltd.	Cement	Lao PDR	(856) 51-628-000	-	Ordinary shares Preferred shares	32 0.06	11,188 21	100	100
8	The Siam Refractory Industry Co., Ltd.	Refractory	Bangkok	66-2586-3230	66-2586-2982	Ordinary shares	3	300	100	100
9	Eco Plant Services Co., Ltd.	Technical services and plant installation	Saraburi	66-3628-9103	66-3628-1212	Ordinary shares	1	50	100	100
10	SCI Eco Services Co., Ltd.	Industrial waste disposal	Bangkok / Saraburi / Nakorn Sri Thamaraj	66-2962-7295-7	66-2962-7298	Ordinary shares	2	187	100	100
11	Q Mix Supply Co., Ltd.	Ready-mixed concrete	Bangkok	66-2022-7888	66-2022-7889	Ordinary shares	8	800	100	100
12	Silathai Sanguan (2540) Co., Ltd.	Aggregates	Khonkaen	66-4335-8031	66-4335-8033	Ordinary shares	1	54	100	100
13	Silasanon Co., Ltd.	Aggregates	Saraburi	66-2555-5000	66-2555-5003	Ordinary shares	3	280	100	100
14	PT SCG Pipe and Precast Indonesia	Concrete products	Indonesia	(6221) 797-1190	(6221) 797-1090	Ordinary shares	15	466	100	100
15	PT Semen Lebak	Cement	Indonesia	(6221) 798-3751	(6221) 791-80919	Ordinary shares	0.04	1,193	100	100
16	PT SCG Readymix Indonesia	Ready-mixed concrete	Indonesia	(6221) 797-1190	(6221) 797-1090	Ordinary shares	12	365	100	100
17	PT CPAC Surabaya	Ready-mixed concrete	Indonesia	(6231) 732-1512	(6231) 732-1512	Ordinary shares	1	43	100	100
18	CPAC Lao Co., Ltd.	Ready-mixed concrete	Lao PDR	(856) 21-720-385	(856) 21-720-224	Ordinary shares	0.1	31	100	100
19	The Concrete Products and Aggregate (Vietnam) Co., Ltd.	Ready-mixed concrete	Vietnam	(84) 28-3974-4380-3	(84) 28-3974-1888	**	-	196	100	100
20	SCG Cement-Building Materials Vietnam Limited Liability Company	Cement distribution	Vietnam	(84) 93-3558-096	-	**	-	47	100	100
21	Vietnam Construction Materials Joint Stock Company	Cement	Vietnam	(84) 52-6262-666	(84) 52-6268-666	Ordinary shares	363	5,505	100	100
22	Song Gianh Cement Joint Stock Company	Cement	Vietnam	(84) 232-3535-098	(84) 232-3535-071	Ordinary shares	226	3,284	100	100
23	Mien Trung Cement One Member Company Limited	Cement	Vietnam	(84) 511-2227-803	(84) 511-3784-139	**	-	23	100	100
24	Danang Cement One Member Company Limited	Cement	Vietnam	(84) 511-3481-302	(84) 511-3481-302	**	-	15	100	100
25	Phu Yen Cosevco Cement Company Limited	Cement	Vietnam	(84) 57-3790-178	(84) 57-3790-236	**	-	15	100	100
26	SCG Building Materials Co., Ltd.	Holding company	Bangkok	66-2586-3333	66-2586-2761	Ordinary shares	149	14,894	100	100
27	Cementhai Gypsum Co., Ltd.	Holding company	Bangkok	66-2586-3333	66-2586-2761	Ordinary shares	7	193	100	100

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Name	Principal Business / Products	Location (Head Office / Factory)	Telephone	Facsimile	Type of shares	Number of paid-up shares (Million shares)	Issued and paid-up shares (Million Baht)	Direct / Indirect Company and Subsidiaries Holding (Percent)	Total Direct / Indirect Holding * (Percent)
28 MRC Roofing Co., Ltd.	Holding company	Bangkok	66-2586-3333	66-2555-0001	Ordinary shares	8	762	100	100
29 Cementhai Ceramics Co., Ltd.	Holding company	Bangkok	66-2586-3333	66-2586-2761	Ordinary shares	60	6,037	100	100
30 Cementhai Ceramics Philippines Holdings, Inc.	Holding company	Philippines	(632) 717-6901	(6343) 778-2934	Ordinary shares	174	192	100	100
31 Cementhai Gypsum (Singapore) Pte. Ltd.	Holding company	Singapore	(65) 6297-9661	(65) 6297-9662	Ordinary shares	14	278	100	100
32 The Siam Fibre-Cement Co., Ltd.	Holding company	Bangkok	66-2586-3333	66-2586-2761	Ordinary shares	110	11,000	100	100
33 Siam Fibre Cement Group Co., Ltd.	Fiber cement products / roofing ceiling wall floor and decorative materials	Saraburi / Lampang / / Nakorn Sri Thamaraj	66-5433-7301-5	66-5433-7300	Ordinary shares	22	2,230	100	100
34 SCG Landscape Co., Ltd.	Concrete blocks for floor wall and fence	Bangkok / Saraburi / Chonburi / Khonkaen / Nakorn Sri Thamaraj / Lamphun	66-2586-6822	66-2586-6800	Ordinary shares	3	290	100	100
35 Siam Fiberglass Co., Ltd.	Insulation and glass wools / Translucent Roof Sheet	Saraburi	66-3637-3441-4	66-3637-3445-6	Ordinary shares	13	205	100	100
36 The CPAC Roof Tile Co., Ltd.	Concrete roof tiles	Nakorn Prathom / Saraburi / Chonburi / Khonkaen / Nakorn Sri Thamaraj / Lamphun / Nakorn Rajchasima	66-2586-3333	66-2586-4308	Ordinary shares	10	1,030	100	100
37 SCG Concrete Roof (Vietnam) Co., Ltd.	Concrete roof tiles	Vietnam	(84) 274-3767-581-4	(84) 274-3767-686	**	-	235	100	100
38 SCG Concrete Roof (Cambodia) Co., Ltd.	Concrete roof tiles	Cambodia	(855) 23-454-3888	-	Ordinary shares	0.1	43	100	100
39 Thai Ceramic Roof Tile Co., Ltd.	Ceramic roof tiles	Saraburi	66-2586-3333	66-2586-5017	Ordinary shares	4	400	100	100
40 SCG Cement-Building Materials Philippines, Inc. (Formerly: Cementhai Roof Holdings Philippines, Inc.)	Concrete products	Philippines	(632) 717-6901	(6343) 778-2934	Ordinary shares	14	136	100	100
41 PT SCG Lightweight Concrete Indonesia	Light-weight concrete	Indonesia	(6226) 7861-0360	(6226) 7861-0361	Ordinary shares	4	1,253	100	100
42 SCG Distribution Co., Ltd.	Holding company	Bangkok	66-2586-3333	66-2586-5454	Ordinary shares	275	15,405	100	100
43 SCG Cement-Building Materials Company Limited	Holding company / Domestic distribution	Bangkok	66-2586-3333	66-2586-2961	Ordinary shares	976	22,257	100	100
44 SCG International Corporation Co., Ltd.	International trading	Bangkok	66-2586-2222	66-2587-2159	Ordinary shares	4	400	100	100
45 SCG International Australia Pty. Ltd. (Formerly: SCG Trading Australia Pty. Ltd.)	International trading	Australia	(612) 9439-1441	(612) 9436-0195	Ordinary shares	0.2	5	100	100
46 SCG International China (Guangzhou) Co., Ltd.	International trading	China	(86) 208-365-2559	(86) 208-365-2595	Ordinary shares	0.03	24	100	100
47 SCG International Hong Kong Limited (Formerly: SCG Trading Hong Kong Limited)	International trading	Hong Kong	(852) 2838-6456	(852) 3549-7219	Ordinary shares	45	220	100	100
48 SCG International (Philippines) Corporation Co., Ltd. (Formerly: SCG Trading Philippines Inc.)	International trading	Philippines	(632) 501-8634	(632) 501-8635	Ordinary shares	0.5	38	100	100
49 SCG International USA Inc. (Formerly: SCG Trading USA Inc.)	International trading	USA	(1310) 323-2194-106	(1310) 324-9528	Ordinary shares	0.1	36	100	100
50 PT SCG International Indonesia (Formerly: PT SCG Trading Indonesia)	International trading	Indonesia	(6221) 350-9488	(6221) 352-0718	Ordinary shares	8	8	100	100

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51 SCG International Laos Co., Ltd. (Formerly: SCG Trading Lao Co., Ltd.)	International trading	Lao PDR	(856) 21-454-596-7	(856) 21-454-598	Ordinary shares	0.02	11	100	100
52 SCG Marketing Philippines Inc.	International trading	Philippines	(632) 501-8634 (632) 501-8630	(632) 501-8635	Ordinary shares	1	90	100	100
53 SCG International Malaysia Sdn. Bhd. (Formerly: SCGT Malaysia Sdn. Bhd.)	International trading	Malaysia	(60) 35-632-0168	(60) 35-632-0158	Ordinary shares	2	14	100	100
54 SCG International (Cambodia) Co., Ltd. (Formerly: SCG Trading (Cambodia) Co., Ltd.)	International trading	Cambodia	(855) 23-990-401-5	(855) 23-990-400	Ordinary shares	0.0001	1	100	100
55 SCG Trading Middle East Dmcc	International trading	UAE	(971) 4-552-0293	(971) 4-552-0294	Ordinary shares	0.001	11	100	100
56 SCG International Vietnam Co., Ltd. (Formerly: SCG Trading Vietnam Co., Ltd.)	Logistics service, international trading and local distribution	Vietnam	(84) 83-5269-001	(84) 83-5269-009	**	-	64	100	100
57 SCG International India Private Limited	International trading	India	(91) 124-400-6413	-	Ordinary shares	1	27	100	100
58 SCG Logistics Management Co., Ltd.	Logistics service	Bangkok	66-2586-3333	66-2586-2158	Ordinary shares	33	3,340	100	100
59 SCG Logistics Lao Co., Ltd.	Logistics service	Lao PDR	(856) 20-9149-4545	-	Ordinary shares	0.1	13	100	100
60 SCG Logistics Management (Cambodia) Co., Ltd.	Logistics service	Cambodia	(855) 23-966-206	(855) 23-966-205	Ordinary shares	0.03	11	100	100
61 Unify Smart Tech Joint Stock Company	Information Technology service	Vietnam	(84) 90-5559-562	-	Ordinary shares	1	7	100	100
62 Nexter Living Co., Ltd. (Formerly: SCG Trading Services Co., Ltd.)	Elder Safety Product	Bangkok	66-2030-1000	66-2586-2250	Ordinary shares	0.8	46	100	100
63 Myanmar CBM Services Co., Ltd.	Business services	Myanmar	(951) 966-2014	(951) 966-2014	Ordinary shares	0.02	66	100	100
64 Nexter Digital Co., Ltd.	Business services	Bangkok	66-2586-6950	-	Ordinary shares	37	187	100	100
65 BetterBe Marketplace Co., Ltd.	Business services	Bangkok	66-2586-4111	66-2586-4017	Ordinary shares	10	252	100	100
66 Rudy Technology Co., Ltd.	Business services	Bangkok	66-97140-1669	-	Ordinary shares	0.4	4	100	100
67 Nexter Ventures Co., Ltd. (Formerly: SCG Sourcing Co., Ltd.)	Holding company	Bangkok	66-2586-3333	66-2586-5625	Ordinary shares	1	100	100	100
68 Nexter Retail Co., Ltd.	Franchise - retail business	Bangkok	66-2586-3333	-	Ordinary shares	0.5	47	100	100
69 SCG Experience Co., Ltd.	Exhibition center, services and consultation	Bangkok	66-2101-9922	66-2101-9920	Ordinary shares	5	500	100	100
70 SCG Skills Development Co., Ltd.	Logistics skills development school for SCG business partners	Saraburi	66-3672-4377	66-3672-4378	Ordinary shares	0.1	5	100	100
71 SCG Retail Holding Co., Ltd.	Holding company	Bangkok	66-2586-3333	-	Ordinary shares	24	2,400	100	100
72 Prime Group Joint Stock Company	Holding company	Vietnam	(84) 211-3888-987	-	Ordinary shares	101	1,413	100	100
73 Prime Trading, Import and Export One Member Limited Liability Company	Marketing and sales of floor and wall ceramic tiles	Vietnam	(84) 211-3888-987	-	**	-	420	100	100
74 Prime International Import-Export and Service Trading Company Limited	Marketing and sales of sanitary ware	Vietnam	(84) 211-3888-386	-	**	-	6	100	100
75 Prime - Ngoi Viet Joint Stock Company	Clay roof tiles	Vietnam	(84) 211-3597-696	-	Ordinary shares	25	350	100	100
76 Prime Pho Yen Joint Stock Company	Floor ceramic tiles	Vietnam	(84) 280-3866-632	-	Ordinary shares	15	210	100	100
77 Prime - Yen Binh Joint Stock Company	Wall ceramic tiles	Vietnam	(84) 211-3866-152	-	Ordinary shares	13	182	100	100

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78 Prime - Tien Phong Joint Stock Company	Floor and wall ceramic tiles	Vietnam	(84) 211-3888-174	-	Ordinary shares	12	168	100	100
79 Prime - Vinh Phuc Joint Stock Company	Floor and wall ceramic tiles	Vietnam	(84) 211-3866-637	-	Ordinary shares	25	350	100	100
80 Prime - Truong Xuan Joint Stock Company	Water heater and mechanical	Vietnam	(84) 211-3726-552	-	Ordinary shares	6	84	99	99
81 Buu Long Industry and Investment Joint Stock Company	White cement	Vietnam	(84) 251-3965-475	(84) 251-3965-478	Ordinary shares	4	56	99	99
82 PT Semen Jawa	Cement	Indonesia	(6221) 350-9491	(6221) 350-9704	Ordinary shares	331	10,778	98	98
83 Prime Dai An Joint Stock Company	Exploration and processing materials	Vietnam	(84) 211-6535-659	-	Ordinary shares	3	35	95	95
84 Kampot Cement Co., Ltd.	Cement	Cambodia	(855) 23-996-839	-	Ordinary shares	13	4,275	94	94
85 PT KIA Serpih Mas	Floor and wall ceramic tiles	Indonesia	(6221) 386-2322	(6221) 386-2253	Ordinary shares	3,768	1,614	94	94
86 PT Tambang Semen Sukabumi	Limestone quarry	Indonesia	(6221) 350-9491	(6221) 350-9704	Ordinary shares	3	8	93	93
87 PT KIA Keramik Mas	Ceramic roof tiles	Indonesia	(6221) 386-2322	(6221) 386-2253	Ordinary shares	2,926	2,162	92	92
88 PT Keramik Indonesia Asosiasi, Tbk.	Floor and wall ceramic tiles	Indonesia	(6221) 386-2322	(6221) 386-2253	Ordinary shares	14,929	5,603	92	92
89 SCG Ceramics Public Company Limited	Floor and wall ceramic tiles and Industrial Estate	Bangkok	66-2586-4092	66-2587-0162	Ordinary shares	5,963	5,963	91	91
90 PT Kokoh Inti Arebama Tbk.	Building materials distribution	Indonesia	(6221) 350-6227	(6221) 350-1767	Ordinary shares	981	350	91	91
91 The Siam Sanitary Fittings Co., Ltd.	Faucets and fittings	Bangkok	66-2973-5040-54	66-2529-1608	Ordinary shares	2	200	91	91
92 Prime Dai Viet Joint Stock Company	Floor and wall ceramic tiles	Vietnam	(84) 211-3845-238	-	Ordinary shares	13	182	90	90
93 Prime Thien Phuc Joint Stock Company	Exploration and processing materials	Vietnam	(84) 234-3626-282	-	Ordinary shares	5	70	90	90
94 Prime Phong Dien Joint Stock Company	Manufacture of materials	Vietnam	(84) 234-3625-966	-	Ordinary shares	3	35	90	90
95 Prime Dai Loc Joint Stock Company	Floor and wall ceramic tiles	Vietnam	(84) 235-3509-999	-	Ordinary shares	30	414	90	90
96 CPAC Cambodia Co., Ltd.	Ready-mixed concrete	Cambodia	(855) 12-222-102	-	Ordinary shares	0.002	128	90	90
97 Saraburirat Co., Ltd.	Floor and wall concrete tiles	Saraburi	66-2586-6822	66-2586-6800	Ordinary shares	1	96	83	83
98 Mariwasa-Siam Ceramics, Inc.	Floor and wall ceramic tiles	Philippines	(632) 717-6901	(6343) 778-2934	Ordinary shares	600	430	80	83
99 SCG Myanmar Concrete and Aggregate Co., Ltd.	Ready-mixed concrete and related products	Myanmar	(959) 783-914-137 (959) 783-914-139	-	Ordinary shares	6	207	80	80
100 PT Surya Siam Keramik	Ceramic floor tiles	Indonesia	(6221) 5397-091	(6221) 5397-094	Ordinary shares	0.01	87	80	80
101 Green Conservation Solution Co., Ltd.	Municipal solid waste management service and use refuse derived fuel as alternative energy	Bangkok	66-2586-3333	66-2586-2979	Ordinary shares	2	185	74	74
102 Siam Sanitary Ware Co., Ltd.	Holding company	Bangkok	66-2973-5040-54	66-2551-3512	Ordinary shares	1	60	71	71
103 Siam Sanitary Ware Industry Co., Ltd.	Sanitary ware	Saraburi	66-2973-5040-54	66-3626-3522	Ordinary shares	2	200	71	71
104 Siam Sanitary Ware Industry (Nongkae) Co., Ltd.	Sanitary ware	Saraburi	66-2973-5040-54	66-3637-3664	Ordinary shares	2	160	71	71
105 Mawlamyine Cement Limited	Cement	Myanmar	(959) 796-093-056 (959) 978-757-519	-	Ordinary shares	0.1	1,631	70	70
106 Prime Hao Phu Joint Stock Company	Exploration and processing materials	Vietnam	(84) 27-383-2270	-	Ordinary shares	3	35	69	69
107 Quality Construction Products Public Company Limited	Autoclaved aerated concrete blocks, reinforced wall panels, floor panels and lintels for construction uses	Phra Nakhon Si Ayutthaya	66-3525-9131	66-3525-9130	Ordinary shares	400	400	68	68

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108 Q-Con Eastern Co., Ltd.	Autoclaved aerated concrete blocks, reinforced wall panels, floor panels and lintels for construction uses	Rayong	66-3865-0515	66-3865-0517	Ordinary shares	59	590	68	68
109 SCGT Automobile Co., Ltd.	Dealer	Bangkok	66-2586-1402	66-2586-2203	Ordinary shares	15	146	67	67
110 SCG Yamato Express Co., Ltd.	Logistics service	Bangkok	66-2239-8999	66-2168-3230	Ordinary shares	0.6	633	65	65
111 SCG-PSA Holdings Co., Ltd.	Holding company	Bangkok	66-2586-4173	66-2586-6904	Ordinary shares	3	256	60	60
112 Prime Dai Quang Joint Stock Company	Packaging	Vietnam	(84) 235-3761-666	-	Ordinary shares	2	28	56	56
113 Guangxi SCG Logistics Co., Ltd.	Logistics service	China	(86) 771-553-5710	(86) 771-578-7177	**	-	34	55	55
114 SCG-Shwe Me Logistics (Myanmar) Co., Ltd.	Logistics service	Myanmar	(959) 43-083-164	-	Ordinary shares	2	58	55	55
115 Panel World Co., Ltd.	Cement-bonded particleboard	Samutsakorn	66-3447-3067-70	66-3447-3063	Ordinary shares	2	245	55	55
116 Jumbo Barges and Tugs Co., Ltd.	Transportation by lighter	Bangkok	66-2872-3014-5	66-2872-3016	Ordinary shares	5	457	55	55
117 Jumbo Barges (Cambodia) Co., Ltd.	Transportation by lighter	Cambodia	(855) 23-966-206	(855) 23-966-205	Ordinary shares	0.001	0.2	55	55
118 Thai Connectivity Terminal Co., Ltd. (Formerly: Thai Prosperity Terminal Co., Ltd.)	Shipping port	Samut Prakarn	66-2754-4501-9	66-2754-4513	Ordinary shares	1	63	51	51
119 Bangkok Interfreight Forwarding Co., Ltd.	Logistics service	Samut Prakarn	66-2754-4501-9	66-2754-4513	Ordinary shares	0.02	2	51	51
120 SCG-Sekisui Sales Co., Ltd.	Construction service and construction components for housing	Bangkok	66-2586-1323	66-2586-4364	Ordinary shares	8	825	51	51
121 SCG-Boonthavorn Co., Ltd.	Franchise - retail business	Bangkok	66-2693-1108-6010	-	Ordinary shares	4	377	51	51
122 Smart Build Bangladesh Co., Ltd.	Dealer	Bangladesh	66-2586-1862	-	Ordinary shares	0.06	24	51	51
123 Mingalar Motor Co., Ltd.	Dealer	Myanmar	(951) 514-940	-	Ordinary shares	0.004	141	50	50
124 PT Siam-Indo Gypsum Industry	Gypsum boards	Indonesia	(6221) 8832-0028	(6221) 8832-0036	Ordinary shares	0.03	306	50	50
125 PT Siam-Indo Concrete Products	Fiber cement roof tiles	Indonesia	(6226) 743-2140	(6225) 743-2149	Ordinary shares	0.03	446	50	50
126 PT Pion Quarry Nusantara	Aggregates	Indonesia	(6221) 797-1190	(6221) 797-1090	Ordinary shares	0.01	16	49	49
127 Sosuco Ceramic Co., Ltd.	Floor and wall ceramic tiles	Saraburi	66-3637-6300	66-3637-6309	Ordinary shares	0.01	800	49	49
128 Home Center Quang Ninh Joint Stock Company	Retail store	Vietnam	(84) 203-6520-959	-	Ordinary shares	0.6	8	49	49
129 PT SCG Barito Logistics	Logistics service	Indonesia	(6221) 634-5668	(6221) 634-5666	Ordinary shares	4	103	49	49
130 Kampot Land Co., Ltd.	Land investment	Cambodia	(855) 12-442-737	-	Ordinary shares	0.001	0.2	46	46
Joint Ventures, Associates and Other Companies									
131 Global House International Company Limited	Holding company	Bangkok	66-2586-3333	66-2586-5454	Ordinary shares	15	1,519	50	66
132 SCG Nichirei Logistics Co., Ltd.	Cold Chain	Bangkok	66-2706-1710	-	Ordinary shares	7	720	51	51
133 Siam Smart Data Co., Ltd.	Holding company	Bangkok	66-2586-3021	66-2586-2391	Ordinary shares	0.03	30	51	51
134 Sekisui-SCG Industry Co., Ltd.	Construction components for housing	Saraburi	66-3637-3478	66-3637-3480	Ordinary shares	23	2,325	49	49
135 China ASEAN Supply Chain Management Co., Ltd.	Logistics service	China	(86) 771-508-6999-30281	-	Ordinary shares	5	23	49	49
136 Survey Marine Services Co., Ltd.	Land rental	Bangkok	66-2296-1490-2	66-2296-1494	Ordinary shares	0.4	37	48	48
137 Noritake SCG Plaster Co., Ltd.	Manufacture and distribute plaster	Saraburi	66-3637-3578-82	66-3637-3577	Ordinary shares	4	405	40	40
138 Green Siam Resources Corporation	Baling business	Philippines	(632) 501-8631	(632) 501-8631	Ordinary shares	13	95	40	40

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139 Mariwasa Holdings, Inc.	Holding company	Philippines	(632) 717-6901	(6343) 778-2934	Ordinary shares	248	235	40	40
140 CMPI Holdings, Inc.	Holding company	Philippines	(632) 813-1666	(632) 813-1704	Ordinary shares	48	55	40	40
141 Siam Global House Public Company Limited	Building materials and home improvement products distribution	Roi Et	66-4351-9597	66-4351-1492	Ordinary shares	4,202	4,202	32	32
142 Siam Saison Co., Ltd.	Financial service	Bangkok	66-2586-3021	66-2586-2391	Ordinary shares	0.05	48	31	31
143 Anhui Conch-SCG Refractory Co., Ltd.	Refractory	China	(86) 553-839-9857	(86) 553-839-9888	**	-	497	30	30
144 PT Catur Sentosa Adiprana Tbk	Retailer and distributor of construction materials	Indonesia	(6221) 566-8801	(6221) 5696-5178	Ordinary shares	4,458	1,030	30	30
145 PT Catur Mitra Sejati Sentosa	Modern retail business	Indonesia	(6221) 5420-4999	(6221) 5421-7375 (6221) 5421-7383	Ordinary shares	7,000	1,617	-	30
146 PT Catur Sentosa Berhasil	Modern retail business	Indonesia	(6221) 580-0757	(6221) 580-0758	Ordinary shares	130	300	-	30
147 PT Catur Sentosa Anugerah	Distribution	Indonesia	(6221) 619-7255	(6221) 619-0009	Ordinary shares	0.1	185	-	30
148 The Siam Gypsum Industry Co., Ltd.	Holding company	Bangkok	66-2555-0055	66-2555-0001-6	Ordinary shares	2	150	29	29
149 The Siam Gypsum Industry (Saraburi) Co., Ltd.	Gypsum board / product derived from gypsum and plaster	Saraburi	66-3621-8200	66-3621-8201	Ordinary shares	5	470	-	29
150 The Siam Gypsum Industry (Songkhla) Co., Ltd.	Gypsum board / product derived from gypsum and plaster	Songkhla	66-7420-0400	66-7420-0401	Ordinary shares	1	120	-	29
151 PT MClass Industry	Clay roof tiles	Indonesia	(6202) 6743-6888	(6221) 539-7094	Ordinary shares	34	222	28	28
152 PT Caturaditya Sentosa	Distribution	Indonesia	(6221) 4682-6456-58	(6221) 4682-6455	Ordinary shares	0.003	7	-	27
153 PT Catur Logamindo Sentosa	Distribution	Indonesia	(6227) 445-2010	(6227) 445-2011	Ordinary shares	0.002	3	-	21
154 Global House (Cambodia) Company Limited	Building materials and home improvement products distribution	Cambodia	(855) 23-232-232	(855) 23-232-231	Ordinary shares	0.002	521	-	18
155 Asia Pacific Logistics and Transportation Joint Stock Company	Logistics service	Vietnam	(84) 43-7738-420	(84) 43-7738-421	Ordinary shares	2	44	17	17
156 PT Catur Hasil Sentosa	Modern retail business	Indonesia	(6272) 132-057	(6272) 132-058	Ordinary shares	0.001	2	-	16
157 PT Kusuma Kemindo Sentosa	Distribution	Indonesia	(6221) 565-3736 (6221) 5694-2213	(6221) 566-9443 (6221) 560-2025	Ordinary shares	2	5	-	15
158 PT Caturdiluhur Sentosa	Distribution	Indonesia	(6271) 1564-5723-29	(6271) 1564-5730	Ordinary shares	0.01	23	-	15
159 PT Eleganza Tile Indonesia	Distribution	Indonesia	(6221) 566-6360	(6221) 568-2081	Ordinary shares	0.03	58	-	15
160 Asia Cement Public Company Limited	Cement	Bangkok	66-2641-5600	-	Ordinary shares	778	4,671	10	10
161 Finfloor S.p.A	Holding company	Italy	(39) 05-3684-0111	(39) 05-3684-0322	Ordinary shares	11	429	10	10
Chemicals Business									
Subsidiaries									
162 SCG Chemicals Co., Ltd.	Holding company	Bangkok	66-2586-1111	66-2586-5561	Ordinary shares	344	32,277	100	100
163 Thai Polyethylene Co., Ltd.	Polyethylene and polypropylene	Rayong	66-3868-3393-7	66-3868-3398	Ordinary shares	52	5,190	100	100
164 SCG Plastics Co., Ltd.	Trading	Bangkok	66-2586-1111	66-2586-5561	Ordinary shares	0.1	10	100	100

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165 SCG Performance Chemicals Co., Ltd.	Trading	Bangkok	66-2586-1111	66-2586-5561	Ordinary shares	0.1	5	100	100
166 SCG Chemicals Trading Singapore Pte. Ltd.	International trading	Singapore	(65) 6221-5368	(65) 6221-5346	Ordinary shares	1	23	100	100
167 Rayong Engineering & Plant Service Co., Ltd.	Engineering and plant service	Rayong	66-3868-5040-8	66-3891-1309	Ordinary shares	0.04	4	100	100
168 Protech Outsourcing Co., Ltd.	Engineering and plant service	Rayong	66-3868-2632-3	66-3868-2633	Ordinary shares	0.01	1	100	100
169 RIL 1996 Co., Ltd.	Industrial Estate	Rayong	66-3893-7010	66-3803-5575	Ordinary shares	11	1,100	100	100
170 Texplyre Co., Ltd.	Chemical technology services	Rayong	66-2586-4779	66-2586-5453	Ordinary shares	0.01	1	100	100
171 Vina SCG Chemicals Co., Ltd.	Holding company	Bangkok	66-2586-5435	-	Ordinary shares	673	52,313	100	100
172 Long Son Petrochemicals Co., Ltd.	Raw materials for plastic resins	Vietnam	(84) 283-911-8660	-	**	-	37,253	100	100
173 SCG Chemicals (Singapore) Pte. Ltd.	Holding company	Singapore	(65) 6221-5368	-	Ordinary shares	38	804	100	100
174 Tuban Petrochemicals Pte. Ltd.	Holding company	Singapore	(65) 6297-9661	-	Ordinary shares	112	2,349	100	100
175 Hexagon International, Inc.	Holding company	USA	66-2586-4444	-	Ordinary shares	2	67	100	100
176 Norner Holding AS	Holding company	Norway	(47) 3557-8000	(47) 3557-8124	Ordinary shares	0.01	3	100	100
177 Norner AS	Research and development	Norway	(47) 3557-8001	(47) 3557-8125	Ordinary shares	0.001	0.1	100	100
178 Norner Research AS	Research Institute	Norway	(47) 3557-8002	(47) 3557-8126	Ordinary shares	0.001	0.1	100	100
179 SCGN AS (Formerly: Norner IP AS)	Technology service and licensing	Norway	(47) 3557-8003	(47) 3557-8127	Ordinary shares	0.001	0.1	100	100
180 Norner Verdandi AS	Technology service and licensing	Norway	(47) 3557-8004	(47) 3557-8128	Ordinary shares	0.01	3	100	100
181 CO2 Technologies AS	Holding company	Norway	(47) 3557-8005	(47) 3557-8129	Ordinary shares	0.001	0.5	100	100
182 SMH Co., Ltd.	Research and development and technology service	Bangkok	66-2586-4859	66-2586-6277	Ordinary shares	2	170	100	100
183 PT TPC Indo Plastic and Chemicals	PVC	Indonesia	(6231) 395-2945	(6231) 395-2944	Ordinary shares	0.03	1,020	100	100
184 Thai Plastic and Chemicals Public Company Limited	PVC	Bangkok	66-2827-7272	66-2827-7273	Ordinary shares	875	875	100	100
185 TPC Paste Resin Co., Ltd.	PVC paste resins	Bangkok	66-2827-7272	66-2827-7273	Ordinary shares	3	333	100	100
186 The Nawaplastic Industries Co., Ltd.	PVC pipe and fittings	Bangkok	66-2555-0888	66-2586-2929	Ordinary shares	4	400	100	100
187 Nawa Intertech Co., Ltd.	Molding products	Rayong	66-3889-2190	66-3889-2244	Ordinary shares	0.4	40	100	100
188 Chemtech Co., Ltd.	Plastic compound	Vietnam	(84) 650-3784-992	(84) 650-3784-993	**	-	103	100	100
189 Total Plant Service Co., Ltd.	Holding company	Rayong	66-2827-7272	66-2827-7273	Ordinary shares	12	1,180	100	100
190 SENFI UK Limited	Research and development	UK	66-2586-4444	-	Ordinary shares	1	43	100	100
191 SENFI Swiss GmbH	Marketing service	Switzerland	66-2586-4444	-	Ordinary shares	0.0003	1	100	100
192 Rayong Pipeline Co., Ltd.	Rights of pipe rack use	Rayong	66-3893-7065	66-3803-5381	Ordinary shares	4	400	92	92
193 SCG Ico Polymers Company Limited	Rotomolding compound	Bangkok	66-2586-1111	66-2586-5561	Ordinary shares	4	380	87	87
194 Map Ta Phut Tank Terminal Co., Ltd.	Tank and terminal service	Rayong	66-3868-9471-2	66-3891-1955	Ordinary shares	7	700	82	82
195 Grand Nawaplastic Myanmar Co., Ltd.	PVC pipe and fittings	Myanmar	(959) 863-3988	-	Ordinary shares	0.68	237	80	80
196 Viet-Thai Plastchem Co., Ltd.	PVC compound	Vietnam	(84) 650-3710-993	(84) 650-3740-065	**	-	75	72	72
197 TPC Vina Plastic and Chemicals Corporation Ltd.	PVC	Vietnam	(84) 83-8234-730	(84) 83-8234-725	**	-	1,013	70	70
198 Rayong Olefins Co., Ltd.	Raw materials for plastic resins	Rayong	66-3868-5040-8	66-3868-5036	Ordinary shares	108	10,820	51	68

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199 Map Ta Phut Olefins Co., Ltd.	Raw materials for plastic resins	Rayong	66-3893-7000	66-3891-5310	Ordinary shares	225	22,520	55	67
200 Nawaplastic (Cambodia) Co., Ltd.	PVC pipe and fittings	Cambodia	(855) 23-882-072	(855) 23-885-172	Ordinary shares	1	179	60	60
201 PT Nusantara Polymer Solutions	Trading	Indonesia	(6221) 535-5678	(6221) 536-79185	Ordinary shares	1	23	50	55
202 Binh Minh Plastics Joint Stock Company	PVC pipe and fittings	Vietnam	(84) 83-9690-973	(84) 83-9606-814	Ordinary shares	82	1,123	54	54
203 Northern Binh Minh Plastics One Member Limited Company	PVC pipe and fittings	Vietnam	(84) 321-3967-868	(84) 321-3967-869	**	-	213	54	54
204 PT Berjaya Nawaplastic Indonesia	PVC pipe and fittings	Indonesia	(6221) 2956-6526-28	-	Ordinary shares	0	151	51	51
205 Flowlab & Service Co., Ltd.	Calibration service	Rayong	66-3891-1321-2	66-3891-1381	Ordinary shares	0.02	4	51	51
Associates and Other Companies									
206 SCG Plastics (China) Co., Limited	Trading	Hong Kong	(852) 2544-9991	(852) 2544-9992	Ordinary shares	0.1	4	60	60
207 SCG Plastics (Shanghai) Co., Ltd.	Trading	China	(86) 216-888-6091	(86) 216-888-6092	**	-	25	-	60
208 Siam Styrene Monomer Co., Ltd.	Raw materials for polystyrene	Rayong	66-3867-3000	66-3868-3991	Ordinary shares	48	1,189	50	50
209 Siam Synthetic Latex Co., Ltd.	Synthetic latex	Rayong	66-3867-3000	66-3868-3991	Ordinary shares	59	5,789	50	50
210 Siam Polyethylene Co., Ltd.	Polyethylene	Rayong	66-3867-3000	66-3868-3991	Ordinary shares	44	4,366	50	50
211 Siam Polystyrene Co., Ltd.	Polystyrene	Rayong	66-3867-3000	66-3868-3991	Ordinary shares	10	995	50	50
212 Rayong Terminal Co., Ltd.	Tank and terminal service	Rayong	66-3891-3133	66-3869-3134	Ordinary shares	14	1,325	-	50
213 PT Siam Maspion Terminal	Tank and terminal service	Indonesia	(6231) 395-2945-8	(6231) 353-3218	Ordinary shares	0.01	327	50	50
214 Bangkok Synthetics Co., Ltd.	Raw materials for synthetic rubber	Bangkok	66-2679-5120	66-2679-5119	Ordinary shares	12	1,173	49	49
215 Thai MMA Co., Ltd.	Raw materials for acrylic	Rayong	66-3891-1700	66-3868-4855	Ordinary shares	56	5,590	46	47
216 Grand Siam Composites Co., Ltd.	Polypropylene compound	Rayong	66-3868-4241	66-3868-4255	Ordinary shares	1	64	46	46
217 Thai MFC Co., Ltd.	Melamine compound	Rayong	66-3868-5038	66-3891-1729	Ordinary shares	2	200	45	45
218 Siam Tohcello Co., Ltd.	Packaging film	Rayong	66-3301-0525	66-3301-0506	Ordinary shares	1	406	45	45
219 PT Trans-Pacific Polyethylene Indonesia	Polyethylene	Indonesia	(6221) 574-5880	-	Ordinary shares	0.2	472	39	39
220 PT Trans-Pacific Polyethyindo	Polyethylene	Indonesia	(6221) 574-5880	-	Ordinary shares	0.1	337	39	39
221 Riken (Thailand) Co., Ltd.	PVC compound	Bangkok	66-2501-1054	66-2501-1198	Ordinary shares	1	120	35	35
222 PT Chandra Asri Petrochemical Tbk.	Raw materials for plastic resins	Indonesia	(6221) 530-7950	(6221) 530-8930	Ordinary shares	17,834	27,248	31	31
223 PT Styrimdo Mono Indonesia	Raw materials for polystyrene	Indonesia	(6221) 530-8505	(6221) 530-8506	Ordinary shares	0.3	10,093	-	31
224 Mtsui Advanced Composites (Zhongshan) Co., Ltd.	Polypropylene compound	China	(86) 760-533-2138	(86) 760-389-8880	Ordinary shares	15	596	20	20
225 Da Nang Plastics Joint Stock Company	PVC pipe	Vietnam	(84) 36-3714-460	(84) 36-3714-561	Ordinary shares	2	31	16	16
226 Binh Minh Viet Trading Investment Real Estate Joint Stock Company	Real estate business	Vietnam	(84) 83-9690-973	(84) 83-9606-814	Ordinary shares	21	288	14	14
227 PT Srithai Maspion Indonesia	Melamine compound	Indonesia	(6231) 891-3630	-	Ordinary shares	0.01	118	10	10
228 PT Trans-Pacific Polypropylene Indonesia	Polypropylene	Indonesia	(6221) 574-5880	-	Ordinary shares	0.1	220	10	10
229 PT Trans-Pacific Styrene Indonesia	Raw materials for polystyrene	Indonesia	(6221) 574-5880	-	Ordinary shares	0.1	314	10	10
230 PT Trans-Pacific Petrochemical Indotama	Raw materials for aromatics	Indonesia	(6221) 574-5880	-	Ordinary shares	15	8,931	5	5

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Name	Principal Business / Products	Location (Head Office / Factory)	Telephone	Facsimile	Type of shares	Number of paid-up shares (Million shares)	Issued and paid-up shares (Million Baht)	Direct / Indirect Company and Subsidiaries Holding (Percent)	Total Direct / Indirect Holding * (Percent)
Packaging Business Subsidiaries									
231 SCG Packaging Public Company Limited	Holding company	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	3,126	3,126	99	99
232 Siam Kraft Industry Co., Ltd.	Kraft paper	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	35	3,450	99	99
233 Invenique Co., Ltd.	Asset and intellectual property management service	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	1	70	99	99
234 SCGP Excellence Training Center Co., Ltd.	Training and seminar	Bangkok	66-2586-3876	66-2586-4507	Ordinary shares	1	49	99	99
235 SCG Paper Energy Co., Ltd.	Energy	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	9	890	99	99
236 SCGP Solutions Co., Ltd.	Holding company	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	2	170	99	99
237 SCGP Solutions (Singapore) Pte. Ltd.	Holding company	Singapore	66-2586-3333	66-2586-2164	Ordinary shares	961	21,716	99	99
238 SCGP Rigid Plastics Company Limited	Holding company	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	62	4,403	99	99
239 SKIC International Company Limited	Holding company	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.01	1	99	99
240 United Pulp and Paper Co., Inc.	Kraft paper	Philippines	(632) 870-0100	(632) 870-0409	Ordinary shares	141	1,082	99	99
					Preferred shares	840	3,246		
241 Thai Cane Paper Public Company Limited	Kraft paper	Kanchanaburi	66-3461-5800	66-3461-5899	Ordinary shares	358	3,583	97	97
242 Visy Packaging (Thailand) Limited	Rigid plastic packaging	Rayong	66-3895-8200	66-3895-8078	Ordinary shares	5	497	79	79
243 Precision Print Co., Ltd.	Offset-printed cartons	Samutsakorn	66-2105-4477	66-3445-2339	Ordinary shares	3	33	74	74
244 Thai Containers Group Co., Ltd.	Corrugated boxes	Bangkok / Ratchaburi / Samut Prakarn / Pathumthani	66-2586-5991	66-2586-4723	Ordinary shares	14	1,384	69	69
245 Thai Containers Khonkaen Co., Ltd.	Corrugated boxes	Khonkaen	66-2586-3333	66-2586-2164	Ordinary shares	0.2	150	69	69
246 Thai Containers Rayong Co., Ltd.	Corrugated boxes	Rayong	66-2586-3333	66-2586-2164	Ordinary shares	1	650	69	69
247 Vina Kraft Paper Co., Ltd.	Kraft paper	Vietnam	(848) 268-0240-2	(848) 268-0239	**	-	6,069	69	69
248 New Asia Industries Co., Ltd.	Corrugated boxes	Vietnam	(84) 83-7294-160	(84) 83-7293-028	**	-	345	69	69
249 Alcamax Packaging (Vietnam) Co., Ltd.	Corrugated boxes	Vietnam	(84) 650-3743-031	(84) 65-0378-2816	**	-	607	69	69
250 AP Packaging (Hanoi) Co., Ltd.	Corrugated boxes	Vietnam	(84) 32-0375-3862	(84) 32-0375-2868	**	-	248	69	69
251 Packamex (Vietnam) Co., Ltd.	Corrugated boxes	Vietnam	(84) 83-7291-030	(84) 83-7291-031	**	-	220	69	69
252 Dyna Packs Co., Ltd.	Corrugated boxes	Samutsakorn	66-2810-9346-7	66-2810-9103	Ordinary shares	1	90	69	69
253 Orient Containers Co., Ltd.	Corrugated boxes	Samutsakorn	66-3488-3422-4	66-3488-3421	Ordinary shares	26	260	69	69
254 D-In Pack Company Limited	Corrugated boxes	Nakhonpathom	66-3498-1401-4	66-3498-1406-7	Ordinary shares	0.01	50	69	69
255 PT Indoris Printingdo	Corrugated boxes	Indonesia	(6221) 596-0772-3	(6221) 596-0774 (6221) 596-3076	Ordinary shares	0.02	55	69	69
256 PT Indocorr Packaging Cikarang	Corrugated boxes	Indonesia	(6221) 893-6868	(6221) 893-6565	Ordinary shares	0.5	298	69	69
257 Phoenix Pulp & Paper Public Company Limited	Bleached pulp / Printing and writing paper	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	236	2,365	69	69
					Preferred shares	10	98		
258 Phoenix Utilities Co., Ltd.	Utilities	Khonkaen	66-4343-3104-6	66-4343-3101	Ordinary shares	15	1,500	69	69
259 Thai Paper Co., Ltd.	Printing and writing paper	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	78	7,770	69	69

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260 The Siam Forestry Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	2	184	69	69
261 Panas Nimit Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.02	2	69	69
262 Thai Panason Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.02	2	69	69
263 Thai Panadorn Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.02	2	69	69
264 Thai Panaram Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.02	2	69	69
265 Suanpa Rungsaris Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.02	2	69	69
266 Siam Panawes Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.03	3	69	69
267 Thai Panaboon Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.03	3	69	69
268 Thai Wanabhum Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.03	3	69	69
269 Interpress Printers Sendirian Berhad	Food service products	Malaysia	(60) 35-542-1716	(60) 35-542-1703	Ordinary shares	47	384	68	68
					Preferred shares	28	225		
270 PT Primacorr Mandiri	Corrugated boxes	Indonesia	(6221) 596-2345	(6221) 596-2000	Ordinary shares	0.1	294	67	67
271 PT Fajar Surya Wisesa Tbk.	Kraft paper	Indonesia	(6221) 344-1316	(6221) 345-7643	Ordinary shares	2,477.9	2,713	55	55
272 PT Dayasa Aria Prima	Kraft paper	Indonesia	(6221) 344-1316	(6221) 345-7643	Ordinary shares	250.0	547	55	55
273 TC Flexible Packaging Co., Ltd.	Holding company	Bangkok	66-2586-5991	66-2586-4723	Ordinary shares	21	2,108	52	52
274 SCGP-T Plastics Company Limited	Holding company	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	4	386	51	51
275 Tawana Container Co., Ltd.	Corrugated boxes	Samut Prakarn	66-2324-0781	66-2324-0079	Ordinary shares	3	300	50	50
276 Tin Thanh Packing Joint Stock Company	Flexible packaging	Vietnam	(84) 72-3779-747	(84) 72-3779-750	Ordinary shares	17	254	47	47
277 Conimex Co., Ltd.	Rigid plastic packaging	Samut Prakarn	66-2738-0305	66-2326-6275	Ordinary shares	4	420	38	38
278 Prepack Thailand Co., Ltd.	Flexible packaging	Samutsakorn	66-3444-0600-5	66-3444-0606-7	Ordinary shares	3	322	37	37
		Samut Songkhram / Rayong			Preferred shares	1	90		
Associates									
279 Siam Toppan Packaging Co., Ltd.	Offset-printed cartons	Samut Prakarn	66-2709-3110-7	66-2324-0336	Ordinary shares	5	500	49	49
280 P&S Holdings Corporation	Holding company	Philippines	(632) 870-0100	(632) 870-0409	Ordinary shares	28	263	40	40
281 Siam Nippon Industrial Paper Co., Ltd.	Specialty paper	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	11	1,100	31	31
282 Sahagreen Forest Co., Ltd.	Energy and utilities	Kamphaengphet	66-5585-8033	66-5585-8031	Ordinary shares	19	190	17	17
Other									
Subsidiaries									
283 Cementhai Holding Co., Ltd.	Holding company	Bangkok	66-2586-2104	66-2586-2008	Ordinary shares	0.01	1	100	100
284 Cementhai Property (2001) Public Company Limited	Holding company	Bangkok	66-2586-2104	66-2586-2008	Ordinary shares	7	72	100	100
285 Property Value Plus Co., Ltd.	Land business and land lease service	Bangkok	66-2586-2104	66-2586-2008	Ordinary shares	8	820	100	100
286 SCG Accounting Services Co., Ltd.	Accounting, financial and tax services	Bangkok	66-2586-3333	66-2586-2398	Ordinary shares	1	5	100	100
287 SCG Legal Counsel Limited	Legal consultant	Bangkok	66-2586-5777	66-2586-2976	Ordinary shares	0.2	15	100	100
288 CTO Management Co., Ltd.	Marketable securities investment	Bangkok	66-2586-3333	66-2587-2157	Ordinary shares	25	380	100	100
289 Cementhai Captive Insurance Pte. Ltd.	Insurance	Singapore	(65) 6411-9374	(65) 6333-6116	Ordinary shares	0.3	34	100	100

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290 Siam Innovation Product and Solution Co., Ltd.	Provide innovative technology products and services	Bangkok	66-2586-3333	66-2587-2157	Ordinary shares	1	13	100	100
291 SCG Learning Excellence Co., Ltd	Training service	Bangkok	66-2586-3333	66-2586-2684	Ordinary shares	0.2	20	100	100
292 SCG Vietnam Co., Ltd.	Management consulting service	Vietnam	(84) 83-526-9011-13	(84) 83-526-9014	**	-	16	100	100
293 PT SCG Indonesia	Management consulting service	Indonesia	(6221) 350-9491	(6221) 352-0718	Ordinary shares	0.1	26	100	100
294 Bangsue Industry Co., Ltd.	Provide products and services on new online platform and others	Bangkok	66-2586-1920	-	Ordinary shares	4	303	100	100
295 Add Ventures Capital Co., Ltd.	Venture capital	Bangkok	66-2586-3333	-	Ordinary shares	12	305	100	100
296 Add Ventures Capital International Co., Ltd.	Overseas venture capital	Bangkok	66-2586-3333	-	Ordinary shares	9	679	100	100
297 Siam GNE Solar Energy Co., Ltd	Manufacturing and sales the electricity from renewable energy	Bangkok	66-2586-5684	66-2586-6284	Ordinary shares	0.2	16	50	50
Associates and Other Companies									
298 Siam Kubota Corporation Co., Ltd.	Agricultural machinery	Pathumthani	66-2909-0300-1	66-2909-1698	Ordinary shares	31	2,739	40	40
299 Siam Kubota Metal Technology Co., Ltd.	Cast iron	Chachoengsao	66-3885-5115	66-3885-5110	Ordinary shares	9	900	-	40
300 Siam Kubota Leasing Co., Ltd.	Leasing	Pathumthani	66-2909-0300	66-2909-1697	Ordinary shares	80	2,000	-	40
301 Siam AT Industry Co., Ltd.	Automotive parts	Chonburi	66-3845-4266-8	66-3845-4266	Ordinary shares	2	240	30	30
302 Thai Engineering Products Co., Ltd.	Automotive parts	Pathumthani	66-2529-3518-22	66-2529-1677	Ordinary shares	1	85	29	30
303 The Nawaloha Industry Co., Ltd.	Cast iron	Saraburi	66-3633-6531-4	66-3622-3209	Ordinary shares	3	300	30	30
304 Aisin Takaoka Foundry Bangkok Co., Ltd.	Cast iron	Chonburi	66-3845-4671-7	66-3845-4670	Ordinary shares	5	475	30	30
305 Muang Thong United Co., Ltd.	Football team	Bangkok	66-2508-8100	66-2508-3369	Ordinary shares	3	233	30	30
306 The Siam Nawaloha Foundry Co., Ltd.	Cast iron	Saraburi	66-3628-8300	66-3628-8309	Ordinary shares	3	308	20	25
307 Lysando AG	Research and development	Liechtenstein	(423) 262-5753	(423) 262-5752	Ordinary shares	1	39	20	20
308 IT One Co., Ltd.	Technical services	Bangkok	66-2271-5111	66-2271-5112	Ordinary shares	1	80	20	20
309 Toyota Motor Thailand Co., Ltd.	Automotives	Samut Prakarn	66-2386-1000	66-2386-1883	Ordinary shares	8	7,520	10	10
310 Siam Yamato Steel Co., Ltd.	Structural steel	Rayong	66-3868-3723-30	66-3868-3200	Ordinary shares	30	3,000	10	10
311 Siam Toyota Manufacturing Co., Ltd.	Automotive engines and automotive parts	Chonburi	66-3821-3451-5	66-3874-3310	Ordinary shares	29	2,850	4	4

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2. Operation of Key Business Units

Revenue Structure for Year 2019

	(in Million Baht)				
	Revenue from sales	Other Income	Total Revenue	Sale breakdown (%)	Equity in Associates *
Cement-Building Materials Business	184,690	2,353	187,043	38.83	947
Chemicals Business	177,634	1,924	179,558	40.19	7,225
Packaging Business	89,070	841	89,911	20.12	53
Other	117	10,544	10,661	0.86	3,407
Total Consolidated	437,980	8,847	446,827	100.00	11,632

Remark: Financial figures are classified according to business unit before intersegment elimination, as disclosed in note 24 to the financial statements pages 250-255 of the Annual Report 2019.

*Share of profit of associates and jointly ventures entities recognized by using equity method.

Key operations of each business unit

Cement-Building Materials business

Cement- Building Materials business consists of cement, building materials and distribution business, focuses on developing High Value Added Products & Services (HVA) and aims to be the market leader in both domestics and ASEAN. The main products in the company are cement product group, building material product group, and ceramic product group.

Key Information			
Capacity	<ul style="list-style-type: none"> Grey cement (Thailand) Grey cement (Outside Thailand) Ready-mixed concrete (Thailand) Roofing products Ceiling/board/wood substitutions (Thailand) Floor and wall ceramic tiles 	23 10.5 762 90 106.5 210	million tons per year million tons per year plants million Sq. M. per year million Sq. M. per year million Sq. M. per year
Brand	<ul style="list-style-type: none"> Portland cement: SCG Mixed / Masonry cement, Mortar cement, Decorative cement and Tile Adhesive cement: Tiger Portland and mixed cement: K-Cement Ready-mixed concrete: SCG, Jayamix by SCG and CPAC Fireclay bricks and special refractory: SRIC Aerated Lightweight Concrete: Q-CON and SCG PVC pipe and accessories: SCG 		

Key Information	
	<ul style="list-style-type: none"> • Concrete pipe and precast: SCG • Roofing products: SCG • Ceiling/board/wood substitutions: SCG • Concrete blocks, concrete floor tiles and precast concrete walls: SCG • Reinforcing steel: SCG • Thermal and acoustic insulations: SCG • Home building service: SCG HEIM • Precast concrete system: SCG • Solar roof system: SCG • Active AIRflow™ system: SCG Living Tech • Prefabricated wall system (S Wall, Fulfill Wall): SCG • Unit bathroom: SCG • Products/service/installation for elderly: SCG Elder Care Solution • Complete consulting service on eco-friendly buildings in line with international standards: SCG Green Building Solution • Ceramic floor and wall tiles: COTTO, SOSUCO, CAMPANA, Prime, KIA and Mariwasa • Pyrolithic stone: GEOLUXE • Sanitary ware, sanitary fittings and bathroom: COTTO • Total solution in tiles and sanitary wares: COTTO Life • Building materials flagship store: SCG Experience • Building materials retail store: SCG Home Solution • Building materials retail store: SCG Home Boonthavorn • Logistics and delivery services: SCG Logistics and SCG Express • Import/export service: SCG International
Strengths	<ul style="list-style-type: none"> • Major integrated producer of cement and building material products in ASEAN • The second world's largest production capacity in floor and wall ceramic tiles • Sustainable development philosophy Embeddment in parts of company policies and operations • Rigorous in-house R&D efforts to create innovative products and services
Major Business Policy	<ul style="list-style-type: none"> • Expand business in ASEAN in order to be the regional market owner • Maintain price and market stability as well as enhance its domestic market leadership • Develop high value added products and services (HVA) • Continuously conserve and reduce natural resources consumption, protect environment and join social development program with local community for sustainable development

2.1 Product or Service Features

Products and services are primarily classified as follows:



Cement group

1. Portland cement
2. Mixed cement
3. Mortar cement
4. Decorative cement
5. Tile Adhesive cement
6. Ready mixed-concrete
7. Fireclay bricks and special refractory
8. Precast concrete system

Building Material Group

9. Aerated Lightweight Concretes (ALC)
10. Roofing products (fiber cement roof, concrete roof, ceramic roof, metal roof, clay roof, and glasolit roof), roof truss and accessories
11. Ceiling, wall, floor, fiber cement board and cement board products
12. Wood substituted products
13. Landscape products (paving block, paving tile, wall tile and fence)
14. Reinforcing steel
15. Thermal and acoustic insulation
16. PVC pipe and accessories
17. Concrete pipe and precast
18. Solar roof system
19. Active Airflow™ system
20. Prefabricated wall system (S Wall, Fulfill Wall)
21. Unit bathroom

Ceramic group

22. Floor and wall tiles
23. Pyrolithic stone
24. Sanitary ware, sanitary fittings, and bathroom

Other products and services

25. Logistics service
26. Import/export service
27. Disposal of industrial waste
28. Other products and services such as roofing center, and home product and service
29. An expert consultant specializing in sustainability advice and services on both national and international green building standard practices
30. Products/service/installation for elderly
31. Home building service
32. Total solution in tiles and sanitary wares

2.2 Market and Competition

A. Policy and Market Features of Main Products and Services

- Policy and Market Features

1) Competitive Strategy

- The business rigorously creates value to customers through high value added products and services (HVA) to differentiate and respond to customers' needs such as continuing products improvement through R&D, becoming trend settler, and developing eco-friendly products to reduce natural resource consumption. In addition, the business has its own Research and Development institution that allows business to efficiently develop its goods and services to serve the needs of each customer segment. Moreover, the business can flexibly support the trend changes toward cement industries and consumer's behaviors by improving better quality of products and launching new products to the market. For instance, SCG hybrid cement (Eco-friendly), Tiger Plastering cement, SCG Precast Cement, SCG marine cement, SCG Extra Durable cement, SCG Portland Pozzolan cement, Tiger Mortar General and Lightweight Block Plastering Xpert Formula crack resistant mortar cement, Tiger Tile Adhesive for ceramic granite marble granite tiles, Grey-White skim coat, SCG wood plank cool plus, SCG roof tile for low slope & modern style roofin, thin ceramics technology 'COTTOCERAM™' in COTTO sensation series which makes wash basins look slimmer, Modern design toilet 'Simply Modish', Smart toilet Tunio Laconic series which combined design and technology combined together, and soft paddle faucet that designed produced with under universal design concept. Not only core product offerings, the business also provides total range of products, services and solutions to serve agricultural sector, government infrastructure projects, commercial buildings and residential segment by joining with various SCG alliances and partners.
- The business has policy to continuously increase production efficiency and implement cost reduction, for example, energy cost reduction, and waste reduction. Furthermore, the business also has its own cement business solution team to provide professional consultant and recommendation to the business partners and direct customers. This is not limited to advices on more efficient and effective production process, quality control and cost reduction as well as possible solution of any related problems. Therefore, customers can promptly and directly notify their problems to the customer complaint call center.
- The business gives priority to society, community and environment by providing many marketing and social activities, for example, "Membership program for contractors" as to improve their skills and living standard enhancement and "Project to educate architecture students" as to increase knowledge about building materials and construction technology.

2) Customer Features and Target Groups

- Cement product: products are sold to affiliate companies such as ready mixed concrete, concrete roof, board. Besides SCG customers, products are also sold to dealers, major concrete building material producers, and major contractors.

- Building material products: products are classified by pricing and target group of customers in each area. However, such products are value designed to respond to customer's needs.
- Ceramic products can be classified into two customer segments: middle to lower and middle to upper segments.

3) Channel of Distribution

- Domestic distribution: the business provides strong domestic distribution network through sales campaign and activities to 500 dealers nationwide. System "Project Management" also be applied as one-stop solution service for customers to enhance most efficiency in products. The segment that needs consulting, designing, price estimation, and service installation, is served by the one-stop shop and one-stop service dealer called SCG Home Solution and COTTO Life. The business further improves distribution strength towards renovation segment through retail channel by joint venture with Boonthavorn to enhance one stop service. Indeed, customer experience in all channels has been improved from SCG e-commerce and digitized through application and startup platforms.
- ASEAN distribution: for strategic countries, the business provides distribution network and sales campaign and activities which focus on the market situation in each country and also expand investment in retails business in Indonesia, Cambodia, Myanmar, and Vietnam.
- Distribution in other regions: SCG International Corporation Co., Ltd. (previously SCG Trading Co., Ltd.) as SCG's subsidiary, is the SCG exporting agent to other countries. The export will focus on needs of destination customers or dealers in each country.

In addition, the business focuses on increasing efficiencies of business dealers as follows:

- Wholesales channel: Distribution business strengthens its dealer networks by adopting transportation management software 'Giztix' to improve store's operations process as well as reduce warehouse operations and logistics costs. The business also carries on its loyalty program, SCG Chang Family, to sustainably maintain momentum in wholesale channel.
- Project channel: Rudy, a project sales assistant application, will play vital roles in exploring new sales opportunity and simplifying sell and after-sale processes to satisfy clients' needs. Besides the application, distribution business implements project database system to support manufacturers in demand planning and ensure customers to receive products in-full and on-time. The business also offers an onsite service to provide installation guides to clients.
- Retail channel: The business sustainably develops network through SCG Home solution and SCG Home Boonthavorn in order to respond householder's requirements. For example, design service, price estimation, material selection, service installation, and products warranty. The business also expands network through loyalty program "SCG Family Chang

Puean Chang” as to educate installers to improve their professional skills. Lastly, SCG Home Contact Center is established to provide solution and consultation directly to home owners.

- **Policy and Market Features of Main Products and Services**

Presently, the business has five grey cement plants in Thailand: 1) Ta Luang cement plant 2) Khao Wong cement plant 3) Kaeng Khoi cement plant (Saraburi) 4) Thung Song cement plant (Nakorn Sri Thammarat) 5) Lampang cement plant (Lampang). Under total production capacity of 23 million tons, the business gains the highest market share in Thailand compared to other domestic cement producers. In terms of building materials group, the business has factories in Saraburi, Nakhon Prathom, Lampang, Lamphun, Chonburi, Khonkaen, Nakhon Ratchasima, and Nakhon Si Thammarat to produce roofing products, ceiling and board products. Recently, the business rigorously expands marketing activities of cement and housing products in 5 countries in ASEAN: Indonesia, Myanmar, Cambodia, Vietnam, and Philippines by focusing on strengthening sales and distribution channels.

For Ceramic business, there are floor and wall tiles plant in domestic and regional with total capacity of 210 million Sq.meter per year: 1) Saraburi, Thailand 2) Philippines 3) Indonesia and 4) Vietnam. Furthermore, the sanitary ware and fitting business are still being the leader in domestic market. The business emphasizes to continuously develop sanitary ware and fitting business for being well known in global market in the future. The innovative products launched to the market as follows;

- 1) Start to enter into construction sector by introducing CPAC Construction Solution; CPAC Floor solution, CPAC FillGood solution, CPAC Beam and column, CPAC Farm solution, and CPAC Wall solution to create better wealth to society and throughout value chain. SCG has co-developed solutions among several partners and enhance usage of BIM platform in construction projects between CPAC and partners.
- 2) Create “Ready-to-use” concrete products to serve difficulty in transportation for rural areas by providing “CPAC Instant Concrete” for local customers. Moreover, SCG also develop concrete mold releasing agent, “CPAC Moldera CX1” is co-developed by CPAC and PTT Oil and Retail Business Public Company Limited (PTTOR) for concrete product producers and contractors to have better surface concrete.
- 3) Expand production capacity of SCG Hybrid Cement (Eco-Friendly) as the product has special feature of reducing CO2 emissions in the manufacturing process which is a major cause of global warming. Furthermore, the product contributes strength and durability to the concrete structures as well.
- 4) Develop and launch localized products that response to different needs for various customer segments. For instance, SCG Portland Pozzolan cement is innovated to enhance structural strength to endure soil problem condition in Northeastern part of Thailand.
- 5) Continue to increase competitive advantage of Silo & Spraying service by lifting up service standard towards “Professional and Smart team” and improve efficiency of Silo & Spraying system to serve high-rise building segment and expand in big cities throughout Thailand.

The system provides convenient working condition, enhances project speed and solves labor shortage problem.

- 6) Increase production capacity of Tiger decorative cement under brand “Tiger Décor” which is for floor and wall decoration to serve customers that need unique and outstanding covering cement. Business continue to expand in renovation segment by expanding Tiger Decor Polymercement Loft wall to capture DIY customers. SCG has enlarge business opportunity through online channel by introducing Tiger Décor Polymercement Loft wall with specialty team service to build desired loft wall for customers in the online store.
- 7) Enhance speed of work for decorative segment by providing new decorative “Ready-to-use” package; Easy Mix series which are Tiger Decor Easy Mix Terrazzo and Tiger Decor Easy Mix Marble Render.
- 8) Develop new formula and the first brand approved by TIS standard of Tiger Tile Adhesive for ceramic granito marble granite tiles. Tiger Tile Adhesive has been commercialized and sold throughout Thailand in wholesale, retail and project channel.
- 9) Passive Stack Ventilation System and indoor air quality control system for better living standard in Thailand: the combination of natural ventilation concept, which depends on the amount of the movement of external air, and the external temperature and a ventilation system using a solar powered fan with a smart control to provide optimum cooling comfort and reduce the build-up of heat during the day. Furthermore, new products have been developed to improve indoor air quality – humidity, temperature, CO2 and VOCs, by controlling and monitoring the air quality with IoT technology.
- 10) SCG Eldercare Solution, a housing innovation for the elderly has wide range of innovation solutions offering healthcare caution. The concept is to focus on bedding solutions to solve problems or to ease pain associated with joints and muscles in the lower body problem, bed and chair that help elderly more convenient to get up, movable toilet, automatic turn-on intelligence light when leaving bed at night or special mattress to ease bed sore
- 11) Research and develop 3D Printing Mortar: Extrusion 3D Printing is an innovative construction fabrication technique. In SCG, we are aware of a future of this technology and develop 3D printing mortar. The SCG 3D printing mortar has high quality and suitability to serve the extrusion 3D printers. This technology allows a freeform fabrication of designs with complicated patterns, easy onsite and fast installation. To further business advantage, SCG started to enlarge 3D printing business model towards “Service Solution” by co-creating and co-designing with customers to utilize the technology and response to customized demand from different customers such as Department of Marine, Coastal Resources, Faculty of Veterinary Science, Chulalongkorn University, and Tourism Authority of Thailand.
- 12) Research and develop concrete fabric: After the success in product development, SCG continue to expand to more construction sites; for example ditch lining surrounding solar farm at Saraburi province, agricultural drainage system with Kubota farm at Chonburi province,

and erosion protection for Doi Tung Royal Villa at Chiang Rai province. This year, business continue to promote concrete fabric in online retail channel.

13) Research and develop wood substituted product in new various applications such as decorative plank and skirt by using extrusion technology and fiber-reinforced composites to develop.

- **Domestics Market and Competition**

Domestic demand for cement increased comparing to the previous year, largely attributable to infrastructure projects from government investments and industrial sector. Whereas cement demand from household users and the private sector recover, exports dropped comparing to last year due to increasing in cement domestic demand.

Domestic demand for building products were still under pressure from the sluggish household demand. Nonetheless, the business managed to maintain its leadership status in the building product business through the continued development of high value-added products and services to better accommodate consumer needs.

The business focuses on maintaining its market leadership by creating value to customers and rigorous continuing enhances product quality and new product and service development. And the business sustains leadership by building good relationship with customers as well as implementing cost reduction program in order to be more competitive. In addition, we have also improved and expanded distribution network nationwide to increase points of purchase to facilitate our customers' accessibility to our products.

- **Regional Market and Competition**

Overall, the reboot growth in the demand for building materials in ASEAN was fueled by the cement and housing products market expansion. Cambodia, in particular, witnessed a steady growth driven by the housing and commercial building projects and the government's large-scale infrastructure projects such as expansion of airport project. In Myanmar, construction market slightly decreased mainly because of private direct investment especially the industrial construction in special economic zones. Vietnam construction market stabilized due to the GDP growth slightly slowed down and the bank credit for property sector was controlled by the government, but the infrastructure investment continued expanding. Whereas, Philippines Government increased infrastructure project to stimulate construction and domestic economy such as Clark International airport Expansion project, Malitubog-Maridagao Irrigation project Phase II and Binondo-Intramuros bridge. Construction market in Indonesia picked up from last year as a result of government's continuous investment in infrastructure, especially the transport infrastructure.

2.3 Products and Services Procurement

A) Product Procurement Feature

Type	Number of Sellers	Procurement method	Local / Foreign	Remark
Main Raw Materials				
Limestone	-	-	100% / 0%	Own supply sources and self-operated
Shale	-	Long-term contracts with external contractors	100% / 0%	Own supply sources. Long-term contracts with contractors
Sand	~ 3	Occasional purchase with external suppliers	100% / 0%	Own supply sources kept as reserve. Currently buy from external suppliers
Clay	~ 3	Long-term contracts with external contractors	100% / 0%	Own supply sources. Currently have long-term contracts with contractors
Copper Slag	1	2-year contracts with external suppliers	0% / 100%	Buy from external suppliers
Gypsum	~ 7	Occasional purchase with external suppliers and partly operate from own sources	100% / 0%	Currently buy from external suppliers and partly operate from own sources
Kraft Paper	5	Yearly contracts with external suppliers and occasional purchase from SCG affiliates	10% / 90%	Currently buy from international vendors and partly from SCG affiliates
Fuel				
Lignite	~ 2	Long-term contracts with suppliers	30% / 70%	Self-operate from its supply sources and buy from external suppliers
Petroleum Coke	1	Occasional purchase	0% / 100%	Buy from external suppliers
Coal	~ 4	Long-term contracts with suppliers and occasional purchase	0% / 100%	Buy from external suppliers
Bunker Oil	2	Occasional purchase	100% / 0%	Buy from external suppliers
Biomass	22	Occasional purchase	100% / 0%	Buy from external suppliers

For other materials, the business has long-term contracts with many raw material producers both domestics and foreign. The company will not depend too much on any single supplier to prevent shortage of raw materials.

B) Environment Protection

Circular Economy in CBM Business

As a manufacturer and a service provider for building materials, CBM realizes an important of circular economy (CE) to be implemented in our business's operation and set a target to a building industry and its value chain. This shall start from a co-operation from every party by using circular materials, reducing less waste from construction as much as possible and up-cycling any or recycling wastes to be raw material for the next usage. However, there are few business operations practicing the circular economy and most of the wastes are buried in landfills.

As a result, CBM together with property developers, building contractors, architects, and property consultants established a "Circular Economy in Construction Industry" or "CECI" with a purpose to drive the circular economy concept into an actual implementation in Thai construction industry. The objectives of CECI are to reduce any waste occurred from a lack of good management in construction, and to collect any waste and make its most use of resources. During the past few years, CBM has initiated many activities to create learning points in order to expand its operation in the future. The interesting activities include :-

1. Management's Meetings of CECI have been held in order to exchange ideas and share experiences on CE of member companies so that each company is able to adopt and have some ideas to operate activities together for example, reducing waste from BIM, practicing a waste segregation and waste management in working sites, using leftover of ready-mixed concrete as raw materials, etc. The meeting agreed to set up working committees to implement the concept of CE and operate in some projects.
2. A seminar on circular economy has been held for architects, building contractors and those who work in construction industry on March 14, 2019. The purpose of this activity was to create the better understanding among the member companies and to adopt the circular economy in their business operations. There were 433 participants attending the seminar.
3. R&D on waste materials such as, cement debris, concrete test tubes or concrete pile cut-off, from construction has been conducted in order to create renewable materials for construction, for example; recycled aggregate or road construction using recycled concrete, and the construction of Supalai Prime Rama 9 and Forestia, Bang-Na.
4. The Building Information Modeling or BIM, which is a disruptive technology in construction projects has been implemented in a construction solution. Therefore, a benefit gained from the usage of BIM is that everyone can see the same virtual image before the construction starts. It is a collaboration platform which helps reducing construction errors, lessening reworks and reducing waste from the construction which has been set at 20% of project's impairment. Initially, CBM signed MOU with the Federal of Thai Industries and Thai BIM Association in order to set a Standard BIM Object to promote and support building material manufacturers in Thailand as part of value chain in assisting a digital construction system. In addition, CBM supports a creation of a body of knowledge in making a digital object,

prepares platform in publishing products, develops human resources, gives a financial support for the program and expands its concept to both private and governmental sectors.

5. New services have been initiated in order to promote the use of resources with most effective way by collecting a list of machines from operators and share the services via a management and technology systems of ALL RENT which is a concept of sharing platform. At present, there are 5,000 machines country-wide in ALL RENT project such as, mobile cranes, excavators, backhoes, crane trucks, trucks and trailers and etc.
6. Changes of one-way wooden pallet to recycling plastic pallet have been done in transporting ceramic tiles. In addition, a study on a reduction of ceramic's wrapping material has been conducted in order to reduce the packaging waste on site.
7. R&D of CBM's product has been developed so that the waste materials from a production and from other industries can be reused as raw materials in other manufacturing which is called recycled content to replace the use of natural resources. At present, CBM is able to operate 5-80% of recycled content.

Nowadays, under the SCG Circular Way Guideline, any waste materials from the plants must be recycled to be raw materials of products made by local communities. For examples,

- Under a Mixed soil and Seeding Soil for Rice Grain in Parachute Planting Project, local people from Cham Pak Praew community in Saraburi use surplus soils from the ceramic sanitary manufacturing process as raw materials in making seeding soil for rice grain in parachute planting to earn their livings and create job in the community.
- A project on development of pottery in Dan Kwain, Nakornrachasima has been initiated for local community to test and use surplus soils from ceramic sanitary manufacturing process as a replacing soil material in making pottery. This is to reduce the use of soil material of Dan Kwain and in the meantime, to keep a unique and good quality of Dan Kwain pottery.
- A collaboration project with every sector has been established in order to promote a good quality of life and environment. For instance, a project on Waste Management of Mae Sa Community in Lampang has been conducted and the community has joined hands to manage all kind of wastes such as organic wastes, recycled waste, hazardous waste as well as other wastes and make them as refuse-derived fuels. With the co-operation of Siam Cement (Lampang) Co.,Ltd. as a user, the project has been expanded to Muang Mai and would be developed as an Eco City.

2.4 Undelivered Projects or High-Valued Purchase Agreements

None

Chemicals business

2.1 Product or Service Features

- **Olefins**

Olefins are the primary petrochemical product comprising of Ethylene and Propylene which are the main raw materials for downstream Polyolefin plastics and related products such as Polyvinyl Chloride and Styrene Monomer. The business's current Olefins capacity is 3,050,000 tons per year and by-products from the olefins plant such as Mixed C4, Benzene and Toluene. Main products are mainly consumed within the business's downstream plants.

- **Polyolefin and related products**

Polyolefin are the business's main products. The business has total polyolefin capacity of 1,912,000 tons per year, covering a wide range of applications as follows:

- 1) High Density Polyethylene (HDPE): outstanding features are good flow-ability, easy formation, and high resistance to chemicals. It is normally used as the main raw material for the production of plastic shopping bags, milk bottles, shampoo and cosmetics bottles, lubricant containers, bottle crates, fruit crates, trash bins, water pipes, power cord insulators, and etc.
- 2) Medium Density Polyethylene (MDPE): outstanding features are high dart impact strength, stable formation, and low temperature resistance. It is normally used as the main raw material for the production of coolers, water tanks, water treatment tanks, traffic cones, and etc.
- 3) Linear Low Density Polyethylene (LLDPE): outstanding features are high stiffness, high tensile strength, and puncture resistance. It is normally used as the main raw material for the production of industrial and agricultural films, plastic rice bags, and etc.
- 4) Low Density Polyethylene (LDPE): outstanding features are clarity, good adhesion strength and high stiffness. It is normally used as the main raw material for the production of Flexible packaging, Aseptic packaging, and etc.
- 5) Polypropylene (PP): outstanding features are good stiffness, high dart impact strength and high heat resistance. It is normally used as the main raw material for the production of hot food bags, general wrapping films, woven bags, household utensils, furniture, battery shells, electrical appliance parts, car components, and etc.
- 6) High Density Polyethylene Compound for Pipe: The product is normally in pellet form dry-blended with various additives to improve properties such as pressure resistance and UV resistance. It is used as the main raw material for the production of high pressure pipe; large size pipe for water work system and gas pipe system, mining pipe, buoy, and etc.

- **Polyvinyl Chloride (PVC) and related products**

PVC products from Thai Plastics and Chemicals Public Company Limited, the leading PVC producer in Thailand and ASEAN with total PVC resins production capacity of 886,000 tons per year (Thailand, Vietnam and Indonesia), can be divided into three main categories:

- 1) PVC Resin - a type of thermoplastic in pure powder form which can withstand heat and pressure without changing its original structure and can be reused in different productions. However, it

cannot be directly formed into finished goods, thus needs various additives to adjust its properties according to customers' specifications.

- 2) PVC finished products – consist of PVC pipe and fittings, PVC tube, profiles for window and door, rain gutter, and other building material from PVC.
- 3) PVC Compound - normally in pellet or powder which has already been dry-blended with various additives such as additives to increase impact strength, additives to help the forming process, additives to increase heat resistance capability without changing its form, and etc. Due to its many outstanding features such as weather resistance, flame retardant, light weight, and rust-free material, it can be used as cable jacketing, pipe and fitting, window and door profile, and etc.

- **Jetty & Tank Terminal**

The business provides SCG affiliates services that include storage of petrochemical gases and liquids, such as Naphtha, Olefins, Benzene, and Mixed Xylene, as well as transport of raw materials and products via pipelines and terminals. At present, the business owns four jetties with deadweight tonnage of 100,000, 80,000, 20,000 and 10,000 tons.

- **Other services** such as Industrial Furnace Coating service, Robotics Inspection service and Technology Licensing.

2.2 Market and Competition

A) Policy and Market Features of Main Products and Services

- Policy and Market Features

Polyolefin and PVC are commodity products with a fairly volatile price cycle.

1) Competitive Strategy

- **High Value-Added Products**

The business has planned and developed high value-added products in order to improve product quality and respond to customer needs. In this regard, the business has continually invested in the enhancement of research and development capability and efficiency. Currently, the business is setting up Application Development Center. In addition, the business has emphasized to adjust product portfolio to reduce the portion of plastic resins sales in single-use applications and increase the portion in durable product applications which also serve circular economy concept.

At present, sales of high value-added products and services accounts for 33% of total sales from subsidiaries.

1. High value-added products:

- Food and Beverage business: Flexible packaging, retort pouch, lightweight bottle cap
- Building and Infrastructure and Formulation business
 - Building sector: Insulation for power cord and telephone cable, water tank from Rotational Molding, PVC pipe and fitting, plastic doors and windows

- Infrastructure: Large HDPE pipe for water work system, mining and natural gas industry, insulation for power cord and fiber optic cable
- Formulation: Medical equipment, kayak boat and components of agricultural machinery
- Automotive business: Interior and exterior automotive parts and battery
- Electrical Appliances business: Parts for refrigerator and washing machine
- 2. High value-added services:
 - Industrial Furnace Coating service: Coating in high temperature industrial applications such as fired heaters and furnaces in refinery, petrochemical and steel industries.
 - Robotics Inspection service: Carburization Inspection Robot (CiBot™), Tank Inspection Robot and Aerial Visual Inspection Robot
 - Technology Licensing: License of High Density Polyethylene (HDPE) production process, license of functional material CIERRA™

The business aims to further increase sales portion of high value-added products to reduce impact of business volatility in the down cycle while enhancing overall competitiveness of the business.

● Price and Cost

The business focuses on value creation for customers, business partners, and stakeholders, including technology development and innovation creation. As both domestic and export prices of Polyolefin and PVC resins move in-line with the global market prices, the business aims to create premium by offering high quality products, services, and innovations in response to customers' need in order to be competitive in the market.

In terms of cost management, the business also places importance to maintaining competitive cost position. As petrochemical industry requires high investment, the business has to constantly expand the plant capacities and improve productivity to achieve economy of scale with lowest investment cost per ton. The business's upstream and downstream integration also provides significant competitiveness. Business expands Integrated Business Excellence (IBE) system which help reduce loss in production time which brought about higher plant productivity, cost reduction, improved product lines management and ability to set product prices to serve customer needs.

The business also utilizes Total Productivity Management (TPM), which emphasizes on equipment maintenance, production efficiency, and cost reduction. By following TPM concept, the business was awarded with Advanced Special Award for its achievement in production efficiency enhancement, energy conservation, accident and environmental impact reduction, as well as in development of the employees' capabilities.

The business also employs digital technology, and advanced information technology, in business processes and operations in e-Business platform, such as e-Procurement, Warehouse

Management, Advanced Process Control, Advanced Planning and Scheduling, ReadyPlastic, CRM (Customer Relationship Management), and e-DP (Electronic Delivery Paper) and B2P (Blockchain for Procure-to-Pay to achieve best-in-class efficiency and customer satisfaction. With RPA (Robotic Process Automation), the business is able to improve efficiency by automating repetitive manual tasks using robotic software. Moreover, the business has developed Smart Online Fault Analysis (SmartOFA) which can estimate risk and also send out alerts before potential problem occur. This helps reduce maintenance cost and reduce opportunity loss from machinery breakdown.

- **Product Quality Management**

One of the business's main policies is to produce safe and high quality products without any effects on the environment and communities. The business has adopted Total Quality Management (TQM), which emphasizes on customer and quality. Therefore, it integrated Risk Management Policy and ISO system with TQM and TPM to come under one quality management resulted in being certified by the various international quality systems, namely ISO 9001, ISO 14001, ISO13485, ISO 16949, OHSAS and TIS 18001. The business also applied for ISO17025 resulting to product assurance in both quality and safety throughout the process, such as procurement, production, storage, and logistics. Moreover, the business has supported in research and development constantly improve and create its product with quality and safety to truly meet customers' needs in various product applications.

- **Service**

The business recognizes that “service is the heart of selling”. Therefore, it has developed Customer Relationship Management system (CRM) through advanced IT technology, which gathers and analyzes customers' requirements to accurately and timely respond to those needs. The system is also designed to receive customer complaints to ensure that every problem will be recorded and solved systematically and sustainably.

Moreover, the business provides technical advices on plastics conversions, engage in collaboration with customers to co-create values from development of products and services that better satisfy customers' latent needs, develop and expand network of business (Business Matching), host seminars or business panels to provide both business and technical information to increase customer's competency for their sustainable growth. The business also emphasizes on accuracy of the delivery. It also engages in continuous improvement to enhance the service efficiency in order to match the customers' business operations which vary by segments.

- **Management**

The business's main focus is on improving management practices in order to timely and accurately responds to market volatility. On a monthly basis, the business develops integrated forward-looking plan for the whole value chain, covering production and sales, demand and supply of both raw materials and end products, as well as new products in the pipeline. This is for the business to become more proactive in adapting to the fast-pacing market and changing

customers' needs. Moreover, the business constantly measures the effectiveness of the management plan for future improvement.

The business places high importance on cultural transformation to shape continuous improvement mindset of the employees. The business also selects high potential employees to work full-time on improvement projects.

The business elevates strategic workforce planning, starting from assessing the needs and readiness of human resources in terms of numbers, capability, and traits that are vital to business operations, readying them for business development both today and tomorrow. The business also aligns enterprise's goals to those of the employees', using the new Performance Management System (PMS) and creates organizational culture that promotes common understanding. Added to this is the development of a better performance evaluation between supervisors and subordinates, as well as the development of necessary skills for executives, enabling them to be role models for employees to work collaboratively in an efficient manner.

The business enhances the efficiency of Enterprise Resource Planning (ERP) system through the integration of all departments' systems to quickly response to the customers. The system consists of various functions, such as order forecast, sales and logistics planning, and inventory management.

Furthermore, the business invites world-class consultants whose expertise lies in supply chain management to co-develop and continuously improve its supply chain management with the emphasis on visibility of supply chain as a whole. In addition, the business also extends Business Continuity Management (BCM) system to all of its subsidiaries for ongoing customer responsiveness in case of emergency.

2) Customer Features and Target Groups

The business has rearranged target customers into groups of businesses, in order to directly response to customer's need, which can be classified as building and infrastructure business, automotive business, electrical appliances business, food and beverages business, and general purpose business.

The business's customers are mostly small and fragmented so the business aims to diversify the customer base into diverse segment and region to reduce the risk from depending on a limited number of customers. However, the business has also collaborated with global leading players in order to be leader in technology for best responding to end users' needs in advance.

3) Channel of Distribution

In 2019, the business's domestic and export sales of polyolefin are accounted for 44% and 56%, respectively. Domestic and export sales of PVC are 37% and 63%, respectively. The business has expanded the distribution channel by setting up e-market place, namely ReadyPlastic, e-commerce platform for non-prime product trading, to cover recycled product.

- **Domestic**

Domestic customers can be categorized in 2 groups; customers who convert and sell in domestic market represent 93% of the total domestic sales, whereas those who convert and export (re-export

customers) represent 7%. For sales of PVC are for customers who convert and sell in domestic market only.

- **Export**

The business mainly exports to the Asia-Pacific region. Products are distributed directly to end-users or local distributors so that customer needs are satisfied efficiently. The proportion for the export market is 41% in East Asia, 31% in Southeast Asia, 7% in South Asia, and 21% in other regions and PVC export to Southeast Asia 38% , South Asia 41% and the rest 21%.

The business exports this year around 1.3 million tons of polyolefin 1.1 million tons and PVC 0.2 million tons, respectively. By diversifying its export destinations, the business is able to avoid risks from political or economic change in a particular country. In addition, by having global based customers, the business is able to manage export products quantities for profit optimization as prices may differ depending on market conditions of each country.

- **Competition and Capacity**

- 1) **Domestic**

Thailand has Polyolefin capacity of approximately 6.3 million tons per year while the country's demand in 2019 was approximately 2.9 million tons. Moreover, Thailand export Polyolefin around 54% of total production. However, when comparing with local producers, the business has around 30% of total domestic capacity. For PVC, Thailand has total PVC production capacity of 0.9 million tons per year. Thai Plastic and Chemicals Public Company Limited is the largest producer, accounting for 65% of total domestic capacity.

- 2) **Foreign**

In 2019, Polyolefin demand in Asia equaled 97.7 million tons, with China as the largest importer. Major exporters are producers in the Middle East, USA, and South Korea. For PVC, demand in 2019 was 29 million tons with India as the largest importer in Asia.

2.3 Products or Services Procurement

A) Product Procurement Feature

- **Production**

The business has 2 Olefins plants, 9 Polyolefin plants located in Map Ta Phut Industrial Estate, Rayong Province and 14 PVC plants located in Thailand and regional countries. Nameplate capacities are displayed below:

Company	Product / Service	Capacity (Ton / Year)	Year First Operated	% Shareholding
Rayong Olefins	Ethylene	900,000	1999	68
	Propylene	450,000		
Map Ta Phut Olefins	Ethylene	900,000	2010	67
	Propylene	800,000		
Thai Polyethylene	HDPE 1	140,000	1989	100
	HDPE 2	180,000	1997	

Company	Product / Service	Capacity (Ton / Year)	Year First Operated	% Shareholding
	HDPE 3	200,000	2001	
	HDPE 4	400,000	2010	
	LLDPE	120,000	1990	
	LDPE	152,000	1995	
	PP 1	140,000	1993	
	PP 2	180,000	1997	
	PP 3	400,000	2010	
Thai Plastics and Chemicals	PVC Resin	530,000	1971	100
	PVC Compound	63,500		
Nawaplastic Industries (Saraburi)	PVC Pipe and Fittings	227,810	1970	100
Binh Minh Plastics Joint Stock Company (BMP)	Plastic Pipe and Fittings	150,000	1977	54
Nawaplastic (Cambodia)	PVC Pipe and Fittings	17,400	2016	60
Grand Nawaplastic Myanmar	PVC Pipe and Fittings	16,000	2016	80
TPC Paste Resin	PVC Paste Resin	36,000	1993	100
PT. TPC Indo Plastic & Chemicals	PVC Resin	120,000	1996	100
TPC Vina Plastic and Chemicals Corporation	PVC Resin	200,000	1995	70
Viet-Thai Plastchem	PVC Compound	16,500	1994	72
Map Ta Phut Tank Terminal	Jetty and Tank Terminal	-	1998	82
Rayong Pipeline	Pipe Transportation	-	1998	92
Rayong Engineering and Plant Service	Engineering and Plant Service	-	2001	100

- Raw Material Procurement
- Olefins Production

The key raw material in Olefins production is Naphtha. The business purchased 16% of total naphtha from local producers, and 84%, majority from producers in the Middle East. In addition, the crackers were designed to use alternative raw materials, such as liquid petroleum gas (LPG), raffinate, and condensate if Naphtha price is higher than other raw materials.

- **Polyolefins Production**

The key raw material in Polyolefin production is Olefins. The business has olefins purchasing contracts with olefins producers in Chemicals business of 1,690,000 tons per year, while the rest of olefins production is sold to joint ventures and external customers who are the business's olefins plant shareholders. Moreover, the business is also able to procure more Olefins from PTT Global Chemical PLC. (PTTGC) or import in case of Olefins shortages.

- **PVC Production**

The key raw material in PVC production is Vinyl Chloride Monomer (VCM). The business can produce VCM to fulfill all demand from its domestic PVC production. For its production facilities in Indonesia and Vietnam, the business obtains VCM from Thailand production base and additional overseas imports.

B) Environmental Impact

Chemicals Business of SCG operates business with policies that support sustainable development by placing importance on the environment and communities to create the harmonious living between industry, environment, and communities. The business is the first company in Thailand to achieve Eco Factory certification on 100% of its production facilities in 2015. Besides, RIL Industrial Estate has also been certified as the first and only eco industrial estate at the level of Eco-World Class, which is the highest level, in 2019. The business has also engaged several sectors to develop Eco Community, Eco School, and Eco Temple, with a final aim to become Eco Industrial Town, in accordance with the government's policies to develop environmental friendly industries and build awareness of resource optimization, waste management and safety in community. Moreover, the business has also extended its internal waste sorting model to surrounding communities linking residences, temples, schools, and waste banks under the campaign of "Zero-waste Community", creating collaboration among stakeholders. The business has also developed an application named "KoomKah" for waste bank management.

The business has initiated various sustainable development initiatives covering economic, social and environmental aspects. For instance, Fish Home project, an eco-innovation project from business sector to community and society. Adding value to waste by turning discarded PE pipes from product testing into a fish home to serve as marine nursery areas and set up "protection zone" for sustainable living of local fishery groups. By 2019, the business together with concerned government agencies, local fishery groups and over 22,400 volunteers have placed over 2,150 fish homes in Thailand's East coast including Rayong, Chonburi, Chanthaburi, and Trat.

In addition, the business also leverages the Circular Economy concept through its business operations as well as continuous campaigns. The project "Recycled Fish Home" was introduced as a way to convert plastic marine debris and community waste such as bottle caps through the moulding process into the recycled fish homes. The business has collaborated with Dow Thailand Group to develop Recycled Plastic Road. The first model road with has been built at RIL Industrial Estate and has expanded collaboration with other partners. Nowadays, the accumulated length of Recycled Plastic Road is 1.1 kilometre. The business also took part in a Thailand Public-Private

Partnership aiming to tackle plastic waste issues sustainably with target to cut marine waste in Thai oceans by 50% within 2027. The business also participated as one of the founding members in Alliance to End Plastic Waste, a global non-profit organization aiming to end plastic waste in the environment.

2.4 Undelivered Projects on High-Valued Purchase Agreements

None

Packaging business

SCG Packaging PLC. and its subsidiaries is the leading comprehensive packaging solutions provider in Thailand and ASEAN. Packaging business main business consists of Integrated packaging chain and fibrous chain.

Key Information	
Capacity	<p>Integrated Packaging Chain</p> <ul style="list-style-type: none"> • Packaging paper 3,934,142 tons per year • Containers <ul style="list-style-type: none"> - Corrugated containers 1,070,400 tons per year - Flexible packaging 817,000,000 square meter per year - Rigid packaging 25,100 tons per year <p>Fibrous Chain</p> <ul style="list-style-type: none"> • Pulp 556,000 tons per year • Printing and writing paper 490,900 tons per year
Main Products	<p>Integrated packaging chain</p> <ul style="list-style-type: none"> • Kraft paper, duplex, corrugated containers, flexible packaging, and rigid plastic packaging <p>Fibrous Chain</p> <ul style="list-style-type: none"> • Eucalyptus pulp, dissolving pulp, printing and writing paper
Brand	<ul style="list-style-type: none"> • Packaging and supplies for mail and shipping solutions Doozy Pack • Packaging : Green Carton, Inspired Studio • Printing and writing paper <ul style="list-style-type: none"> Idea Green, Idea Work, Idea Max, Supreme, Delight, Spring PRO Series – Offset PRO New, Card PRO, Note PRO, Text PRO Green Series – Green Offset, Green Card, Green Matt, Green MattCard, Green Plus • Food Packaging: Fest
Strengths	<ul style="list-style-type: none"> • Leading comprehensive packaging solutions provider • Packaging business are the partner of choice of multinational companies ("MNCs") and other blue chip and established regional customers with whom Packaging business have long-standing relationships • Strong R&D capabilities which allows us to offer broad, diversified and innovative solutions and products to cater to our customers' differentiated needs. • Large-scale vertically integrated packaging solutions providers in ASEAN, which creates operational efficiencies, cost competitiveness, security of supply and products and optimized resource allocation.

Key Information	
	<ul style="list-style-type: none"> ● A leading proponent of sustainability, focused on maximizing the lifecycle of packaging materials through Circular Economy approach and implementing the principles of the Circular Economy in all of our operations.
Major Business Policy	<ul style="list-style-type: none"> ● Enhancing Packaging business customers' brand and their value chain efficiency through innovating renewable products and services. ● Continuing Packaging business expansion both in Thailand and overseas, product offerings and customer base to capture regional consumer growth and macroeconomic trends; and ● Committing to sustainability and proactively continuing to be the pioneer of the Circular Economy in ASEAN.
Business Development Policy	<ul style="list-style-type: none"> ● To increase sales in high-growth sectors including consumer products and E-commerce packaging. ● To replicate Packaging business successful vertical integration business model in overseas operations ● Continue to deploy acquisition and investment strategy and collaborate with new partners as a mean to accelerate Packaging business growth strategy and extract operational synergy. ● Continue to invest in product and solution innovation ● Continue to enhance Packaging business operations and supply chain efficiency through automation and digitalization. ● Continue to pioneer the Circular Economy

2.1 Product or Service Features

Packaging business is the leading comprehensive packaging solutions provider in Thailand and ASEAN, which has vertically integrated business model starting from pulp production to manufacturing of printing and writing paper, packaging paper, corrugated containers, flexible packaging and rigid plastic packaging. This allows us to appropriately allocate the production capacity and efficiently control cost. Thus, making it relatively less vulnerable to external changes, while continuing to add values to Packaging business products. Packaging business consists of two major business chains as follows:

- **Integrated packaging chain**

The main products comprise of kraft paper for the manufacturing corrugated containers, extensible sacks, shopping bag, paper core, processed and finished products, gypsum linerboard, coated duplex and various types of corrugated containers, flexible packaging, rigid plastic packaging, logistics packaging, folding carton, merchandising display, and total packaging design solutions.

- **Fibrous Chain**

The main products are eucalyptus pulp, dissolving pulp and printing and writing paper. Additionally, Packaging business also produce specialty paper and food service products. The eucalyptus pulp can be used as raw materials for various kinds of paper, for example printing & writing paper, in which third party printing house is used for magazine, paper for notebooks, textbooks, copy paper, and specialty industrial paper such as paper for label, release liner, furniture products, medical & hygienic paper and food service products such as Fest, cupstock paper, cone cup, lunch box, paper bowl and tray.

2.2 Market and Competition

A) Policy and Market Features of Main Products and Services

- Policy and Market Features

1) Marketing strategy

Packaging business aim to be a provider of “Packaging Solutions” with diversified product portfolio to serve wider range of customers’ requirements, including corrugated containers, flexible packaging, rigid plastic packaging, logistics packaging, folding carton, and merchandising display. To this end, packaging business has developed and expanded capacity in flexographic pre-printing, offset printing and digital printing in order to meet rising demand for higher printing quality packaging in ASEAN, with special focus on the expansion of digital printing capacity to serve the growing food & beverage industry.

For the packaging design services, Packaging Business continues to develop team of designers with comprehensive set of skills to work proactively with customers in designing logo, brand, merchandising display, exhibition and other printing materials. Packaging business integrated services and Packaging business network of production sites across Thailand and ASEAN can ensure that consistent and excellent quality goods and services are always delivered to Packaging business customers.

As Packaging business foresee growth potential of the packaging industry and the growing need to cater to a wider range of customers' demand, Packaging business has invested in rigid plastic packaging while also developed new packaging format to better suit the modern consumer lifestyles.

Furthermore, Packaging Business focuses on developing new products and services to meet with customers' needs, led by “Innovation” development which is key to Packaging business strategy to increase competitiveness. This includes a newly developed packaging paper called “Hi-Strength” paper, which has lower basis weight but higher strength compared to normal packaging paper, helped saving production cost and reducing use of environmental resources.

Moreover, packaging business also focuses on developing more environmental-friendly products. Many of Packaging business products are certified with the “Green Label”, which is the national level certification awarded to products that comparatively have lower environmental footprint, for promoting the reduction and reuse of materials. Additionally, SCG also has its own

certificate, the “SCG EcoValue”, which is given to innovative products and services that are environmentally friendly. For example, Packaging business linerboard (KA, KH, KT, TA), corrugating medium (CS, CSP), coated duplex board and gypsum linerboard were certified by SCG EcoValue for their higher recycled content comparing with other competitors’ in the market.

Furthermore, Packaging business also promotes production and sales of packaging paper, paper core, sack kraft, gypsum linerboard and coated duplex board with the FSC-CoC (Chain-of-Custody) certification, which is granted to products that are made from FSC-certified plantation and production processes. The FSC or the Forest Stewardship Council has taken into accounts raw material selection, handling and storage, production volume control, sales and product delivery to ensure that the materials in the whole supply chain are sustainably sourced and do not get mixed up with uncertified items. Packaging business products have earned several types of the FSC-CoC certification (FSC Recycled 100%, FSC Mix 100%, and FSC Mix 70%) in which Packaging business customers can be confident that Packaging business products are environmentally friendly, and that the Packaging Business remains fully committed to social responsibility.

For the fibrous chain, printing and writing paper business has increased imports of coated paper to meet wider customers’ needs and to expand customer base for photocopy paper in both domestic and international markets. For domestic market, Packaging business have continuously deployed marketing promotion activities while increased such activities in international market and neighboring countries including Asia and The United States of America.

Packaging business food service products “Fest” has started to develop hygienic and safety food packaging product that are certified by Food Direct Contact standard in response to demand from chain restaurants and food delivery businesses that continue to grow. The growing global trend for environmental-friendly products also leads us to develop new Food service products made from natural fiber as an alternative product for consumers. The new product is made from eucalyptus fiber that is sustainably sourced from Packaging business own Eucalyptus plantation, with saplings that has more strength than fibers from common herbaceous plants. The result is a Food service product that has outstanding qualities such as clear white color, smooth surface, high strength that supports stacking, water and oil resistance, leak-proof, microwavable, available in several designs and shapes to meet with differentiated urban lifestyles requirement.

2) Customer Features and Channel of Distribution

Integrated Packaging Chain

Packaging and Containers

Channel: Sell directly to customers through account executives who work closely with Packaging business customers to understand their problems, provide consultation, develop solutions and timely deliver quality products and services to the customers. Packaging business continues to train Packaging business account executives to be the center point of contact for customers while coordinating internally with multi-team from designers, marketing personnel, researchers,

and production team to develop innovative products and services that can truly address the needs of Packaging business customers.

Packaging Paper

Channel: Sells directly to both subsidiaries of the Packaging Business and external customers. Products include paper rolls for converting plants and converted products such as sheet board, shopping bags, ream paper, and small paper rolls. The products are also exported to several countries especially in Asia such as China, Malaysia, India, and Myanmar.

Fibrous Chain

Pulp

Channel: Sells directly to subsidiaries of the Packaging Business and external customers, and through agents for international customers.

Printing and Writing Paper

Channel: Printing and Writing business sells to both domestic and export markets. For domestic market, Packaging business sell through both agent and direct customers which include printing house, industrial users and also through modern trade stationery stores. For exports, which are the main market for copy paper, major destinations are Vietnam, USA, Myanmar, India, Cambodia, Hongkong and other ASEAN countries.

Specialty paper for industrial uses

Channel: Sells directly to industrial customers and convertors, and through agents for exports.

Food service products

Channel: Sells through convertors, Food service products stores and modern trade stores, and through agents for export market, and online channel was added recently.

- Industry, Competition, and Trend

1) Integrated Packaging Chain

Thailand's domestic demand for corrugated containers in 2019 continued to grow at similar pace with the country's GDP, which expanded approximately by 3% y-o-y. In 2019, overall domestic consumption had improved thanks to the government's stimulus packages and improved farm income on the back of agricultural product prices increase. On the other hand, private investment growth had slowed with global economy which is impaired by a prolonged trade war. As a result, export volume to partners' countries like USA, China, EU, and Japan, for instance, was lower than expected and demand for corrugated cartons for exporting products was contracted.

In 2019, Fast moving consumer goods (FMCG) industry continued to grow with higher domestic consumption trend in the country, supported by numbers of factors including promotional campaigns, new product launches and the booming of e-Commerce business. However, the industry segment relying on export market such as electronics and electrical appliance had slowed in accordance with slower economic progress in partner countries such as USA, EU, Japan and ASEAN, the affect from US-China trade war, and Thai Baht appreciation, which all caused demand for corrugated containers to decrease.

Meanwhile, overall ASEAN market has seen considerable growth in 2019, especially for Vietnam and Indonesia, where demand for corrugated cartons continued to grow by 6.3% y-o-y and 4.1% y-o-y respectively. Demand in Vietnam expanded mainly from the electronics and electrical appliances sector as key players launched new products, which increased demand for corrugated cartons. As Vietnam is the global hub of footwear and garment industries, both segments also had seen continuous growth. For Indonesia market, the corrugated carton industry continued to grow with support from Food & Beverage and Footwear industries due to the large manufacturing base.

However, price competition remains a challenge for the packaging industry. Producers are being pushed to increase organizational efficiency and reduce cost to stay competitive. Developing packaging product which can add value to customer products is one of the key elements in sustaining the company's profitability.

Demand for packaging paper in Thailand grew 4.2% y-o-y. For ASEAN, the demand for packaging paper increased 4.7% y-o-y. However, there are both risk and opportunity from trade war between USA and China that might affect demand for packaging paper in ASEAN as packaging paper producers in Asia especially from China may have plans to relocate their capacity in and out of the region.

2) Fibrous Chain

Pulp

In 2019, Pulp demand increased 1.4% y-o-y as a result of capacity expansion in tissue industry in Asia. Demand for pulp in the printing and writing industry were lower due to the contraction of printing and writing paper industry, the uncertainty of economy and the high inventory of pulp. As a result both long fiber and short fiber prices had continued to decline since the end of 2018.

Dissolving pulp

In 2019, Dissolving pulp consumption was slow due to pressure from downstream industry, which had the operating rate at 77%, coupled with the effect from the US-China trade war. Dissolving pulp price had reduced over 30% y-o-y.

Printing and writing paper

In 2019, demand for printing and writing paper in Thailand decreased 6% y-o-y mainly due to the substitution of digital media. Moreover, demand for copy paper dropped due to the government policy of Zero Copy and Thailand 4.0 for its internal departments.

Thailand's imported printing and writing volume decreased by 30% y-o-y because of intense competition in the domestic market. This caused prices to drop to level near imported paper. Furthermore, number of copy centers also reduced.

2.3 Product or Service Procurement

A) Product Procurement Feature

- Raw Material and Suppliers

Integrated Packaging Chain

Packaging

Raw Material Type: Kraft paper for corrugated carton, Plastic resin and film for flexible packaging and rigid plastic packaging.

Source: Kraft paper from Siam Kraft Industry Co., Ltd., a subsidiary of packaging business and Plastic resin from Chemicals Business and other producers.

Obstacles: raw materials sourcing are efficiently managed. Supply is adequate and of desired quality. Price is set in accordance with market price for fairness and competitiveness.

Packaging Paper

Raw Material Type: Wastepaper, pulp, and chemicals.

Source:

- Wastepaper: 48% from domestic and 52% from import
- Pulp: from local and import
- Main chemicals such as starch, sizing agent, color, and others: from domestic and import vendors

Obstacles: Part of consumed pulp is imported which needs 30-45 days lead-time. Domestic supply of wastepaper is also limited and purchase is highly competed among players, requiring us to resort to imported wastepaper which is more expensive.

Fibrous Chain

Pulp

Raw Material Type: Eucalyptus logs and chips.

Source: Eucalyptus logs and chips bought from open market and contract farmers.

Printing & writing paper and other papers such as specialty paper for industrial uses and Food service products

Raw Material Type: Bleached long fiber pulp, bleached short fiber pulp, and chemicals.

Source:

- Pulp from local and import
- Chemicals, synthetic latex, kaolin powder, calcium carbonate, and others from local and import

Obstacles: Some pulp is imported which has 30-45 days lead-time .

B) Environmental Impact

Packaging business conducts its business with awareness on the importance of enhancing energy efficiency through various means. Examples included using alternative energy, investing in energy-saving projects, and raising awareness about energy conservation among employees. The projects are as follows:

- Boilers, turbines generators and waste reject management systems project. Waste Reject is used to convert waste into fuel for boiler, which is then used for turbine generator to generate electricity for the production process.
- Coal efficiency improvement projects by installing boilers to improve combustion efficiency. The system helps minimize risk of long machine downtime. Furthermore, the system is designed to have particle dust extraction feature in order to reduce the amount of dust.
- Close loop condensate improvement project to recirculate hot water and steam back into boiler, resulting in energy cost reduction.

Streamlined the manufacturing process to minimize water consumption through balancing water consumption in production process and installing new equipment to collect waste water for reuse. Furthermore, packaging business focuses on environmental treatment systems such as high efficiency water treatment and anaerobic water treatment to promote a better life quality of the community around the factory.

Reduced and reused waste materials by installing lime kiln to reduce lime mud, waste material from pulp production, resulting in calcium carbonate which can be used as raw material in pulp production.

2.4 Undelivered Projects on High-Valued Purchase Agreements

None

3. Risk Management

Risk Management

SCG believes that effective enterprise risk management significantly contributes to the achievement of business goals, ensure the organizations' ability to adapt to changes, enable not only to capture business opportunities and respond to changing customer needs but also cope with uncertainties and risks that have grown increasingly complex and severe. Besides, SCG continues to raise risk management awareness throughout the organization consistently and aims for better risk management efficiency of strategy formulation, operation and decisions on new investments to create value to the organizations, shareholders, and all stakeholders.

SCG Enterprise Risk Management Framework

SCG has implemented the Enterprise Risk Management Framework in alignment with international standards. The framework consists of:

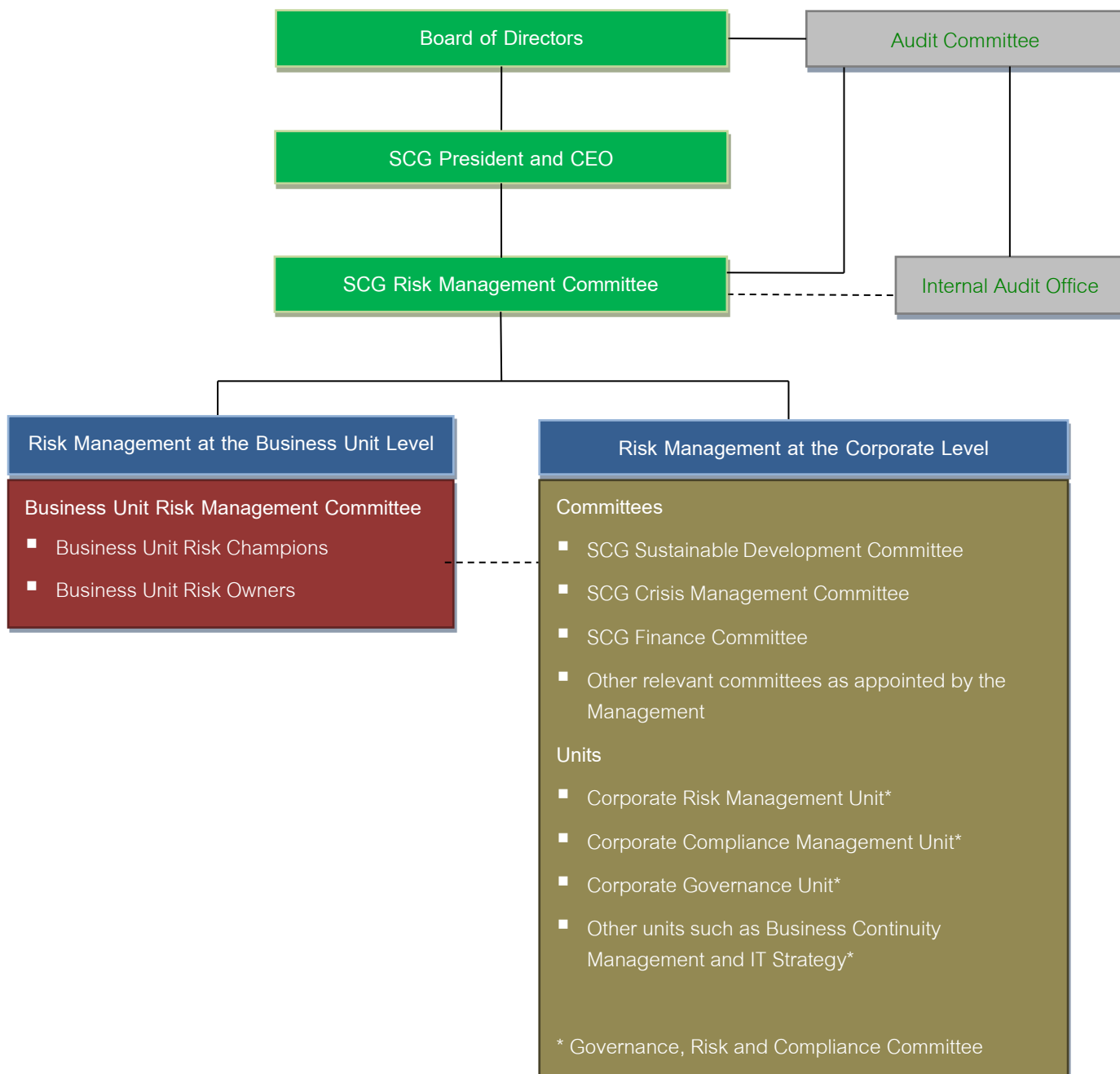
1. Strategy Establishment

SCG has established explicit objectives and risk appetite in managing risks to ensure consistent risk management practice across the organization.

2. SCG Risk Management Structure and Responsibilities

The organization structure of SCG's risk management is illustrated below:

Enterprise Risk Management Organizational Structure



— Reporting line

--- Coordination and information exchange

The Board of Directors and the Audit Committee

The Audit Committee, on behalf of the Board of Directors, establishes risk management policies and oversees the risk management process and practice of SCG. The Audit Committee also evaluates the risk management system to ensure efficiency, effectiveness, and compliance with established guidelines.

Internal Audit Office

SCG Internal Audit is responsible for conducting an audit of the first line (operating units) and the second line (management level, risk management and compliance, and other supporting functions) to provide assurance on the efficiency and effectiveness of risk management. Internal Audit Office also reports the outcomes to the Audit Committee as well as provides consultation and communicates the Audit Committee's opinions and recommendations to the first line and functions that are being audited for improvement.

SCG Risk Management Committee

SCG Risk Management Committee consists of the SCG President and CEO who serves as the Committee Chairman, the President and Vice President of each business unit. SCG Risk Management Committee has the following core responsibilities:

1. Determine risk management structure and assign accountabilities for risk management
2. Consider and approve risk management policies, strategies, framework, and plans
3. Review and monitor the SCG risk profile

3. Risk Management Process

SCG risk management framework is applied in three primary areas: medium and long-term strategic risk management, investment project risk management, and operational risk management. The risk management process for the above areas, documented in the "SCG Risk Management Manual," comprises 1) Risk/Opportunity Identification, 2) Risk Assessment, 3) Risk Response (including defining the Key Risk Indicators and Key Performance Indicators, which are the leading and lagging indicators, in order to anticipate risk events and to manage risk levels to be in line with the targets), 4) Risk Reporting to the Business Unit Risk Management Committee and SCG Risk Management Committee, respectively. Then, the reports are presented to the Audit Committee, on a quarterly basis.

4. Building a Corporate Risk Culture

SCG recognizes that risk culture is a critical component of risk management. SCG has, therefore, assigned top executives to communicate the significance of risk management (tone at the top) and be role models in risk management. This includes establishing practical guidelines on the common risk language, risk appetite, common risk assessment systems, and accountability of each risk owner. Moreover, SCG has encouraged each company to include risk management as part of the agenda in major meetings. Apart from that, risk management was designated as a component of training and development programs for directors, top executives and SCG employees. SCG has also encouraged

experience sharing across departments and companies to improve risk management practices through lessons learned. In addition, learning materials in digital format was developed to increase risk awareness and coverage for SCG employees from the commencement of employment. SCG has also continuously communicated the objectives and benefits of GRC, with the collaboration of the Corporate Governance Unit, Risk Management Unit, and Compliance Management Unit, to foster a better understanding of Integrated GRC concept and its importance to all SCG employees.

Key Risks, Business Opportunities, and Risk Management Strategies

In 2019, SCG assessed and mitigated the significant risks in alignment with material sustainability issues as described below.

Safety, Health, and Environment Risk

1. Safety and Health Risks

Overseas operations in countries where working environment, safety and health standards are not the major concerns and the expansion of logistic and transportation business domestically and overseas may incur workplace, transportation, and road safety risks, which may affect SCG's employees, business partners, communities, and society.

- Developed SCG Safety Framework and a safety performance assessment program as guidelines to elevate the occupational health and safety standards of every company under SCG in Thailand and overseas.
- Extends contractor safety management to business partners and encouraged them to put in place an occupational health and safety system. The Company's safety management practices have also been applied and expanded to community and societal levels.
- Enforced "9 Life-Saving Rules" to all employees and business partners to promote operational and road safety. Safety awareness is constantly promoted and disciplinary actions are also imposed on violators to induce behavioral change and promote safety culture.
- Encourages top executives and supervisors on being a safety role model and prescribes performance assessment on operational and transportation safety for employees at management level.
- Introduced GPS technology to monitor SCG Logistics Management drivers' behavior. The system is also connected to the Logistic Command Center, which is staffed around the clock, to alert drivers, for instance, when they exceed speed limits, park on road shoulders, or have been driving for over four consecutive hours.
- Developed the Good Transportation Safety Standard and the Road Safety Corporate Standard. These standards are regularly communicated all employees to elevate the transportation and road safety practice and to reduce accident cases of domestic and overseas companies.

2. Climate Change and Environmental Risk

The climate emergency has triggered a series of natural disasters, such as droughts, wildfires, landslides, and flash floods, in many areas across the world. At the same time, stakeholders and investors have shown higher demand and expectations on private sector regarding environmental, social, and governance (ESG) consciousness in its business management practices as well as the disclosure of risks associated with climate change. These challenges could affect the continuity of business operations and the organization's reputation as well as the increased costs and compensatory damages.

- Established plan to decrease greenhouse gas emissions by 28% by 2030 compared to the amount of 2007, in line with the Paris Agreement which aims to keep the rise in the global average temperature under 2 degrees Celsius. Moreover, SCG aims to eventually limit the temperature increase to under 1.5 degrees Celsius.
- Developed action plan for greenhouse gas emission reduction, which includes relevant compliance processes, strategy formulation, risk management, and goal and indicator establishment in accordance with TCFD (Task Force on Climate-related Financial Disclosures) framework.
- Increases usage of alternative fuels and renewable energy, such as solar energy and biofuels, with a focus on cutting emissions by launching the Waste Heat Power Generation Project and specific thermal and electrical energy consumption project.
- Develops Eco-friendly products, such as hydraulic cement which is a low carbon products that has properties comparable to Type 1 Portland Cement but emits less carbon dioxide, a floating solar farm consisting of buoys which allow solar panels to be installed on different water surfaces, and SCG Solar Roof Solutions to cater to customer needs related to rooftop solar energy.
- Joined the Natural Climate Solution Project to push for an increase of natural areas, which help absorb greenhouse gases.
- Promotes activities that help mitigate global warming, such as mangroves reforestation to increase carbon capture and reduce greenhouse gas emissions. This includes fostering awareness and habits of resource efficiency in youths.

Compliance Risk

3. Compliance Risks from Changes in Laws & Regulations

Risks from noncompliance or partial compliance caused by changes in laws and regulations could negatively affect the organization's reputation and result in significant penalties and fines or loss of business opportunities.

- Established SCG compliance policy and communicated to all SCG employees.
- Closely monitors and reports changes in government policies as well as laws and regulations in the countries where SCG operates. Added to this is the fostering of networks

with government and the private sector in Thailand and overseas to ensure that operations remain in strict compliance with relevant laws and regulations.

- Regularly revises SCG Code of Conduct to align with updated laws and regulations and administer the “Ethics e-Testing,” based on SCG 4 Core Values, Anti-Corruption Policy, Human right Policy, Compliance Policy, Anti-trust Policy, Insider trading Policy, and Information disclosure Policy.
- Communicates risk management and control practices in accordance with the “Three Lines of Defense” concept to SCG employees at all levels to prevent noncompliance.
- Encourages SCG employees to respect the right to privacy of customers, stakeholders, other employees, and other individuals. SCG has also developed relevant systems, steps, and guidelines in preparation for compliance with Personal Data Protection Law to ensure uniform practices.

Reputation Risk

4. Reputation Risks from Eco-consciousness Trend

As consumers grow more conscious of the impact of global warming and show greater demand for eco-friendly products and services, business owners are required to adjust their business operations and develop products and services that answer these needs. Fail to adapt to this shift in customer needs in an appropriately and timely fashion, long-term competitiveness and reputation may be negatively affected.

- Lead the charge in advocating businesses to adopt the Circular Economy principles and collaborate with public and private sectors, communities, and other relevant agencies. An example is Thailand SD Symposium, which has been held for 10 consecutive years to promote and communicate the principles of sustainable development and circularity to all sectors and the general public in an effort to foster a better understanding, which will enable them to put these principles to practice in tangible ways.
- Implemented The Bang Sue Model at SCG Headquarters as a model waste management program to embed a consciousness of the circular economy principles and the SCG Circular Way within employees through promoting and cultivating correct behavior of sorting wastes among SCG employees.
- Develops new products, services, and solutions based on the principle of circular economy. (More details are provided under the “Emerging Risks” Section.)

Hazard Risk

5. Geopolitical Risks

Interstate conflicts have grown more severe, resulting in uncertainty in the global economy and business operations in countries besieged by these conflicts. This could potentially impact the safety of SCG’s employees and its business continuity.

- Closely monitors situations and builds a network of geopolitical experts locally and overseas to obtain up-to-date information in order to timely mitigate risks and review business continuity plans.
- Conducts scenario analysis to identify and assess likelihood and impacts that could impact SCG's operations and prepare response plans accordingly.
- The Business Continuity Management (BCM) Units at corporate and business unit levels are responsible for identifying, assessing and monitoring relevant situations as well as notifying those who might be impacted. This is to ensure they can timely make necessary preparations in accordance with business continuity plans.

6. Drought

In the past year, the accumulated rainfall was lower than average, while the demand for water appeared to be on the rise in anticipation of industrial and investment expansion in areas where SCG operates, such as the Eastern Economic Corridor (EEC), leading to risks of water shortages, which could affect SCG's ability to deliver products to customers and thus tarnish company's image.

- Established Water Management policies, goals, and strategies to reduce reliance on external water sources. Also, the company has formed a working team responsible for developing water management plan and keeping track of their implementation.
- Adheres strictly to water management policy by minimizing water consumption (Reduce), treating and reusing wastewater (Reuse/Recycle), and replenishing its water sources (Replenish) in the production process in its plants.
- Collaborates with government agencies, such as joining the Water War Room for the eastern region to manage water resources with consideration to risks that may arise and push water storage expansion projects to completion in a timely manner.
- Organizes socially and environmentally responsible activities such as carrying out the Conserving Water from Mountain to the Mighty River Project in alignment with the royal initiatives, with a focus on promoting the participation of local communities to ensure appropriate water management in each area.

Production Cost Risk

7. Fluctuation in Energy and Major Raw Material Prices Risk

The volatility of global crude oil price from U.S.-China trade war affecting economic growth and oil demand, has resulted in the fluctuation of energy and commodity prices such as naphtha and fuel oil.

- Appointed the Commodity Hedging Committee in the Chemicals Business to deploy appropriate risk management strategies, such as the use of hedging instruments to reduce the fluctuation of commodity prices and maintain competitive costs as well as inventory management.
- Applies the Integrated Business Excellence (IBE) system to enhance production efficiency and integrate plan throughout the value chain.

- Develops high value-added (HVA) products and services capable of increasing sales and profits to reduce the risk of fluctuating raw material prices.
- Improves manufacturing process to accommodate a greater range of raw materials, which can help reduce raw material costs.

Process Risk

8. Human Resources Management and Capability Risks

SCG businesses expansion in Thailand and overseas as well as a shift in business model have resulted in an increasingly diverse range of employees. Therefore, SCG has adjusted its human resources management strategies and made efforts to quickly enhance the capabilities of human resources to ensure that their knowledge and skills are in alignment with business strategies.

- Develops overseas employees' capability with various Flagship Program, such as the Business Concept Development (BCD) course and professional courses on human resources management, safety, environment, marketing, and sales. In addition, learning opportunity has been provided to SCG's international employees who are key talents to attend Flagship Program, such as Management Development Program (MDP) and Management Acceleration Program (MAP), in Thailand.
- Prepares human resources for change in business landscape by adjusting employee recruitment practice, increasing the proportion of mid-career recruits with experience and expertise in digital-related areas, retail, and logistics to accommodate SCG's future businesses.

Business Environment Risk

9. Foreign Exchange Rates Fluctuation Risks

In 2019, the Thai baht continued to appreciate as a result of Thailand's massive current account surplus, for which the Thai baht was considered a safe asset in Asia amid the volatile economic climate, possibility of a severe economic slowdown, risk arising from the U.S.-China trade war, and the uncertainty surrounding Brexit. For 2020, the Thai baht is projected to fluctuate as these global risks will persist and will be compounded by domestic factors, such as an economic slump and revenues from tourism.

- SCG's Financial Committee considers using financial instruments to hedge foreign exchange rate exposure when appropriate. This includes matching revenues and expenses in foreign currency (Natural Hedges), making agreements with trading partners using local currencies, and considering foreign exchange hedging for investment projects at an appropriate level.

10. Risks from Global Economic Slowdown

The global economy is likely to experience a slowdown due to various factors, such as the Chinese economic downturn, which might grow more severe than expected; the prolonged U.S.-China conflict, which is still shrouded in uncertainty; the ongoing trade and technology war with far-reaching impact, as well as the uncertainty surrounding Brexit, which affects the overall

economy of the European Union and the global financial market. However, it has also been forecasted that the countries in Southeast Asia where SCG operates, namely Vietnam, Cambodia, and Thailand, will benefit from the situation and see a move of investments towards them as a result of a shift in the global production chain. This will potentially cause the economies of these countries to expand and spur the demand for SCG's products and services. Therefore, SCG has adjusted its strategic plans in preparation for business opportunities as well as management strategies for risks related to these factors.

- Develops high value-added (HVA) products and services as well as product designs in accordance with the circular economy principles. SCG has also fostered networks of innovation, such as a collaborative program with the Chinese Academy of Sciences for product and service development and exchange of knowledge and technology in five main areas, namely smart cities, artificial intelligence and robotics, high value chemicals, new energy businesses, and environment and sustainable development.
- Implemented digital technology to enhance operational efficiency and competitive capability. For instance, blockchain has been adopted in procurement with external suppliers, while robotic process automation (RPA) has been deployed to reduce errors and the time required for repetitive tasks. In addition, data analytics have been used to assess prices and place oil orders to manage raw material costs.
- Enhances the growth potential of the Packaging Business across Southeast Asia, both in terms of production bases and marketing, to accommodate the increased consumption rate and purchasing power.
- Expedites key investment projects to achieve growth as planned and focuses on the efficient management of company's working capital.

Emerging Risks

1. Risks from Digital Technology Transformation

The rapid technological transformation has played an increasingly vital role in people's everyday life and business operations. For example, consumers' easy access to information through digital media, digital marketing, doing online business, and logistics could pose risks and have impact on market conditions, consumer behavior in making buying decisions for products and services, as well as higher business competition. The transformation could also lead to a change in business models and operations costs. Risks from digital technology transformation may affect SCG businesses as follows:

- Impact on productions, business model, and SCG's conventional distribution channels. For instance, instead of buying building and construction materials from traditional distributor outlets, more customers are turning to purchasing from modern building and construction stores or via online channels.
- More competitors driven by digital technology from other industries due to less entry barriers such as owners of online building and construction distribution channels.

- SCG needs to adapt to digital transformation trend in a timely manner to avoid losing its competitiveness as well as revenue.

Digital technology, however, opens up opportunities to create new value-added business for the organization. Therefore, SCG closely monitors and analyzes the trends in digital technology transformation to collect information for use in developing work processes and streamlining business strategy to enhance competitiveness. The efforts encompass the followings:

- Adopted the Active Omni-Channel retailing to provide home building customers with a unified experience across online and offline channels, making it more convenient for customers to access to SCG products and services, as well as to serve lifestyle of younger generations who embrace digital life, preferring to browse and purchase products or services via both <http://scghome.com> and SCG HOME SOLUTION physical stores. Information on customer purchases and preferences can aid SCG to improve offerings to customers.
- Differentiated the logistics business through order fulfillment, which is defined as the steps involved in inventory management, packaging, and delivering orders to end customers to allow online sellers to have more time to focus on managing sales strategies.
- Prepares employees to acquire skill sets necessary for the rapidly changing technology and new business approaches. For example, the establishment of a startup within the organization through the “Hatch-Walk-Fly” project, which allows employees to develop skills as a startup entrepreneur and expands to build new businesses for SCG.
- Employs automation technology and robots in the production processes to create production cost advantage and enhance efficiency in business operations.
- Embraces the Open Innovation concept such as searching for technologies from startups around the globe to better meet customer needs.
- In 2019, the Cement-Building Materials Business established the Digital Office with an objective to build digital capabilities and increase CBM competitiveness in today’s digital world. These capabilities will enable the Company to develop and provide full range of innovative and appealing products and services to meet customer needs.

2. Risk from Customers’ Behavior Change due to Circular Economy Trend

Issues related to climate change, resource scarcity, and environmental issues, including plastic wastes in oceans, have garnered significant attention worldwide, causing a spike in global sensitive to plastic consumption. Additionally, governments in various countries have started to enforce laws in banning plastic bags, as well as raising plastic-related tariff to plastic producers. Accordingly, consumers are becoming more mindful about environmental issues, particularly plastic waste management, which could cause their behaviors to shift in the next three to five years. For instance, consumers have begun to prefer products and services that are eco-friendly, resource efficiency as well as looked for products and services from manufacturers who minimize resource consumption or use recycled materials in their productions. Both public and private sectors are also stepping up efforts from linear to circular economy, which present significant

opportunities for SCG. However, these changes could also disrupt existing business models because products made from plastics are perceived as one of the causes to environmental pollutions, potentially resulting in decreases in revenues of existing products, such as single-use plastics, and increases in production costs, expenditures on research and development activities, and tariffs related to environmental issues, as well as impact on the Company's reputation.

To address these issues, SCG has begun adopting the circular economy principles in all stages of the value chain such as strategy formulation, products and services design and development, supply chain management, and production processes by shifting from the "Take-Make-Dispose" linear supply chains that produce disposable products to the "Make-Use-Return" circular supply chains that produce ongoing services. The Company has also been actively promoting awareness and understanding about waste management. The key goals are to protect environment, societies and communities for future generations, as well as to sustainably increase our competitiveness and growth in a long run. Examples of key collective efforts are as follows:

- Established plans to curb the amount of single-use plastic sold and produced in 2025 to 9% by the Chemicals Business, as well as to increase production allocation of recyclable plastic packaging to 100% by 2025 for the Packaging Business
- Adopted the Circular Economy principles in operations following the 3 strategies:
 - 1) Reduce and Durable: Reduces resource use in the product design and production processes for long life use of products such as designing Micro Flute corrugated packaging, which requires less paper, while maintains the same product strength and lowers overall logistic costs for customers.
 - 2) Upgrade and Replace: Develops innovation to replace existing products and raw materials with new ones that offer higher efficiency while minimizing resource usage or making them recycle-friendly such as developing new materials that eliminate waste generation such as modular toilet, precast wall, cut-to-size autoclaved aerated concrete, and the development of plastic resins used as automotive-components which is lighter in weight yet provides strength and energy-saving benefits.
 - 3) Reuse and recycle: Enhances recyclability or develops products with higher proportion of recycled materials in the production, for example, developing plastic formulation that allows a mixture of higher proportion of recycled plastics by leveraging the SMX Technology. This innovation can enhance recycled plastic properties which now makes up 30% of plastic resin materials used in the manufacturing process.
- Forms partnerships with trading partners and alliances to actively manage and resolve plastic waste issues. In 2019, SCG partnered with Dow Thailand Group to develop solutions related to recycled plastic by recycling plastic waste to other benefits with an objective to minimize plastic waste leakage to the environment. Moreover, SCG started developing innovative products related to Post-Consumer Recycle Resin (PCR) such as collaborating

with Bangchak Public Company Limited for Greenovative Lube Packaging to develop a lubricant packaging recycling scheme.

- Collaborated with government agencies and private companies to promote and implement business operations that are in line with the Circular Economy principles. For example, collaborating with Industrial Estate Authority of Thailand to establish the “Eco World Class with Circular Economy Concept” Project with an objective to eliminate industrial waste by building industrial waste power plants to convert garbage and industrial waste into fuel for power generation with a closed system to control pollutions and waste in accordance with global standards. In addition, SCG also signed the Memorandum of Understanding with Amata Corporate Public Company Limited to develop the Yangon AMATA Smart and ECO City in Myanmar, with SCG focusing on developing building materials and related solutions for modern constructions that are environmentally friendly in accordance with the Circular Economy principles.

3. Risk from a changing business landscapes

Major shifts in the competitive landscape of industries that SCG operates are under way, and these upcoming structural shifts present a number of challenges and opportunities for the company to manage and capture, potentially resulting in changes in SCG strategies and operations.

Chemicals Business: Major global oil producers joining the petrochemical industry could cause naphtha prices to fluctuate in the future. Moreover, the self-reliant policy in China could increase supply of petrochemicals products to meet increasing domestic demands, thereby potentially leading an oversupply of petrochemical products in the market.

Packaging Business: Economic expansion, demographic transition, and rapid e-commerce penetration in Southeast Asia have moved sellers and manufacturers in the market to demand more of packaging that is customized and innovative to add values to their products, improve corporate image and enhance experience for their customers. At the same time, consumers are also becoming more environmentally conscious and increasingly choosing eco-friendly products.

Cement-Building Materials Business: Shift in the construction industry as well as consumers' lifestyles and needs result in higher demand for convenience and a comprehensive range of building materials-related products and services from designing, constructing to delivering. Customers increasingly look for products and services that can eliminate inefficiencies and problems that could arise during the construction process such as inaccurate design selection, poor collaboration and communication, and breach of contracts by contractors.

SCG strives to actively transform and adapt to these readjustments to capture opportunities, as well as to mitigate impacts that the Company could face within three to five years. Potential impacts could include higher costs of productions and provisions of services from possible competitive disruption, decrease of revenues and loss of competitive advantage if companies could not appropriately and timely adapt business strategies and operations. Key mitigation strategies include the followings:

- **Chemicals Business:** Extensively analyzes market demand and collaborates with product owners to develop and innovate high value-added products and services to accurately and timely offer solutions that cater to the need of their customers. Improving facilities to increase cracker feedstock flexibility is also essential for the business to remain cost competitive. Moreover, SCG continuously deploys advanced technologies throughout the value chain, including the production process to increase competitive advantage.
- **Packaging Business:** Becomes a fully integrated packaging chain solution provider in Southeast Asia through development of various innovative products and services as well as efforts on designing the products to address customers' various needs throughout the entire supply chain. Solutions to meet special needs of customers include design and printing solutions, small lot solutions, convenience solutions, smart and functional solutions, E-commerce solutions, products display and promotion solutions, and solutions for providing products and services from environmentally friendly and cost-effective production process.
- **Cement-Building Materials Business:** Enhances business operations to provide customers with a better living quality through developing various innovative products, services and solutions to address customer needs such as providing construction solution and living solution and deploying advanced technologies to be a reliable partner for customers. For instance, the Building Information Modeling (BIM) technology allows projects to be built virtually before they are constructed physically, eliminating many of the inefficiencies that arise during the construction process and providing greater level of assurance for cost and scheduling control. Additionally, the establishment of the CPAC Solution Center provides a place for knowledge sharing, as well as provision of advices and solutions for contractors and related parties in the construction business. Based on the Open Innovation concept, CPAC utilizes its comprehensive database through innovations and technologies to connect partners and industry experts in the construction business to raise the quality and working standard and to address customers' and project owners' requirements, including construction quality and cost control.

4. Assets Used in Operations

Total Assets

Total assets of The SCG as at 31 December 2019 were Baht 634,733 million of which 26 percent of them are current assets, comprising of cash and cash equivalents, short-term investment, trade and other current receivables, and inventories. The rest (74 percent) are investments, property, plant and equipment.

Most assets shown in the financial statements of the Company and its subsidiaries were belonged to the Company and its subsidiaries.

Total assets can be classified according to main business units as follows:

	<u>2019</u>	<u>2018</u>	
Cement-Building Materials Business	211,573	218,316	Million Baht
Chemicals Business	230,543	213,263	Million Baht
Packaging Business	139,513	93,246	Million Baht
Other	307,424	312,828	Million Baht

From the consolidated financial statements as at 31 December 2019, SCG's property, plant and equipment have carrying values of Baht 305,986 million, which are 48 percent of total assets.

Property, Plant and Equipment - Net

(in million Baht)

Business Unit	Land		Building		Machinery and others		Total	
	31 Dec 19	31 Dec 18	31 Dec 19	31 Dec 18	31 Dec 19	31 Dec 18	31 Dec 19	31 Dec 18
Cement-Building Materials Bussiness	16,680	16,868	23,938	25,010	65,197	67,707	105,815	109,585
Chemicals Bussiness	2,681	2,689	5,632	5,585	107,200	69,181	115,513	77,455
Packaging Bussiness	6,660	3,132	9,468	8,352	66,736	46,895	82,864	58,379
Other	180	195	1,579	1,720	898	1,031	2,657	2,946
Consolidated SCG	25,286	21,970	40,414	40,448	240,286	185,048	305,986	247,466

Remark: Figures in financial statements are classified according to business unit before intersegment elimination.

Intangible Assets

- Patent

At the end of 2019, SCG has 749 valid patents comprising 283 invention patents, 109 petty patents and 357 design patents. The number of patents owned by the Siam Cement PLC., Chemicals Business, Packaging Business, Cement-Building Materials Business and Chemicals Business together with Cement-Building Materials Business and Packaging Business together with Cement-Building Materials Business are 8 patents, 338 patents, 68 patents, 322 patents, 12 patents, and 1 patents consecutively. List of valid patents owned by companies and subsidiaries are listed below:

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
<u>The Siam Cement PLC.</u>								
1	Petty Patent 11748	Jul 22, 2016	The Siam Cement PLC.	1403000254	Mar 21, 2014	A process for preparing activated sludge by hydrothermal treatment	-	Mar 20, 2024
2	71209	Aug 22, 2019	The Siam Cement PLC.	1502000122	Jan 14, 2015	-	Design on packaging box	Jan 13, 2025
3	ES2690073 (Spain)	Jul 25, 2018	The Siam Cement PLC.	15001396.9	Apr 8, 2015	Catalyst for 1,3-Butadiene Production from Ethanol	-	Apr 7, 2035
4	DE602015013 848.1 (Germany)	Jul 25, 2018	The Siam Cement PLC.	15001396.9	Apr 8, 2015	Catalyst for 1,3-Butadiene Production from Ethanol	-	Apr 7, 2035
5	3090801 (Great Britain)	Jul 25, 2018	The Siam Cement PLC.	15001396.9	Apr 8, 2015	Catalyst for 1,3-Butadiene Production from Ethanol	-	Apr 7, 2035

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
6	3090801 (Italy)	Jul 25, 2018	The Siam Cement PLC.	15001396.9	Apr 8, 2015	Catalyst for 1,3-Butadiene Production from Ethanol	-	Apr 7, 2035
7	3090801 (France)	Jul 25, 2018	The Siam Cement PLC.	15001396.9	Apr 8, 2015	Catalyst for 1,3-Butadiene Production from Ethanol	-	Apr 7, 2035
8	10-2018-7026734 (Korea)	Jul 25, 2019	The Siam Cement PLC.	102004111	Feb 23, 2017	Antimicrobial benzoic acid dental gypsum composition enhanced with addition of low concentration of IPBC	-	Feb 22, 2037
Chemicals Business								
9	47452	Dec 17, 2015	SCG Chemicals Co., Ltd.	1102002684	Sep 6, 2011	-	Shelter	Sep 5, 2021
10	51321	Sep 16, 2016	SCG Chemicals Co., Ltd.	1202003037	Nov 20, 2012	-	Container	Nov 19, 2022
11	58763	Nov 3, 2017	SCG Chemicals Co., Ltd.	1502003702	Oct 27, 2015	-	Polycast	Oct 26, 2025
12	58764	Nov 3, 2017	SCG Chemicals Co., Ltd.	1502003704	Oct 27, 2015	-	Polycast	Oct 26, 2025
13	58765	Nov 3, 2017	SCG Chemicals Co., Ltd.	1502003706	Oct 27, 2015	-	Polycast	Oct 26, 2025
14	58926	Nov 14, 2017	SCG Chemicals Co., Ltd.	1502003705	Oct 27, 2015	-	Polycast	Oct 26, 2025
15	59804	Jan 5, 2018	SCG Chemicals Co., Ltd.	1502003703	Oct 27, 2015	-	Polycast	Oct 26, 2025
16	65437	Oct 9, 2018	SCG Chemicals Co., Ltd.	1602000062	Jan 8, 2016	-	Elderly tableware	Jan 7, 2026
17	65438	Oct 9, 2018	SCG Chemicals Co., Ltd.	1602000063	Jan 8, 2016	-	Elderly tableware	Jan 7, 2026
18	65439	Oct 9, 2018	SCG Chemicals Co., Ltd.	1602000064	Jan 8, 2016	-	Elderly tableware	Jan 7, 2026
19	65440	Oct 9, 2018	SCG Chemicals Co., Ltd.	1602000065	Jan 8, 2016	-	Elderly tableware	Jan 7, 2026



No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
20	65435	Oct 9, 2018	SCG Chemicals Co., Ltd.	1602000066	Jan 8, 2016	-	Elderly tableware	Jan 7, 2026
21	65436	Oct 9, 2018	SCG Chemicals Co., Ltd.	1602000067	Jan 8, 2016	-	Elderly tableware	Jan 7, 2026
22	70032	May 29, 2019	SCG Chemicals Co., Ltd.	1702003384	Sep 5, 2017	-	Nut	Sep 4, 2027
23	70375	Jun 20, 2019	SCG Chemicals Co., Ltd.	1702003383	Sep 5, 2017	-	Pathway	Sep 3, 2027
24	70373	Jun 20, 2019	SCG Chemicals Co., Ltd.	1702003386	Sep 5, 2017	-	Stand	Sep 3, 2027
25	70374	Jun 20, 2019	SCG Chemicals Co., Ltd.	1702003385	Sep 5, 2017	-	Pin	Sep 3, 2027
26	30201906955Y (Singapore)	Aug 22, 2019	SCG Chemicals Co., Ltd.	30201906955Y	Aug 22, 2019	-	Nut	Aug 21, 2029
27	30201906956X (Singapore)	Aug 22, 2019	SCG Chemicals Co., Ltd.	30201906956X	Aug 22, 2019	-	Floating Connection Unit	Aug 21, 2029
28	30201906954U (Singapore)	Aug 22, 2019	SCG Chemicals Co., Ltd.	30201906954U	Aug 22, 2019	-	Bolt	Aug 21, 2029
29	30201906957V (Singapore)	Aug 22, 2019	SCG Chemicals Co., Ltd.	30201906957V	Aug 22, 2019	-	Floating Solar Panel Stand	Aug 21, 2029
30	Petty Patent 7762	Jan 16, 2013	SCG Chemicals Co., Ltd.	1103000619	Jun 21, 2011	Water container	-	Jun 20, 2021
31	Petty Patent 11924	Sep 9, 2016	SCG Chemicals Co., Ltd.	1403001033	Sep 5, 2014	Product comprising natural materials	-	Sep 4, 2024
32	Petty Patent 11942	Sep 16, 2016	SCG Chemicals Co., Ltd.	1503001818	Oct 27, 2015	Flexible ready-made splint	-	Oct 26, 2025

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
33	60106 (Iran)	Jul 22, 2009	SCG Chemicals Co., Ltd.	387091337	Dec 20, 2008	Method for preparing a catalyst component for ethylene	-	Dec 19, 2028
34	11201403491T (Singapore)	Jul 9, 2015	SCG Chemicals Co., Ltd.	11201403491T	Jun 20, 2014	Modification of layered double hydroxides	-	Dec 18, 2032 (PCT filing date Dec 18, 2012)
35	4/13336/2014 (Myanmar)	Sep 2, 2014	SCG Chemicals Co., Ltd.	4/13336/2014	Sep 2, 2014	Polymer composition and cable spacer comprising the polymer composition	-	Sep 1, 2034
36	102712853B (China)	Dec 24, 2014	SCG Chemicals Co., Ltd.	200980163165.8	Jun 25, 2012	Process for reducing the bromine index of a hydrocarbon	-	Jun 24, 2032
37	2816051B1 (Germany)	Nov 4, 2015	SCG Chemicals Co., Ltd.	13172833.9	Jun 19, 2013	Catalyst for olefin polymerization, method for its preparation and use	-	Jun 18, 2033
38	2799485 (Germany)	Mar 23, 2016	SCG Chemicals Co., Ltd.	602013005635.8	Apr 30, 2013	Polymer composition and cable spacer comprising the polymer composition	-	Apr 29, 2033
39	2799485 (France)	Mar 23, 2016	SCG Chemicals Co., Ltd.	13165931.0	Apr 30, 2013	Polymer composition and cable spacer comprising the polymer composition	-	Apr 29, 2033
40	602014002301.0 (Germany)	Jun 15, 2016	SCG Chemicals Co., Ltd.	14166673.5	Apr 30, 2014	Polymer composition for a container closure	-	Apr 29, 2034
41	2939814 (France)	Jun 15, 2016	SCG Chemicals Co., Ltd.	14166673.5	Apr 30, 2014	Polymer composition for a container closure	-	Apr 29, 2034



No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
42	502016000090465 (Italy)	Jun 15, 2016	SCG Chemicals Co., Ltd.	14166673.5	Apr 30, 2014	Polymer composition for a container closure	-	Apr 29, 2034
43	2939814 (Austria)	Jun 15, 2016	SCG Chemicals Co., Ltd.	14166673.5	Apr 30, 2014	Polymer composition for a container closure	-	Apr 29, 2034
44	2939814 (Belgium)	Jun 15, 2016	SCG Chemicals Co., Ltd.	14166673.5	Apr 30, 2014	Polymer composition for a container closure	-	Apr 29, 2034
45	9382123 (USA)	Jul 5, 2016	SCG Chemicals Co., Ltd.	14/367,437	Jun 20, 2014	Modification of layered double hydroxides	-	Dec 17, 2032 (PCT filing date Dec 18, 2012)
46	20122800702770 (China)	Sep 14, 2016	SCG Chemicals Co., Ltd.	2012800702770	Jun 20, 2014	Modification of layered double hydroxides	-	Dec 17, 2032 (PCT filing date Dec 18, 2012)
47	6034399B2 (Japan)	Nov 4, 2016	SCG Chemicals Co., Ltd.	2014-548249	Jun 20, 2014	Modification of layered double hydroxides	-	Dec 17, 2032 (PCT filing date Dec 18, 2012)
48	2786978 (Germany)	Dec 7, 2016	SCG Chemicals Co., Ltd.	602013014937.2	Apr 3, 2013	Process for converting paraffin to olefin and catalyst for use therein	-	Apr 2, 2033
49	2786978 (France)	Dec 7, 2016	SCG Chemicals Co., Ltd.	13162080.9	Apr 3, 2013	Process for converting paraffin to olefin and catalyst for use therein	-	Apr 2, 2033
50	2786978 (Netherland)	Dec 7, 2016	SCG Chemicals Co., Ltd.	13162080.9	Apr 3, 2013	Process for converting paraffin to olefin and catalyst for use therein	-	Apr 2, 2033

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
51	272518 (India)	Apr 5, 2016	SCG Chemicals Co., Ltd.	2658/MUM/2008	Dec 22, 2008	Method for preparing a catalyst component for ethylene	-	Dec 21, 2028
52	11201500990X (Singapore)	Mar 20, 2017	SCG Chemicals Co., Ltd.	11201500990X	Feb 9, 2015	Catalyst systems	-	Sep 26, 2033 (PCT filing date Sep 27, 2013)
53	104661744B (China)	Jun 9, 2017	SCG Chemicals Co., Ltd.	2013800494359	Mar 23, 2015	Catalyst systems	-	Sep 26, 2033 (PCT filing date Sep 27, 2013)
54	9,765,264B2 (USA)	Sep 19, 2017	SCG Chemicals Co., Ltd.	13/518,751	Jun 22, 2012	Process for reducing the bromine index of a hydrocarbon	-	Jun 21, 2032
55	I609904 (Taiwan)	Jan 1, 2018	SCG Chemicals Co., Ltd.	105120175	Jun 27, 2016	Plasticizer composition	-	Jun 26, 2036
56	I620709 (Taiwan)	Apr 11, 2018	SCG Chemicals Co., Ltd.	102134589	Sep 25, 2013	Modification of layered double hydroxides	-	Sep 26, 2033 (PCT filing date Sep 27, 2013)
57	11201500993U (Singapore)	Jun 6, 2018	SCG Chemicals Co., Ltd.	11201500993U	Feb 9, 2015	Modification of layered double hydroxides	-	Sep 26, 2033 (PCT filing date Sep 27, 2013)
58	10,065,172 (USA)	Sep 4, 2018	SCG Chemicals Co., Ltd.	14/432,019	Mar 27, 2015	Modification of layered double hydroxides	-	Sep 26, 2033 (PCT filing date Sep 27, 2013)



No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
59	6360832 (Japan)	Jun 29, 2018	SCG Chemicals Co., Ltd.	2015-534439	Mar 27, 2015	Modification of layered double hydroxides	-	Sep 26, 2033 (PCT filing date Sep 27, 2013)
60	I639468 (Taiwan)	Nov 1, 2018	SCG Chemicals Co., Ltd.	104125214	Aug 4, 2015	Stabilized rhenium-based heterogeneous catalyst and use thereof	-	Aug 3, 2035
61	2014800186210 (China)	Mar 16, 2018	SCG Chemicals Co., Ltd.	2014800186210	Sep 25, 2015	Process for converting paraffin to olefin and catalyst for use therein	-	Mar 27, 2034 (PCT filing date Mar 28, 2014)
62	6289607 (Japan)	Feb 16, 2018	SCG Chemicals Co., Ltd.	2016-506299	Oct 2, 2015	Process for converting paraffin to olefin and catalyst for use therein	-	Mar 27, 2034 (PCT filing date Mar 28, 2014)
63	6353527 (Japan)	Jun 15, 2018	SCG Chemicals Co., Ltd.	2016-520342	Dec 4, 2015	Catalyst for olefin polymerization, method for its preparation and use thereof	-	Dec 3, 2035
64	10,040,695B2 (USA)	Aug 7, 2018	SCG Chemicals Co., Ltd.	15/129,137	Sep 26, 2016	Ultra high surface area layered double hydroxides	-	Mar 23, 2035 (PCT filing date Mar 25, 2015)
65	2015243328 (Australia)	Nov 8, 2018	SCG Chemicals Co., Ltd.	2015243328	Sep 29, 2016	Lactide polymerisation	-	Apr 6, 2035 (PCT filing date Apr 8, 2015)

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
66	9,884,793 (USA)	Feb 6, 2018	SCG Chemicals Co., Ltd.	15/310,812	Nov 14, 2016	Oligomerisation of ethylene	-	May 11, 2035 (PCT filing date May 13, 2015)
67	9,879,100 (USA)	Jan 30, 2018	SCG Chemicals Co., Ltd.	15/310,814	Nov 14, 2016	Catalyst system for the polymerisation and/or oligomerisation of olefins and process utilizing the catalyst system	-	May 11, 2035 (PCT filing date Mar 25, 2015)
68	2993163 (Germany)	Feb 21, 2018	SCG Chemicals Co., Ltd.	602014021085.6	Sep 5, 2014	Process for the separation of ethylbenzene	-	Sep 4, 2034
69	2993163 (France)	Feb 21, 2018	SCG Chemicals Co., Ltd.	14003073.5	Sep 5, 2014	Process for the separation of ethylbenzene	-	Sep 4, 2034
70	2993163 (Netherlands)	Feb 21, 2018	SCG Chemicals Co., Ltd.	14003073.5	Sep 5, 2014	Process for the separation of ethylbenzene	-	Sep 4, 2034
71	2993163 (Italy)	Feb 21, 2018	SCG Chemicals Co., Ltd.	502018000014208	Sep 5, 2014	Process for the separation of ethylbenzene	-	Sep 4, 2034
72	3144348B1 (Germany)	Jul 25, 2018	SCG Chemicals Co., Ltd.	15185465.0	Sep 16, 2015	Non-cryogenic grindable polypropylene based compounds for rotomolding applications	-	Sep 15, 2035
73	3129389 (Netherlands)	Jun 6, 2018	SCG Chemicals Co., Ltd.	15717122.4	Sep 28, 2016	Lactide polymerisation	-	Sep 27, 2036

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
74	10,143,997 (USA)	Dec 4, 2018	SCG Chemicals Co., Ltd.	15/524,026	May 3, 2017	Stabilized rhenium-based heterogeneous catalyst and use thereof	-	Aug 3, 2035 (PCT filing date Aug 5, 2015)
75	3152218 (France)	Dec 26, 2018	SCG Chemicals Co., Ltd.	15725660.3	Dec 31, 2016	Process for Synthesis of Indenes	-	Dec 30, 2036
76	3152218 (Germany)	Dec 26, 2018	SCG Chemicals Co., Ltd.	15725660.3	Dec 31, 2016	Process for Synthesis of Indenes	-	Dec 30, 2036
77	3152218 (Netherlands)	Dec 26, 2018	SCG Chemicals Co., Ltd.	15725660.3	Dec 31, 2016	Process for Synthesis of Indenes	-	Dec 30, 2036
78	3152218 (Norway)	Dec 26, 2018	SCG Chemicals Co., Ltd.	15725660.3	Dec 31, 2016	Process for Synthesis of Indenes	-	Dec 30, 2036
79	3152218 (Great Britain)	Dec 26, 2018	SCG Chemicals Co., Ltd.	15725660.3	Dec 31, 2016	Process for Synthesis of Indenes	-	Dec 30, 2036
80	67273	Jan 4, 2019	SCG Chemicals Co., Ltd.	801001181	Mar 11, 2008	Multi layer pipe	-	Mar 10, 2028
81	I648246 (Taiwan)	Jan 21, 2019	SCG Chemicals Co., Ltd.	106117615	May 23, 2017	Process for purification of hydrocarbons	-	May 22, 2037
82	I648245 (Taiwan)	Jan 21, 2019	SCG Chemicals Co., Ltd.	106136851	Oct 26, 2017	Process for converting paraffin to olefin and catalyst for use therein	-	Oct 23, 2037

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
83	3252030 (Spain)	Jan 8, 2019	SCG Chemicals Co., Ltd.	16127039.6	May 30, 2016	Process for purification of hydrocarbons	-	May 29, 2036
84	3252030 (Italy)	Jan 8, 2019	SCG Chemicals Co., Ltd.	50201900000539 7	May 30, 2016	Process for purification of hydrocarbons	-	May 29, 2036
85	3252030 (Germany)	Jan 8, 2019	SCG Chemicals Co., Ltd.	602016006387.5	May 30, 2016	Process for purification of hydrocarbons	-	May 29, 2036
86	3252030 (France)	Jan 8, 2019	SCG Chemicals Co., Ltd.	16127039.6	May 30, 2016	Process for purification of hydrocarbons	-	May 29, 2036
87	3252030 (Netherlands)	Jan 8, 2019	SCG Chemicals Co., Ltd.	16127039.6	May 30, 2016	Process for purification of hydrocarbons	-	May 29, 2036
88	3218385 (Germany)	Jan 23, 2019	SCG Chemicals Co., Ltd.	15797165.6	Jun 9, 2017	Metallocenes and their use as polymerization catalysts	-	Jun 8, 2037
89	3218385 (France)	Jan 23, 2019	SCG Chemicals Co., Ltd.	15797165.6	Jun 9, 2017	Metallocenes and their use as polymerization catalysts	-	Jun 8, 2037
90	3218385 (Netherlands)	Jan 23, 2019	SCG Chemicals Co., Ltd.	15797165.6	Jun 9, 2017	Metallocenes and their use as polymerization catalysts	-	Jun 8, 2037
91	3218385 (Great Britain)	Jan 23, 2019	SCG Chemicals Co., Ltd.	15797165.6	Jun 9, 2017	Metallocenes and their use as polymerization catalysts	-	Jun 8, 2037
92	6475621 (Japan)	Feb 6, 2019	SCG Chemicals Co., Ltd.	2015-534438	Mar 27, 2015	Catalyst system	-	Sep 26, 2033 (PCT filing date Sep 27, 2013)

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
93	2014800351824 (China)	Feb 1, 2019	SCG Chemicals Co., Ltd.	2014800351824	Dec 18, 2015	Catalyst for olefin polymerization, method for its preparation and use thereof	-	May 19, 2034 (PCT filing date May 22, 2014)
94	11201703620V (Singapore)	Feb 25, 2019	SCG Chemicals Co., Ltd.	11201703620V	May 3, 2017	Metallocenes and their use as polymerization catalysts	-	Nov 12, 2035 (PCT filing date Nov 13, 2015)
95	3143034 (Germany)	Feb 27, 2019	SCG Chemicals Co., Ltd.	602015025355.8	Nov 9, 2016	Oligomerisation of ethylene	-	Nov 7, 2036
96	I654228 (Taiwan)	Mar 21, 2019	SCG Chemicals Co., Ltd.	106142557	Dec 5, 2017	Plasticizer composition	-	Nov 12, 2037 (PCT filing date Nov 11, 2017)
97	31942 (Eurasia)	Mar 29, 2019	SCG Chemicals Co., Ltd.	201691938	Oct 25, 2016	High surface area layered double hydroxides	-	Mar 23, 2035 (PCT filing date Mar 27, 2015)
98	69092	Mar 29, 2019	SCG Performance Chemicals Co., Ltd. and National Healthcare Systems Co., Ltd.	1602003570	Sep 16, 2016	-	Medical container	Sep 15, 2026

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
99	11201700375Q (Singapore)	Mar 25, 2019	SCG Chemicals Co., Ltd.	11201700375Q	Jan 17, 2017	Stabilized rhenium-based heterogeneous catalyst and use thereof	-	Aug 3, 2035 (PCT filing date Aug 4, 2015)
100	10,221,259 (USA)	Mar 5, 2019	SCG Chemicals Co., Ltd.	15/541,663	Jun 5, 2017	Sio2-layered double hydroxide microspheres and their use as catalyst supports in ethylene polymerisation	-	Jan 4, 2036 (PCT filing date Jan 6, 2016)
101	11201703623S (Singapore)	Apr 1, 2019	SCG Chemicals Co., Ltd.	11201703623S	May 3, 2017	Catalyst	-	Nov 12, 2035 (PCT filing date Nov 13, 2016)
102	11201705078T (Singapore)	Apr 9, 2019	SCG Chemicals Co., Ltd.	11201705078T	Jul 6, 2017	SiO2-Layered double hydroxide microspheres and methods of making them	-	Jan 4, 2036 (PCT filing date Jan 6, 2016)
103	11201710652W (Singapore)	Apr 2, 2019	SCG Chemicals Co., Ltd.	11201710652W	Dec 21, 2017	Inorganic porous framework - layered double hydroxide core-shell materials as catalyst supports in ethylene polymerisation	-	Jul 14, 2036 (PCT filing date Jul 15, 2016)

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
104	70033	May 29, 2019	SCG Performance Chemicals Co., Ltd.	1602003569	Sep 16, 2016	-	Surgical knife	May 18, 2029
105	313835 (India)	Jun 7, 2019	SCG Chemicals Co., Ltd.	201717006708	Feb 25, 2017	Process for the separation of ethylbenzene	-	Sep 3, 2035 (PCT filing date Sep 4, 2016)
106	3359585 (Netherlands)	Jul 24, 2019	SCG Chemicals Co., Ltd.	16781159.5	May 3, 2018	Use of compounds in polymerisation reactions	-	Apr 30, 2038
107	3359585 (Germany)	Jul 24, 2019	SCG Chemicals Co., Ltd.	16781159.5	May 3, 2018	Use of compounds in polymerisation reactions	-	Apr 30, 2038
108	3359585 (Spain)	Jul 24, 2019	SCG Chemicals Co., Ltd.	16781159.5	May 3, 2018	Use of compounds in polymerisation reactions	-	Apr 30, 2038
109	01580018896 (China)	Aug 2, 2019	SCG Chemicals Co., Ltd.	2015800188969	Oct 10, 2016	Lactide polymerisation	-	Apr 6, 2035 (PCT filing date Apr 8, 2015)
110	6563457 (Japan)	Aug 21, 2019	SCG Chemicals Co., Ltd.	2017-201447	Oct 18, 2017	Process for converting paraffin to olefin and catalyst for use therein	-	Mar 27, 2034 (PCT filing date Mar 28, 2014)

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111	170946A (Malaysia)	Sep 20, 2019	SCG Chemicals Co., Ltd.	2014701028	Apr 25, 2014	Polymer composition and cable spacer comprising the polymer composition	-	Apr 24, 2034
112	I670258 (Taiwan)	Sep 1, 2019	SCG Chemicals Co., Ltd.	104127863	Aug 26, 2015	Process for the separation of ethylbenzene	-	Aug 24, 2035
113	3143052 (Great Britain)	Sep 4, 2019	SCG Chemicals Co., Ltd.	15721280.4	Nov 9, 2016	Catalyst system for the polymerisation and/or oligomerisation of olefins and process utilizing the catalyst system	-	Nov 8, 2036
114	2794486 (Germany)	Sep 11, 2019	SCG Chemicals Co., Ltd.	602012063968.7	Jun 20, 2014	Modification of layered double hydroxides	-	Jun 19, 2034
115	2794486 (Great Britain)	Sep 11, 2019	SCG Chemicals Co., Ltd.	12837660.5	Jun 20, 2014	Modification of layered double hydroxides	-	Jun 19, 2034
116	2794486 (Netherlands)	Sep 11, 2019	SCG Chemicals Co., Ltd.	12837660.5	Jun 20, 2014	Modification of layered double hydroxides	-	Jun 19, 2034
117	2794486 (Czech)	Sep 11, 2019	SCG Chemicals Co., Ltd.	12837660.5	Jun 20, 2014	Modification of layered double hydroxides	-	Jun 19, 2034
118	2794486 (Italy)	Sep 11, 2019	SCG Chemicals Co., Ltd.	12837660.5	Jun 20, 2014	Modification of layered double hydroxides	-	Jun 19, 2034

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
119	2794486 (France)	Sep 11, 2019	SCG Chemicals Co., Ltd.	12837660.5	Jun 20, 2014	Modification of layered double hydroxides	-	Jun 19, 2034
120	3245258 (Czech)	Sep 11, 2019	SCG Chemicals Co., Ltd.	16700660	Jul 27, 2017	SiO ₂ -Layered double hydroxide microspheres and methods of making them	-	Jul 24, 2037
121	3245258 (Germany)	Sep 11, 2019	SCG Chemicals Co., Ltd.	16700660	Jul 27, 2017	SiO ₂ -Layered double hydroxide microspheres and methods of making them	-	Jul 24, 2037
122	3245258 (Denmark)	Sep 11, 2019	SCG Chemicals Co., Ltd.	16700660	Jul 27, 2017	SiO ₂ -Layered double hydroxide microspheres and methods of making them	-	Jul 24, 2037
123	3245258 (Spain)	Sep 11, 2019	SCG Chemicals Co., Ltd.	16700660	Jul 27, 2017	SiO ₂ -Layered double hydroxide microspheres and methods of making them	-	Jul 24, 2037
124	3245258 (France)	Sep 11, 2019	SCG Chemicals Co., Ltd.	16700660	Jul 27, 2017	SiO ₂ -Layered double hydroxide microspheres and methods of making them	-	Jul 24, 2037

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125	3245258 (Great Britain)	Sep 11, 2019	SCG Chemicals Co., Ltd.	16700660	Jul 27, 2017	SiO ₂ -Layered double hydroxide microspheres and methods of making them	-	Jul 24, 2037
126	3245258 (Italy)	Sep 11, 2019	SCG Chemicals Co., Ltd.	16700660	Jul 27, 2017	SiO ₂ -Layered double hydroxide microspheres and methods of making them	-	Jul 24, 2037
127	3245258 (Netherlands)	Sep 11, 2019	SCG Chemicals Co., Ltd.	16700660	Jul 27, 2017	SiO ₂ -Layered double hydroxide microspheres and methods of making them	-	Jul 24, 2037
128	3245258 (Poland)	Sep 11, 2019	SCG Chemicals Co., Ltd.	16700660	Jul 27, 2017	SiO ₂ -Layered double hydroxide microspheres and methods of making them	-	Jul 24, 2037
129	6596027 (Japan)	Oct 4, 2019	SCG Chemicals Co., Ltd.	2016-572311	Dec 8, 2016	Process for Synthesis of Indenes	-	May 30, 2036 (PCT filing date Jun 2, 2016)

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
130	3322738B1 (Great Britain)	Oct 16, 2019	SCG Chemicals Co., Ltd.	16750482.8	Feb 16, 2018	Inorganic porous framework - layered double hydroxide core-shell materials as catalyst supports in ethylene polymerisation	-	Feb 15, 2038
131	6600722 (Japan)	Oct 11, 2019	SCG Chemicals Co., Ltd.	2018-154420	Aug 21, 2018	Catalyst systems (Divisional Application)	-	Aug 20, 2038
132	10,457,616 (USA)	Oct 29, 2019	SMH Co., Ltd.	15/515,703	Jan 29, 2014	Catalyst and process for producing olefin	-	Jan 28, 2034
133	6616782 (Japan)	Nov 12, 2019	SCG Chemicals Co., Ltd.	559183	Mar 25, 2015	High surface area layered double hydroxides	-	Mar 24, 2035
134	10,472,304 (USA)	Nov 12, 2019	SMH Co., Ltd.	15/737,848	Jun 29, 2016	Catalyst and hydrocarbon conversion process utilizing the catalyst	-	Jun 28, 2036
135	10,479,743 (USA)	Nov 19, 2019	SCG Chemicals Co., Ltd.	15/506,363	Feb 24, 2017	Process for the separation of ethylbenzene	-	Sep 3, 2035 (PCT filing date Sep 4, 2015)
136	48910	Mar 28, 2016	SCG Chemicals Co., Ltd. and Kasetsart University	1102000372	Feb 4, 2011	-	Holder for plant growing	Feb 3, 2021

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137	68213	Feb 18, 2019	SCG Chemicals Co., Ltd. and Kasetsart University	1302000432	Feb 28, 2013	-	Floating material	Feb 27, 2023
138	Petty Patent 10718	Nov 11, 2015	SCG Chemicals Co., Ltd. and RIL 1996 Co., Ltd.	1403000584	Jun 11, 2014	Process for the sludge management using earthworms	-	Jun 10, 2024
139	Petty Patent 14173	Jul 18, 2018	SCG Chemicals Co., Ltd. and Khon Kaen University and Chiang Mai University and Prince of Songkla University	1703001899	Sep 26, 2017	Camera Drape	-	Sep 24, 2027
140	104609450B (China)	Apr 20, 2016	SCG Chemicals Co., Ltd. and Beijing University of Chemical Technology and Tech Layer Co. Ltd. and University of Oxford	2014105284565	Oct 9, 2014	Process and complete industrial installation for producing highly dispersed magnalium hydrotalcite powder bodies	-	Oct 6, 2034
141	3272821B1 (Belgium)	Aug 29, 2018	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16180302.8	Jul 20, 2016	Emulsion and use thereof for coating a textile	-	Jul 18, 2036
142	3272821B1 (Spain)	Aug 29, 2018	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16180302.8	Jul 20, 2016	Emulsion and use thereof for coating a textile	-	Jul 18, 2036
143	3272821B1 (Portugal)	Aug 29, 2018	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16180302.8	Jul 20, 2016	Emulsion and use thereof for coating a textile	-	Jul 18, 2036
144	3272821B1 (Turkey)	Aug 29, 2018	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16180302.8	Jul 20, 2016	Emulsion and use thereof for coating a textile	-	Jul 18, 2036

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
145	3272821B1 (France)	Aug 29, 2018	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16180302.8	Jul 20, 2016	Emulsion and use thereof for coating a textile	-	Jul 18, 2036
146	3272821B1 (Great Britain)	Aug 29, 2018	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16180302.8	Jul 20, 2016	Emulsion and use thereof for coating a textile	-	Jul 18, 2036
147	3272821B1 (Germany)	Aug 29, 2018	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16180302.8	Jul 20, 2016	Emulsion and use thereof for coating a textile	-	Jul 18, 2036
148	3272821B1 (Italy)	Aug 29, 2018	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16180302.8	Jul 20, 2016	Emulsion and use thereof for coating a textile	-	Jul 18, 2036
149	3293210B1 (Germany)	Mar 6, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	602016010626.4	Sep 12, 2016	Multimodal polyethylene film	-	Sep 11, 2036
150	3293210B1 (France)	Mar 6, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188335	Sep 12, 2016	Multimodal polyethylene film	-	Sep 11, 2036
151	3293210B1 (Turkey)	Mar 6, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188335	Sep 12, 2016	Multimodal polyethylene film	-	Sep 11, 2036
152	3293210B1 (Spain)	Mar 6, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188335	Sep 12, 2016	Multimodal polyethylene film	-	Sep 11, 2036
153	3293210B1 (Portugal)	Mar 6, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188335	Sep 12, 2016	Multimodal polyethylene film	-	Sep 11, 2036
154	3293210B1 (Hungary)	Mar 6, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188335	Sep 12, 2016	Multimodal polyethylene film	-	Sep 11, 2036

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155	3293210B1 (Italy)	Mar 6, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188335	Sep 12, 2016	Multimodal polyethylene film	-	Sep 11, 2036
156	3293210B1 (Great Britain)	Mar 6, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188335	Sep 12, 2016	Multimodal polyethylene film	-	Sep 11, 2036
157	3293211B1 (Germany)	Jun 26, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	602016015824.8	Sep 12, 2016	Multimodal polyethylene screw cap	-	Sep 11, 2036
158	3293211 (Great Britain)	Jun 26, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188337.6	Sep 12, 2016	Multimodal polyethylene screw cap	-	Sep 11, 2036
159	3293211 (France)	Jun 26, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188337.6	Sep 12, 2016	Multimodal polyethylene screw cap	-	Sep 11, 2036
160	3293211 (Italy)	Jun 26, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	50201900006166 8	Sep 12, 2016	Multimodal polyethylene screw cap	-	Sep 11, 2036
161	3293211 (Spain)	Jun 26, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188337.6	Sep 12, 2016	Multimodal polyethylene screw cap	-	Sep 11, 2036
162	3293211 (Turkey)	Jun 26, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	2019/13075T4	Sep 12, 2016	Multimodal polyethylene screw cap	-	Sep 11, 2036
163	3293211 (Hungary)	Jun 26, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188337.6	Sep 12, 2016	Multimodal polyethylene screw cap	-	Sep 11, 2036
164	3293211 (Portugal)	Jun 26, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188337.6	Sep 12, 2016	Multimodal polyethylene screw cap	-	Sep 11, 2036

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165	3293207 (Spain)	Aug 7, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188322.8	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
166	3293207 (Turkey)	Aug 7, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188322.8	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
167	3293207 (Hungary)	Aug 7, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188322.8	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
168	3293207 (Portugal)	Aug 7, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188322.8	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
169	3293207 (Germany)	Aug 7, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188322.8	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
170	3293207 (France)	Aug 7, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188322.8	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
171	3293207 (Italy)	Aug 7, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188322.8	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
172	3293207 (Great Britain)	Aug 7, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188322.8	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
173	3293213 (Germany)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	602016018482.6	Sep 12, 2016	Multimodal polyethylene container	-	Sep 11, 2036
174	3293213 (Spain)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188343.4	Sep 12, 2016	Multimodal polyethylene container	-	Sep 11, 2036

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
175	3293213 (Turkey)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188343.4	Sep 12, 2016	Multimodal polyethylene container	-	Sep 11, 2036
176	3293213 (Hungary)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188343.4	Sep 12, 2016	Multimodal polyethylene container	-	Sep 11, 2036
177	3293213 (Portugal)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188343.4	Sep 12, 2016	Multimodal polyethylene container	-	Sep 11, 2036
178	3293213 (France)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188343.4	Sep 12, 2016	Multimodal polyethylene container	-	Sep 11, 2036
179	3293213 (Italy)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188343.4	Sep 12, 2016	Multimodal polyethylene container	-	Sep 11, 2036
180	3293213 (Great Britain)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188343.4	Sep 12, 2016	Multimodal polyethylene container	-	Sep 11, 2036
181	3293209 (France)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188329.3	Sep 12, 2016	Multimodal polyethylene thin film	-	Sep 11, 2036
182	3293209 (Germany)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	602016018481.8	Sep 12, 2016	Multimodal polyethylene thin film	-	Sep 11, 2036
183	3293209 (Turkey)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188329.3	Sep 12, 2016	Multimodal polyethylene thin film	-	Sep 11, 2036
184	3293209 (Spain)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188329.3	Sep 12, 2016	Multimodal polyethylene thin film	-	Sep 11, 2036

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185	3293209 (Portugal)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188329.3	Sep 12, 2016	Multimodal polyethylene thin film	-	Sep 11, 2036
186	3293209 (Austria)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188329.3	Sep 12, 2016	Multimodal polyethylene thin film	-	Sep 11, 2036
187	3293209 (Hungary)	Aug 14, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188329.3	Sep 12, 2016	Multimodal polyethylene thin film	-	Sep 11, 2036
188	3293205 (Spain)	Aug 28, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188318.6	Sep 12, 2016	Reactor system for multimodal polyethylene polymerization	-	Sep 11, 2036
189	3293205 (Turkey)	Aug 28, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188318.6	Sep 12, 2016	Reactor system for multimodal polyethylene polymerization	-	Sep 11, 2036
190	3293205 (Hungary)	Aug 28, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188318.6	Sep 12, 2016	Reactor system for multimodal polyethylene polymerization	-	Sep 11, 2036
191	3293205 (Portugal)	Aug 28, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188318.6	Sep 12, 2016	Reactor system for multimodal polyethylene polymerization	-	Sep 11, 2036
192	3293205 (Austria)	Aug 28, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188318.6	Sep 12, 2016	Reactor system for multimodal polyethylene polymerization	-	Sep 11, 2036

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193	3293206 (Germany)	Oct 23, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188319.4	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
194	3293206 (Spain)	Oct 23, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188319.4	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
195	3293206 (Turkey)	Oct 23, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188319.4	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
196	3293206 (Hungary)	Oct 23, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188319.4	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
197	3293206 (Portugal)	Oct 23, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188319.4	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
198	3293206 (France)	Oct 23, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188319.4	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
199	3293206 (Italy)	Oct 23, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188319.4	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
200	3293206 (Great Britain)	Oct 23, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188319.4	Sep 12, 2016	Multimodal polyethylene pipe	-	Sep 11, 2036
201	3293214 (Great Britain)	Dec 25, 2019	SCG Chemicals Co., Ltd. and Thai Polyethylene Co., Ltd.	16188347.5	Sep 12, 2016	High performances multimodal ultra high molecular weight polyethylene	-	Sep 11, 2036

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202	2670962 (Russia)	Oct 26, 2018	SCG Chemicals Co., Ltd. and GTC Technology US, LLC	2017111206	Apr 4, 2017	Separation process for C8 aromatics mixture	-	Sep 4, 2034 (PCT filing date Sep 5, 2014)
203	2670963 (Russia)	Oct 26, 2018	SCG Chemicals Co., Ltd. and GTC Technology US, LLC	2017111207	Apr 4, 2017	Separation process for C8 aromatics mixture	-	Sep 4, 2034 (PCT filing date Sep 5, 2014)
204	I670259 (Taiwan)	Sep 1, 2019	SCG Chemicals Co., Ltd. and GTC Technology US, LLC	104127868	Aug 26, 2015	Separation process for C8 aromatics mixture	-	Aug 24, 2035
205	I675825 (Taiwan)	Nov 1, 2019	SCG Chemicals Co., Ltd. and GTC Technology US, LLC	104127865	Aug 26, 2015	Process for the enhanced separation of ethylbenzene	-	Aug 24, 2035
206	3176213B1 (Germany)	Apr 24, 2019	SCG Chemicals Co., Ltd. and Mitsui Chemicals Inc.	602015028782.7	Dec 3, 2015	Ethylene copolymer composition	-	Nov 30, 2035
207	3176213B1 (France)	Apr 24, 2019	SCG Chemicals Co., Ltd. and Mitsui Chemicals Inc.	15197727.9	Dec 3, 2015	Ethylene copolymer composition	-	Nov 30, 2035
208	3176213B1 (Great Britain)	Apr 24, 2019	SCG Chemicals Co., Ltd. and Mitsui Chemicals Inc.	15197727.9	Dec 3, 2015	Ethylene copolymer composition	-	Nov 30, 2035
209	3176213B1 (Marcedonia)	Apr 24, 2019	SCG Chemicals Co., Ltd. and Mitsui Chemicals Inc.	MK/P/2019/609	Dec 3, 2015	Ethylene copolymer composition	-	Nov 30, 2035
210	10201807201W (Singapore)	Aug 22, 2019	SCG Chemicals Co., Ltd. and INC SQUARE., CO., LTD.	10201807201W	Aug 24, 2018	Solid-Liquid separator	-	Aug 23, 2038
211	10201807199W (Singapore)	Aug 22, 2019	SCG Chemicals Co., Ltd. and INC SQUARE., CO., LTD.	10201807199W	Aug 24, 2018	Waste treatment device	-	Aug 23, 2038



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212	28126	Jun 30, 2010	Thai Polyethylene Co., Ltd.	0101003359	Aug 21, 2001	Titanium catalyst composition for ethylene polymerization and process using thereof	-	Aug 20, 2021
213	54433	Mar 27, 2017	Nawaplastic Industries Co., Ltd.	1402001181	May 15, 2014	-	Adaptor clip	May14, 2024
214	54675	Apr 19, 2017	Nawaplastic Industries Co., Ltd.	1402001180	May 15, 2014	-	Common clip	May14, 2024
215	55522	Jun 20, 2017	Nawaplastic Industries Co., Ltd.	1502000277	Jan 30, 2015	-	15°Elbow square	Jan 29, 2025
216	55523	Jun 20, 2017	Nawaplastic Industries Co., Ltd.	1502000278	Jan 30, 2015	-	30°Elbow square	Jan 29, 2025
217	55524	Jun 20, 2017	Nawaplastic Industries Co., Ltd.	1502000279	Jan 30, 2015	-	90°Elbow square	Jan 29, 2025
218	55525	Jun 20, 2017	Nawaplastic Industries Co., Ltd.	1502000280	Jan 30, 2015	-	Connect square	Jan 29, 2025
219	57200	Sep 5, 2017	Nawaplastic Industries Co., Ltd.	1402000197	Jan 31, 2014	-	Casement frame	Jan 30, 2024
220	57201	Sep 5, 2017	Nawaplastic Industries Co., Ltd.	1402000198	Jan 31, 2014	-	Sliding frame	Jan 30, 2024
221	57202	Sep 5, 2017	Nawaplastic Industries Co., Ltd.	1402000199	Jan 31, 2014	-	Casement frame and interior trim	Jan 30, 2024
222	57203	Sep 5, 2017	Nawaplastic Industries Co., Ltd.	1402000200	Jan 31, 2014	-	Casement frame with extension adaptor and interior trim	Jan 30, 2024
223	57204	Sep 5, 2017	Nawaplastic Industries Co., Ltd.	1402000201	Jan 31, 2014	-	Sliding frame with interior trim	Jan 30, 2024
224	57205	Sep 5, 2017	Nawaplastic Industries Co., Ltd.	1402000202	Jan 31, 2014	-	Sliding frame with extension adapter and interior trim	Jan 30, 2024
225	58762	Nov 3, 2017	Nawaplastic Industries Co., Ltd.	1402001179	May 15, 2014	-	Joist	May14, 2024

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226	59102	Nov 21, 2017	Nawaplastic Industries Co., Ltd.	1502000281	Jan 30, 2015	-	Adaptor for downspout	Jan 29, 2025
227	62069	Apr 20, 2018	Nawaplastic Industries Co., Ltd.	1402002514	Sep 5, 2014	-	End Cap for shading	Sep 4, 2024
228	59861	Jan 8, 2018	Nawaplastic Industries Co., Ltd.	1402002516	Sep 5, 2014	-	Shading system	Sep 4, 2024
229	59862	Jan 8, 2018	Nawaplastic Industries Co., Ltd.	1402002517	Sep 5, 2014	-	Shading Clip Line	Sep 4, 2024
230	62938	Jun 12, 2018	Nawaplastic Industries Co., Ltd.	1502000282	Jan 30, 2015	-	Hidden clip	Jan 29, 2025
231	65636	Oct 17, 2018	Nawaplastic Industries Co., Ltd.	1502002935	Aug 27, 2015	-	Corner Square Tooling	Aug 26, 2025
232	60359	Jan 30, 2018	Nawaplastic Industries Co., Ltd.	1502002937	Aug 27, 2015	-	Smart Frame with installation clip	Aug 26, 2025
233	60360	Jan 30, 2018	Nawaplastic Industries Co., Ltd.	1502002936	Aug 27, 2015	-	Smart Frame with installation clip	Aug 26, 2025
234	60356	Jan 30, 2018	Nawaplastic Industries Co., Ltd.	1502002939	Aug 27, 2015	-	Threshold System	Aug 26, 2025
235	60357	Jan 30, 2018	Nawaplastic Industries Co., Ltd.	1502002940	Aug 27, 2015	-	Threshold System	Aug 26, 2025
236	60358	Jan 30, 2018	Nawaplastic Industries Co., Ltd.	1502002938	Aug 27, 2015	-	Insect Screen with Security grill	Aug 26, 2025
237	64153	Aug 10, 2018	Nawaplastic Industries Co., Ltd.	1502003693	Oct 26, 2015	-	Door Z Lock	Oct 25, 2025
238	64154	Aug 10, 2018	Nawaplastic Industries Co., Ltd.	1502003694	Oct 26, 2015	-	Window Z Lock	Oct 25, 2025
239	64155	Aug 10, 2018	Nawaplastic Industries Co., Ltd.	1502003695	Oct 26, 2015	-	Window Z Lock	Oct 25, 2025
240	64156	Aug 10, 2018	Nawaplastic Industries Co., Ltd.	1502003696	Oct 26, 2015	-	Door Z Lock	Oct 25, 2025
241	65040	Sep 20 2018	Nawaplastic Industries Co., Ltd.	1502002941	Aug 27, 2015	-	Threshold System	Aug 26 2025
242	71388	Sep 5, 2019	Nawaplastic Industries Co., Ltd.	1502000276	Jan 30, 2015	-	Square downspout	Jan 29, 2025

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
243	71939	Oct 8, 2019	Nawaplastic Industries Co., Ltd.	1702000760	Mar 8, 2017	-	Rain Gutter	Mar 5, 2027
244	72109	Oct 18, 2019	Nawaplastic Industries Co., Ltd.	1702000466	Feb 9, 2015	-	PVC Sound Barrier	Feb 5, 2027
245	73175	Dec 13, 2019	Nawaplastic Industries Co., Ltd.	1702000465	Feb 9, 2017	-	PVC Sound Barrier	Feb 5, 2027
246	Petty Patent 9500	Feb 5, 2015	Nawaplastic Industries Co., Ltd.	1403000069	Jan 31, 2014	Frame for fast installation	-	Jan 30, 2024
247	Petty Patent 10535	Oct 9, 2015	Nawaplastic Industries Co., Ltd.	1403000468	May 15, 2014	Deck structure	-	May 14, 2024
248	Petty Patent 10795	Nov 26, 2015	Nawaplastic Industries Co., Ltd.	1403001034	Sep 5, 2014	Lathing system	-	Sep 4, 2024
249	Petty Patent 11343	Apr 4, 2016	Nawaplastic Industries Co., Ltd.	1503000102	Jan 30, 2015	Rain gutter system	-	Jan 29, 2025
250	Petty Patent 11417	Apr 25, 2016	Nawaplastic Industries Co., Ltd.	1403000501	May 23, 2014	PVC composition	-	May 22, 2024
251	Petty Patent 22015000036 (Philippines)	Jul 15, 2016	Nawaplastic Industries Co., Ltd.	22015000036	Jan 29, 2014	Frame for fast installation	-	Jan 29, 2024
252	Petty Patent 13423	Jan 5, 2018	Nawaplastic Industries Co., Ltd.	1603001707	Sep 8, 2016	Frame assembly and method of installing the same	-	Sep 7, 2026
253	Petty Patent 13891	May 28, 2018	Nawaplastic Industries Co., Ltd.	1703002412	Dec 1, 2017	PVC-Brass Fitting	-	Nov 30, 2027
254	Petty Patent KH/GUM/00003 (Cambodia)	Dec 28, 2018	Nawaplastic Industries Co., Ltd.	KH/UM/2016/00014	Sep 13, 2016	Frame assembly and method of installing the same	-	Sep 11, 2026

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
255	Petty Patent 22016000662 (Philippines)	Sep 28, 2018	Nawaplastic Industries Co., Ltd.	22016000662	Sep 8, 2016	Frame assembly and method of installing the same	-	Sep 7, 2026
256	Petty Patent 22017000288 (Philippines)	Oct 3, 2018	Nawaplastic Industries Co., Ltd.	22017000288	Aug 28, 2018	Frame assembly and method of installing the same	-	Aug 25, 2028
257	63007	Jun 15, 2018	Nawaplastic Industries Co., Ltd.	1401002667	May 15, 2014	Joist for Decking	-	May 12, 2034
258	63006	Jun 15, 2018	Nawaplastic Industries Co., Ltd.	1401002668	May 15, 2014	Decking system	-	May 12, 2034
259	61035	Feb 27, 2018	Nawaplastic Industries Co., Ltd. and The Nawaplastic Industries (Saraburi) Co., Ltd.	1602002942	Aug 5, 2016	-	Precast electrical box	Aug 4, 2026
260	61036	Feb 27, 2018	Nawaplastic Industries Co., Ltd. and The Nawaplastic Industries (Saraburi) Co., Ltd.	1602002943	Aug 5, 2016	-	Precast electrical box	Aug 4, 2026
261	61034	Feb 27, 2018	Nawaplastic Industries Co., Ltd. and The Nawaplastic Industries (Saraburi) Co., Ltd.	1602002944	Aug 5, 2016	-	Precast electrical box	Aug 4, 2026
262	61033	Feb 27, 2018	Nawaplastic Industries Co., Ltd. and The Nawaplastic Industries (Saraburi) Co., Ltd.	1602002945	Aug 5, 2016	-	Precast electrical box	Aug 4, 2026

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
263	67420	Jan 14, 2019	Nawaplastic Industries Co., Ltd. and The Nawaplastic Industries (Saraburi) Co., Ltd.	1602003566	Sep 16, 2016	-	Installation Clip Railing	Sep 15, 2026
264	67421	Jan 14, 2019	Nawaplastic Industries Co., Ltd. and The Nawaplastic Industries (Saraburi) Co., Ltd.	1602003568	Sep 16, 2016	-	Installation Clip Railing	Sep 15, 2026
265	52998	Dec 22, 2016	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402002979	Oct 8, 2014	-	Smart 30° hanger set	Oct 7, 2024
266	52999	Dec 22, 2016	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402002980	Oct 8, 2014	-	Smart 90° hanger set	Oct 7, 2024
267	53000	Dec 22, 2016	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402002981	Oct 8, 2014	-	Smart shim plate	Oct 7, 2024
268	57195	Sep 5, 2017	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402000203	31 Jan, 2014	-	Rain gutter	Jan 30, 2024
269	57196	Sep 5, 2017	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402000204	31 Jan, 2014	-	Rain gutter	Jan 30, 2024
270	57197	Sep 5, 2017	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402000206	31 Jan, 2014	-	Rain gutter	Jan 30, 2024
271	57198	Sep 5, 2017	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402000207	31 Jan, 2014	-	Rain gutter	Jan 30, 2024

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
272	59898	Jan 9, 2018	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402002977	Oct 8, 2014	-	Rain gutter	Oct 7, 2024
273	59899	Jan 9, 2018	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402002978	Oct 8, 2014	-	End cap for rain gutter	Oct 7, 2024
274	59900	Jan 9, 2018	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402002982	Oct 8, 2014	-	Inside corner	Oct 7, 2024
275	59901	Jan 9, 2018	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402002983	Oct 8, 2014	-	Outside corner	Oct 7, 2024
276	59902	Jan 9, 2018	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402002984	Oct 8, 2014	-	Drop outlet	Oct 7, 2024
277	59903	Jan 9, 2018	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402002985	Oct 8, 2014	-	Joiner	Oct 7, 2024
278	59904	Jan 9, 2018	The Nawaplastic Industries (Saraburi) Co., Ltd.	1402002986	Oct 8, 2014	-	Connector	Oct 7, 2024
279	62421	May 11, 2018	The Nawaplastic Industries (Saraburi) Co., Ltd.	1502003340	Sep 29, 2015	-	Flashing socket	Sep 26, 2025
280	62423	May 11, 2018	The Nawaplastic Industries (Saraburi) Co., Ltd.	1502003341	Sep 29, 2015	-	Flashing socket	Sep 26, 2025
281	Petty Patent 11978	Sep 29, 2016	The Nawaplastic Industries (Saraburi) Co., Ltd.	1503001613	Sep 29, 2015	Flashing socket	-	Sep 26, 2025

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
282	54709	Apr 21, 2017	The Nawaplastic Industries (Saraburi) Co., Ltd.	1401006089	Oct 8, 2014	Rain gutter system	-	Oct 6, 2034
283	49700	Jun 3, 2016	SCG Performance Chemicals Co., Ltd.	1402003238	Oct 22, 2014	-	MOBIKE structure frame	Oct 21, 2024
284	49701	Jun 3, 2016	SCG Performance Chemicals Co., Ltd.	1402003240	Oct 22, 2014	-	Mo-Bike	Oct 21, 2024
285	49778	Jun 8, 2016	SCG Performance Chemicals Co., Ltd.	1402003239	Oct 22, 2014	-	Mo-Bike	Oct 21, 2024
286	57199	Sep 5, 2017	SCG Performance Chemicals Co., Ltd.	1402003241	Oct 22, 2014	-	Front Holder for bicycle	Oct 21, 2024
287	70033	May 29, 2019	SCG Performance Chemicals Co., Ltd.	1602003569	Sep 16, 2016	-	Surgical knife	Sep 15, 2026
288	69092	Mar 29, 2019	SCG Performance Chemicals Co., Ltd. and National Healthcare Systems Co., Ltd.	1602003570	Sep 16, 2016	-	Medical container	Sep 15, 2026
289	Petty Patent 13153	Oct 3, 2017	SCG Performance Chemicals Co., Ltd.	1603002548	Dec 14, 2016	A solar energy board float	-	Dec 11, 2026
290	63344	Jun 29, 2018	Rayong Engineering & Plant Service Co., Ltd.	1502003862	Nov 6, 2015	-	Corrosion under Insulation detector	Nov 5, 2025
291	30201805823Q (Singapore)	Nov 1, 2018	Rayong Engineering & Plant Service Co., Ltd.	30201805823Q	Nov 1, 2018	-	A device for detecting corrosion	Nov 1, 2038

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
292	30201805824T (Singapore)	Nov 1, 2018	Rayong Engineering & Plant Service Co., Ltd.	30201805824T	Nov 1, 2018	-	A device for detecting corrosion	Nov 1, 2038
293	006396750-002 /006396750-001 (Great Britain)	Apr 25, 2019	Rayong Engineering and Plant Service Co., Ltd.	639675	Apr 25, 2019	-	A device for detecting corrosion of a metal part	Apr 24, 2029
294	Petty Patent 11586	Jun 8, 2016	Rayong Engineering & Plant Service Co., Ltd.	1503001900	Nov 6, 2015	Corrosion inspection detector	-	Nov 5, 2025
295	Petty Patent 14816	Jan 14, 2019	Rayong Engineering and Plant Service Co., Ltd.	1703002476	Dec 12, 2017	Cable Robot	-	Dec 10, 2027
296	2016102 (Netherland)	Aug 2, 2017	Rayong Engineering & Plant Service Co., Ltd.	2016102	Jan 15, 2016	Movable detector and methods for inspecting elongated tube-like objects in equipment	-	Jan 14, 2036
297	3259570 (Spain)	Feb 27, 2019	Rayong Engineering & Plant Service Co., Ltd.	17730285.8	Sep 22, 2017	Movable detector and methods for inspecting elongated tube-like objects in equipment	-	Sep 21, 2037
298	3259570 (France)	Feb 27, 2019	Rayong Engineering & Plant Service Co., Ltd.	17730285.8	Sep 22, 2017	Movable detector and methods for inspecting elongated tube-like objects in equipment	-	Sep 21, 2037

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
299	3259570 (Great Britain)	Feb 27, 2019	Rayong Engineering & Plant Service Co., Ltd.	17730285.8	Sep 22, 2017	Movable detector and methods for inspecting elongated tube-like objects in equipment	-	Sep 21, 2037
300	3259570 (Belgium)	Feb 27, 2019	Rayong Engineering & Plant Service Co., Ltd.	17730285.8	Sep 22, 2017	Movable detector and methods for inspecting elongated tube-like objects in equipment	-	Sep 21, 2037
301	3259570 (Germany)	Feb 27, 2019	Rayong Engineering & Plant Service Co., Ltd.	17730285.8	Sep 22, 2017	Movable detector and methods for inspecting elongated tube-like objects in equipment	-	Sep 21, 2037
302	Petty Patent 13217	Oct 27, 2017	Rayong Engineering and Plant Service Co., Ltd. and King Mongkut's University of Technology North Bangkok	1703000653	Apr 19, 2017	Movable detector	-	Apr 16, 2027
303	10,131,594 (USA)	Nov 10, 2018	SMH Co., Ltd.	15/515,732	Mar 30, 2017	Metathesis catalyst on mixed metal oxide-zeolite support and process for use thereof	-	Oct 27, 2034 (PCT filing date Oct 28, 2014)

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
304	11201706042V (Singapore)	Nov 10, 2018	SMH Co., Ltd.	11201706042V	Jul 25, 2017	Catalyst and process for producing olefin	-	Jan 28, 2036 (PCT filing date Jan 29, 2014)
305	3277421 (Germany)	May 15, 2019	SMH Co., Ltd.	16732668.5	Oct 19, 2017	Dehydrogenation catalyst and process utilizing the catalyst	-	Oct 16, 2037
306	3277421 (Poland)	May 15, 2019	SMH Co., Ltd.	16732668.5	Oct 19, 2017	Dehydrogenation catalyst and process utilizing the catalyst	-	Oct 16, 2037
307	3277421 (Belgium)	May 15, 2019	SMH Co., Ltd.	16732668.5	Oct 19, 2017	Dehydrogenation catalyst and process utilizing the catalyst	-	Oct 16, 2037
308	3277421 (Spain)	May 15, 2019	SMH Co., Ltd.	16732668.5	Oct 19, 2017	Dehydrogenation catalyst and process utilizing the catalyst	-	Oct 16, 2037
309	3277421 (France)	May 15, 2019	SMH Co., Ltd.	16732668.5	Oct 19, 2017	Dehydrogenation catalyst and process utilizing the catalyst	-	Oct 16, 2037
310	3277421 (Netherlands)	May 15, 2019	SMH Co., Ltd.	16732668.5	Oct 19, 2017	Dehydrogenation catalyst and process utilizing the catalyst	-	Oct 16, 2037

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311	2809717 (Romania)	Jul 13, 2016	Norner AS	13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 28, 2033
312	2809717 (Portugal)	Jul 13, 2016	Norner AS	13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 28, 2033
313	2809717 (Poland)	Jul 13, 2016	Norner AS	13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 30, 2033
314	2809717 (Italy)	Jul 13, 2016	Norner AS	13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 30, 2033
315	2809717 (Hungary)	Jul 13, 2016	Norner AS	13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 30, 2033
316	2809717 (France)	Jul 13, 2016	Norner AS	13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 30, 2033
317	2809717 (Spain)	Jul 13, 2016	Norner AS	13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 30, 2033
318	2809717 (Germany)	Jul 13, 2016	Norner AS	13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 30, 2033

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
319	2809717 (Belgium)	Jul 13, 2016	Norner AS	13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 30, 2033
320	2809717 (Austria)	Jul 13, 2016	Norner AS	13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 30, 2033
321	2809717 (Turkey)	Jul 13, 2016	Norner AS	13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 30, 2033
322	ZL201380017952.8 (China)	Oct 12, 2016	Norner AS	201380017952.8	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 30, 2033
323	6272237 (Japan)	Jan 12, 2018	Norner AS	2014-555196	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer	-	Jan 30, 2033
324	2049537 (Korea)	Nov 21, 2019	Norner AS	10-2014-7024238	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer	-	Jan 30, 2033
325	2930205 (Austria)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033

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326	2930205 (Belgium)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033
327	2930205 (Germany)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033
328	2930205 (Spain)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033
329	2930205 (France)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033
330	2930205 (Great Britain)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033
331	2930205 (Hungary)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
332	2930205 (Poland)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033
333	2930205 (Portugal)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033
334	2930205 (Romania)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033
335	2930205 (Turkey)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033
336	2930205 (Italy)	May 10, 2017	Norner AS	15164618.9	Jan 31, 2013	Multimodal polyethylene polymers and process preparing said polymer (Divisional application)	-	Jan 30, 2033
337	9340646 (USA)	May 17, 2016	Norner IP AS	14/232250	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 10, 2032
338	2731981 (France)	Aug 31, 2016	Norner IP AS	12733739.2	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 10, 2032

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
339	2731981 (Spain)	Aug 31, 2016	Norner IP AS	12733739.2	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 10, 2032
340	2731981 (Netherlands)	Aug 31, 2016	Norner IP AS	12733739.2	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 10, 2032
341	2731981 (Germany)	Aug 31, 2016	Norner IP AS	12733739.2	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 10, 2032
342	103842406 (China)	Nov 2, 2016	Norner IP AS	201280044028.4	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 10, 2032
343	ZL201480004698. 2 (China)	Jan 15, 2019	Norner IP AS	201480004698.2	Jan 10, 2014	Process	-	Jan 9, 2034
344	6479680 (Japan)	Feb 15, 2019	Norner IP AS	2015-552059	Jan 10, 2014	Process	-	Jan 9, 2034
345	10370503 (USA)	Aug 6, 2019	Norner IP AS	14/760356	Jan 10, 2014	Process	-	Jan 9, 2034
346	2694769 (Russia)	Jul 16, 2019	Norner Verdandi AS	2017126222	Jul 21, 2015	Polyethylene for pipes	-	Jul 20, 2035
Packaging Business								
347	39942	May 6, 2014	SCG Packaging PLC.	1002003047	Oct 20, 2010	-	Display	Oct 19, 2020
348	46752	Oct 30, 2015	SCG Packaging PLC.	1002003046	Oct 20, 2010	-	Stand blank	Oct 19, 2020
349	50419	Jul 14, 2016	SCG Packaging PLC.	1102001273	May 3, 2011	-	Paper splint	May 2, 2021
350	Petty Patent 11664	Jun 28, 2016	SCG Packaging PLC.	1503001838	Oct 29, 2015	Investigated method of macro sticky in paper pulp	-	Oct 28, 2025



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351	Petty Patent 12725	Jun 7, 2017	SCG Packaging PLC.	1503001837	Oct 29, 2015	Multi floors truck	-	Oct 28, 2025
352	Petty Patent 14843	Jan 21, 2019	SCG Packaging PLC.	1703002391	Mar 29, 2017	Soil covering material having structural layers	-	Mar 28, 2027
353	Petty Patent 9259	Oct 24, 2014	SCG Packaging PLC. and Khon Kaen University and Thailand Research Fund	1203000685	Jun 29, 2012	Geopolymer from fly ash and biomass ash which obtained from fluidized bed reactor mixing with fly ash from coal and gypsum combustion	-	Jun 28, 2022
354	Petty Patent 10340	Sep 4, 2015	SCG Packaging PLC. and The National Science and Technology Development Agency	1103000736	Jul 28, 2011	Method of pulp treatment with enzyme in refining step for papermaking process	-	Jul 27, 2021
355	Petty Patent 10041	July 2, 2015	Siam Kraft Industry Co., Ltd.	1403000945	Aug 22, 2014	Wireless hygrometer	-	Aug 21, 2024
356	Petty Patent 12351	Jan 24, 2017	Siam Kraft Industry Co., Ltd.	1403001694	Dec 12, 2014	Portable, scoring device	-	Dec 11, 2024
357	19467 (Vietnam)	Jun 13, 2018	Siam Kraft Industry Co., Ltd.	1-2015-04170	Mar 28, 2014	Sheets with organic filler	-	Mar 27, 2034
358	46617	Oct 26, 2015	Thai Containers Group Co., Ltd.	1202002433	Sep 14, 2012	-	Container blank	Sep 13, 2022
359	49033	Apr 4, 2016	Thai Containers Group Co., Ltd.	1202002432	Sep 14, 2012	-	Container	Sep 13, 2022
360	49034	Apr 4, 2016	Thai Containers Group Co., Ltd.	1202002431	Sep 14, 2012	-	Container	Sep 13, 2022
361	53597	Feb 1, 2017	Thai Containers Group Co., Ltd.	1402003369	Nov 3, 2014	-	Display	Nov 2, 2024

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362	58761	Nov 3, 2017	Thai Containers Group Co., Ltd.	1402003368	Nov 3, 2014	-	Display	Nov 2, 2024
363	63990	Aug 3, 2018	Thai Containers Group Co., Ltd.	0701005183	Oct 15, 2007	Chair	-	Oct 14, 2027
364	66067	Nov 6, 2018	Thai Containers Group Co., Ltd.	1502003764	Oct 29, 2015	-	Folding chair	Oct 28, 2025
365	66068	Nov 6, 2018	Thai Containers Group Co., Ltd.	1502003765	Oct 29, 2015	-	Folding chair blank	Oct 28, 2025
366	66433	Nov 19, 2018	Thai Containers Group Co., Ltd.	0701006255	Dec 7, 2007	Chair	-	Dec 6, 2027
367	66472	Nov 21, 2018	Thai Containers Group Co., Ltd.	1302001479	Jun 4, 2013	-	Container	Jun 3, 2023
368	66471	Nov 22, 2018	Thai Containers Group Co., Ltd.	1302001480	Jun 4, 2013	-	Container blank	Jun 3, 2023
369	68373	Feb 26, 2019	Thai Containers Group Co., Ltd.	1602004676	Dec 9, 2016	-	Container divider	Dec 8, 2026
370	68374	Feb 26, 2019	Thai Containers Group Co., Ltd.	1602004677	Dec 9, 2016	-	Container divider blank	Dec 8, 2026
371	68375	Feb 26, 2019	Thai Containers Group Co., Ltd.	1602004678	Dec 9, 2016	-	Container divider	Dec 8, 2026
372	68376	Feb 26, 2019	Thai Containers Group Co., Ltd.	1602004679	Dec 9, 2016	-	Container divider blank	Dec 8, 2026
373	69428	Apr 23, 2019	Thai Containers Group Co., Ltd.	1702000703	Mar 3, 2017	-	Container	Mar 2, 2027
374	69429	Apr 23, 2019	Thai Containers Group Co., Ltd.	1702000704	Mar 3, 2017	-	Container blank	Mar 2, 2027
375	70253	Jun 11, 2019	Thai Containers Group Co., Ltd.	1702002115	Jun 8, 2017	-	Container	Jun 7, 2027
376	70254	Jun 11, 2019	Thai Containers Group Co., Ltd.	1702002116	Jun 8, 2017	-	Container blank	Jun 7, 2027
377	70255	Jun 11, 2019	Thai Containers Group Co., Ltd.	1702002117	Jun 8, 2017	-	Container	Jun 7, 2027
378	70256	Jun 11, 2019	Thai Containers Group Co., Ltd.	1702002118	Jun 8, 2017	-	Container blank	Jun 7, 2027

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379	71053	Aug 8, 2019	Thai Containers Group Co., Ltd.	1702002533	July 7, 2017	-	Container blank	July 6, 2027
380	71054	Aug 8, 2019	Thai Containers Group Co., Ltd.	1702002534	July 7, 2017	-	Container blank	July 6, 2027
381	72812	Nov 25, 2019	Thai Containers Group Co., Ltd.	0701006254	Dec 7, 2007	Assembly chair	-	Dec 6, 2027
382	Petty Patent 9838	Apr 28, 2015	Thai Containers Group Co., Ltd.	1403000528	May 30, 2014	Water-proof sheath for pallet leg	-	May 29, 2024
383	Petty Patent 11075	Jan 26, 2016	Thai Containers Group Co., Ltd.	1503000291	Mar 9, 2015	Box with a creaser line and production thereof	-	Mar 8, 2025
384	55526	Jun 20, 2017	Thai Paper Co.,Ltd.	1402002351	Aug 22, 2014	-	Container	Aug 21, 2024
385	55527	Jun 20, 2017	Thai Paper Co.,Ltd.	1402002352	Aug 22, 2014	-	Container blank	Aug 21, 2024
386	55528	Jun 20, 2017	Thai Paper Co.,Ltd.	1402002353	Aug 22, 2014	-	Container blank	Aug 21, 2024
387	55529	Jun 20, 2017	Thai Paper Co.,Ltd.	1402002354	Aug 22, 2014	-	Container blank	Aug 21, 2024
388	55530	Jun 20, 2017	Thai Paper Co.,Ltd.	1402002355	Aug 22, 2014	-	Container blank	Aug 21, 2024
389	55531	Jun 20, 2017	Thai Paper Co.,Ltd.	1402002356	Aug 22, 2014	-	Container blank	Aug 21, 2024
390	58757	Nov 3, 2017	Thai Paper Co.,Ltd.	1502004293	Dec 17, 2015	-	Container	Dec 16, 2025
391	58758	Nov 3, 2017	Thai Paper Co.,Ltd.	1502004294	Dec 17, 2015	-	Container	Dec 16, 2025
392	58759	Nov 3, 2017	Thai Paper Co.,Ltd.	1502004295	Dec 17, 2015	-	Container blank	Dec 16, 2025
393	58760	Nov 3, 2017	Thai Paper Co.,Ltd.	1502004296	Dec 17, 2015	-	Container blank	Dec 16, 2025
394	61702	Mar 30, 2018	Thai Paper Co.,Ltd.	1502003338	Sep 29, 2015	-	Container	Sep 28, 2025
395	61703	Mar 30, 2018	Thai Paper Co.,Ltd.	1502004005	Nov 24, 2015	-	Container	Nov 23, 2025
396	61704	Mar 30, 2018	Thai Paper Co.,Ltd.	1502004006	Nov 24, 2015	-	Container blank	Nov 23, 2025
397	61705	Mar 30, 2018	Thai Paper Co.,Ltd.	1502004007	Nov 24, 2015	-	Container blank	Nov 23, 2025
398	63510	Jul 5, 2018	Thai Paper Co.,Ltd.	1602001211	Mar 31, 2016	-	Container	Mar 30, 2026

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
399	66313	Nov13, 2018	Thai Paper Co.,Ltd.	1702002966	Aug 4, 2017	-	Lid	Aug 3, 2027
400	66314	Nov13, 2018	Thai Paper Co.,Ltd.	1502003339	Sep 29, 2015	-	Container blank	Sep 28, 2025
401	71076	Aug 9, 2019	Thai Paper Co.,Ltd.	1702002840	July 27, 2017	-	Container	July 26, 2027
402	71077	Aug 9, 2019	Thai Paper Co.,Ltd.	1702002841	July 27, 2017	-	Container blank	July 26, 2027
403	72457	Nov 8, 2019	Thai Paper Co.,Ltd.	1702004851	Nov 30, 2017	-	Container belt blank	Nov 29, 2027
404	72458	Nov 8, 2019	Thai Paper Co.,Ltd.	1702004852	Nov 30, 2017	-	Container with belt	Nov 29, 2027
405	72459	Nov 8, 2019	Thai Paper Co.,Ltd.	1702004853	Nov 30, 2017	-	Container with belt	Nov 29, 2027
406	Petty Patent 12796	Jun 23, 2017	Thai Paper Co.,Ltd.	1603001729	Sep 9, 2016	Food container	-	Sep 8, 2026
407	Petty Patent 13983	Jun 15, 2018	Thai Paper Co.,Ltd.	1603000174	Feb 1, 2016	Packaging having separated containers	-	Jan 31, 2026
408	Petty patent 15101	Apr 17, 2019	Thai Paper Co.,Ltd.	1703001413	Aug 4, 2017	Food container	-	Aug 3, 2027
409	AU330473 (Australia)	Apr 23, 2010	Visy R&D Pty Ltd.	201011063	Mar 25, 2010	-	A tub	Mar 24, 2020
410	AU330474 (Australia)	Apr 23, 2010	Visy R&D Pty Ltd	201011064	Mar 25, 2010	-	A tub	Mar 24, 2020
411	AU349045 (Australia)	Jun 6, 2013	Visy R&D Pty Ltd	201310113	Jan 7, 2013	-	Screw cap for a jar	Jan 6, 2023

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
412	CN302813835S (China)	May 7, 2014	Visy R&D Pty Ltd	201330308180.6	July 5, 2013	-	Screw cap for a jar	July 4, 2023
413	3-2013-000811 (Philippines)	May 14, 2014	Visy R&D Pty Ltd	3-2013-000811	July 5, 2013	-	Screw cap for a jar	July 4, 2023
414	USD723370S (USA)	Mar 3, 2015	Visy R&D Pty Ltd	29/459,982	July 5, 2013	-	Screw cap for a jar	Mar 2, 2029
Cement-Building Materials Business								
415	47306	Dec 8, 2015	SCG Cement Co., Ltd.	1102000780	Mar 21, 2011	-	Refractory supporting unit	Mar 20, 2021
416	49089	Apr 8, 2016	SCG Cement Co., Ltd.	1102000784	Mar 21, 2011	-	Mortar refractory	Mar 20, 2021
417	49090	Apr 8, 2016	SCG Cement Co., Ltd.	1102000782	Mar 21, 2011	-	Mortar refractory	Mar 20, 2021
418	51912	Oct 18, 2016	SCG Cement Co., Ltd.	1202003207	Dec 7, 2012	-	Mold for stampcrete	Dec 6, 2022
419	51913	Oct 18, 2016	SCG Cement Co., Ltd.	1202003208	Dec 7, 2012	-	Mold for stampcrete	Dec 6, 2022
420	51914	Oct 18, 2016	SCG Cement Co., Ltd.	1202003209	Dec 7, 2012	-	Mold for stampcrete	Dec 6, 2022
421	51915	Oct 18, 2016	SCG Cement Co., Ltd.	1202003210	Dec 7, 2012	-	Mold for stampcrete	Dec 6, 2022
422	51916	Oct 18, 2016	SCG Cement Co., Ltd.	1102000781	Mar 21, 2011	-	Refractory	Mar 20, 2021
423	52081	Oct 26, 2016	SCG Cement Co., Ltd.	1102000783	Mar 21, 2011	-	Refractory	Mar 20, 2021
424	54694	Apr 20, 2017	SCG Cement Co., Ltd.	1402003424	Nov 6, 2014	-	Shoveling device	Nov 5, 2024
425	67450	Jan 15, 2019	SCG Cement Co., Ltd.	0801000295	Jan 21, 2008	A furnace for natural material and a method to improve silica properties of the said natural material	-	Jan 20, 2028

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
426	Petty Patent 9756	Apr 4, 2015	SCG Cement Co., Ltd.	1103000179	Feb 23, 2011	Method for manufacturing lightweight aggregate from biomass and its product	-	Feb 22, 2021
427	Petty Patent 10831	Dec 2, 2015	SCG Cement Co., Ltd.	1003000814	Sep 3, 2010	Easy to clean mortar	-	Sep 2, 2020
428	Petty Patent 11798	Aug 4, 2016	SCG Cement Co., Ltd.	1203001476	Dec 7, 2012	Pozzolanic material made from high ferrous clay and manufacturing method thereof	-	Dec 6, 2022
429	Petty Patent 12528	Mar 21, 2017	SCG Cement Co., Ltd.	1603000176	Feb 2, 2016	Textured concrete element	-	Feb 1, 2026
430	Petty Patent 12794	Jun 23, 2017	SCG Cement Co., Ltd.	1603001632	Sep 2, 2016	Big bag transporting device	-	Sep 1, 2026
431	Petty Patent 13228	Nov 3, 2017	SCG Cement Co., Ltd.	1603001194	Jun 6, 2016	Fast drying mixed cement for masonry or plastering application	-	Jun 5, 2026
432	Petty Patent 13229	Nov 3, 2017	SCG Cement Co., Ltd.	1603001193	Jun 6, 2016	Pigment for cementitious material and manufacturing method thereof	-	Jun 5, 2026
433	Petty Patent 13535	Feb 7, 2018	SCG Cement Co., Ltd.	1603000177	Feb 2, 2016	Repairing Cement	-	Feb 1, 2026
434	Petty Patent 13614	Feb 28, 2018	SCG Cement Co., Ltd.	1603000645	Apr 20, 2016	Flexible mortar for construction joint sealing	-	Apr 19, 2026

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
435	Petty Patent 13745	Apr 11, 2018	SCG Cement Co., Ltd.	1703001856	Sep 22, 2017	Shim installing apparatus for refractory brick	-	Sep 21, 2027
436	Petty Patent 15051	Mar 8, 2019	SCG Cement Co., Ltd.	1703001373	Jul 27, 2017	Expansive agent	-	Jul 26, 2027
437	US8864903 (USA)	Oct 21, 2014	SCG Cement Co., Ltd.	US13/717,054	Oct 29, 2012	Composite plaster including an organic additive	-	Oct 28, 2032
438	20285	Jul 28, 2006	The Siam Refractory Industry Co., Ltd.	0301003134 (084687)	Aug 22, 2003	Procedure for packaging basic brick to improve ventilation system	-	Aug 21, 2023
439	25337	Jan 23, 2009	The Siam Refractory Industry Co., Ltd.	0301003133	Aug 22, 2003	Spraying or mortar Refractory	-	Aug 21, 2023
440	Petty Patent 8528	Dec 11, 2013	SCI Eco Services Co., Ltd.	1203000839	Aug 10, 2012	Solid fuel product that is made from waste	-	Aug 9, 2022
441	49595	May 30, 2016	The Siam Fibre-Cement Co., Ltd.	1202002887	Nov 2, 2012	-	Seat	Nov 1, 2022
442	51075	Sep 6, 2016	The Siam Fibre-Cement Co., Ltd.	1302000153	Jan 24, 2013	-	Shelter	Jan 23, 2023
443	Petty Patent 12461	Mar 2, 2017	The Siam Fibre-Cement Co., Ltd.	1503001397	Sep 4, 2015	Roofing materials	-	Sep 3, 2025
444	Petty Patent 15396	Aug 9 ,2019	The Siam Fibre-Cement Co., Ltd.	1703000818	May 15, 2017		-	May14, 2027
445	49317	May 4, 2016	The Siam Fibre-Cement Co., Ltd.	1202002474	Sep 17, 2012	-	Building material element	Sep 16, 2022
446	49596	May 30, 2016	The Siam Fibre-Cement Co., Ltd.	1402000487	Mar 14, 2014	-	Patterned tile	Mar 13, 2024

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447	53439	Jan 20, 2017	The Siam Fibre-Cement Co., Ltd.	1302002661	Sep 24, 2013	-	Bracked element	Sep 23, 2023
448	53440	Jan 20, 2017	The Siam Fibre-Cement Co., Ltd.	1302002660	Sep 24, 2013	-	Bracked element	Sep 23, 2023
449	53971	Feb 24, 2017	The Siam Fibre-Cement Co., Ltd.	1402003915	Dec 19, 2014	-	Patterned floor	Dec 18, 2024
450	53972	Feb 24, 2017	The Siam Fibre-Cement Co., Ltd.	1402003916	Dec 19, 2014	-	Patterned floor	Dec 18, 2024
451	53973	Feb 24, 2017	The Siam Fibre-Cement Co., Ltd.	1402003917	Dec 19, 2014	-	Patterned floor	Dec 18, 2024
452	58152	Oct 11, 2017	The Siam Fibre-Cement Co., Ltd.	1502000029	Jan 6, 2015	-	Patterned floor	Jan 5, 2025
453	58153	Oct 11, 2017	The Siam Fibre-Cement Co., Ltd.	1402000734	Mar 28, 2014	-	Building material element	Mar 27, 2024
454	60014	Jan 12, 2018	The Siam Fibre-Cement Co., Ltd.	1502001733	May 29, 2015	-	Patterned floor	May 28, 2025
455	60804	Feb 16, 2018	The Siam Fibre-Cement Co., Ltd.	1502001416	April 30, 2015	-	Patterned floor	April 29, 2025
456	60805	Feb 16, 2018	The Siam Fibre-Cement Co., Ltd.	1502001741	May 29, 2015	-	Building material element	May 28, 2025
457	61072	Feb 28, 2018	The Siam Fibre-Cement Co., Ltd.	1402000291	Feb 12, 2014	-	Patterned floor	Feb 11, 2024
458	61919	Apr 11, 2018	The Siam Fibre-Cement Co., Ltd.	1502001738	May 29, 2015	-	Building material element	May 28, 2025
459	62386	Apr 30, 2018	The Siam Fibre-Cement Co., Ltd.	1502004404	Dec 24, 2015	-	Patterned ceiling	Dec 23, 2025
460	62387	Apr 30, 2018	The Siam Fibre-Cement Co., Ltd.	1502004405	Dec 24, 2015	-	Patterned ceiling	Dec 23, 2025
461	62388	Apr 30, 2018	The Siam Fibre-Cement Co., Ltd.	1502004406	Dec 24, 2015	-	Patterned ceiling	Dec 23, 2025
462	63420	Jul 3, 2018	The Siam Fibre-Cement Co., Ltd.	1602002718	Jul 15, 2016	-	Patterned ceiling	Jul 14, 2026
463	63421	Jul 3, 2018	The Siam Fibre-Cement Co., Ltd.	1602002720	Jul 15, 2016	-	Patterned ceiling	Jul 14, 2026
464	63425	Jul 3, 2018	The Siam Fibre-Cement Co., Ltd.	1602002719	Jul 15, 2016	-	Patterned ceiling	Jul 14, 2026

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
465	65195	Sep 28, 2018	The Siam Fibre-Cement Co., Ltd.	1502001136	Apr 10, 2015	-	Patterned floor	Apr 9, 2025
466	65196	Sep 28, 2018	The Siam Fibre-Cement Co., Ltd.	1502001135	Apr 10, 2015	-	Patterned floor	Apr 9, 2025
467	65826	Oct 25, 2018	The Siam Fibre-Cement Co., Ltd.	1402001287	May 14, 2014	-	Wall and floor tile	May13, 2024
468	Petty Patent 8721	Mar 17, 2014	The Siam Fibre-Cement Co., Ltd.	1303001128	Sep 24, 2013	Installation of plaques	-	Sep 23, 2023
469	Petty Patent 11004	Jan 11, 2016	The Siam Fibre-Cement Co., Ltd.	1503000960	Jun 25, 2015	Eave	-	Jun 24, 2025
470	Petty Patent 11738	Jul 15, 2016	The Siam Fibre-Cement Co., Ltd.	1503001907	Nov 9, 2015	Ventilating ceiling	-	Nov 8, 2025
471	Petty Patent 12648	May 15, 2017	The Siam Fibre-Cement Co., Ltd.	1603000339	Mar 1, 2016	Jambs and installation system	-	Feb 28, 2026
472	Petty Patent 13560	Feb 16, 2018	The Siam Fibre-Cement Co., Ltd.	1603001100	Jun 24, 2016	Digital printing for fiber cement material	-	Jun 23, 2026
473	Petty Patent 14047	Jul 3, 2018	The Siam Fibre-Cement Co., Ltd.	1603000590	Apr 8, 2016	Screw	-	Apr 7, 2026
474	Petty Patent 14707	Dec 13, 2018	The Siam Fibre-Cement Co., Ltd.	1703000595	Apr 7, 2017	Ventilation and installation system	-	Apr 6, 2027
475	Petty Patent 14708	Dec 13, 2018	The Siam Fibre-Cement Co., Ltd.	1703000915	May 29, 2017	Eaves	-	May 28,2027
476	Petty Patent 15362	Jul 25, 2019	The Siam Fibre-Cement Co., Ltd.	1703001274	Jul 14,2017	Edge of sheet and installation system	-	Jul 13,2027
477	47825	Jan 29, 2016	SCG Building Materials Co., Ltd.	0701002104	Apr 27, 2007	Roof tile and process making thereof	-	Apr 26, 2027

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478	54434	Mar 27, 2017	SCG Building Materials Co., Ltd.	0701004624	Sep 13, 2007	Roofing materials	-	Sep 12, 2027
479	54435	Mar 27, 2017	SCG Building Materials Co., Ltd.	0701004625	Sep 13, 2007	Bracked element	-	Sep 12, 2027
480	56127	Jul 21, 2017	SCG Building Materials Co., Ltd.	0701004623	Sep 13, 2007	Installation of roofing materials	-	Sep 12, 2027
481	56256	Jul 27, 2017	SCG Building Materials Co., Ltd.	0901001969	May 4, 2009	Apparatus and method for forming powder materials	-	May 3, 2029
482	64005	Aug 3, 2018	SCG Building Materials Co., Ltd. and SCG Ceramics Public	0701004776	Sep 21, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 20, 2027
483	68316	Feb 22, 2019	SCG Building Materials Co., Ltd.	1101000516	Apr 8, 2011	Ventilation for housing	-	Apr 7, 2031
484	69124	Mar 29, 2019	SCG Building Materials Co., Ltd.	1201004386	Aug 27, 2012	roof tile stacking and packing machine	-	Aug 26, 2032
485	44000	Apr 30, 2015	SCG Building Materials Co., Ltd.	1002001832	Jul 16, 2010	-	Bracked element	Jul 16, 2020
486	44001	Apr 30, 2015	SCG Building Materials Co., Ltd.	1102000953	Mar 31, 2011	-	Floor tile	Mar 31, 2021
487	44640	Jun 12, 2015	SCG Building Materials Co., Ltd.	1002001831	Jul 16, 2010	-	Bracked element	Jul 16, 2020
488	44641	Jun 12, 2015	SCG Building Materials Co., Ltd.	1202001166	May 3, 2012	-	Bracked element	May 3, 2022
489	44791	Jun 25, 2015	SCG Building Materials Co., Ltd.	1102002691	Sep 6, 2011	-	Roof bracked element	Sep 6, 2021
490	45722	Aug 31, 2015	SCG Building Materials Co., Ltd.	1002003127	Oct 29, 2010	-	Roof tile	Oct 29, 2020
491	46635	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002002675	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
492	46636	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002002679	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
493	46637	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002002678	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
494	46638	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002002676	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
495	46639	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002000945	Apr 5, 2010	-	Roof tile	Apr 5, 2020



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496	46640	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002000944	Apr 5, 2010	-	Solar roof tile	Apr 5, 2020
497	46641	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002000943	Apr 5, 2010	-	Concrete block	Apr 5, 2020
498	46642	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002000725	Mar 15, 2010	-	Roof tile	Mar 15, 2020
499	46644	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002002069	Aug 6, 2010	-	Building material element	Aug 6, 2020
500	46882	Nov 9, 2015	SCG Building Materials Co., Ltd.	1002002672	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
501	46883	Nov 9, 2015	SCG Building Materials Co., Ltd.	1002002673	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
502	46884	Nov 9, 2015	SCG Building Materials Co., Ltd.	1002002674	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
503	46885	Nov 9, 2015	SCG Building Materials Co., Ltd.	1002002677	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
504	47525	Dec 24, 2015	SCG Building Materials Co., Ltd.	1102002425	Aug 11, 2011	-	Fence materials	Aug 10, 2021
505	47772	Feb 25, 2016	SCG Building Materials Co., Ltd.	1002002070	Aug 6, 2010	-	Attaching device	Aug 5, 2020
506	48365	Mar 1, 2016	SCG Building Materials Co., Ltd.	1102001140	Apr 12, 2011	-	Floor tile	Apr 11, 2021
507	48366	Mar 1, 2016	SCG Building Materials Co., Ltd.	1102001137	Apr 12, 2011	-	Floor tile	Apr 11, 2021
508	48367	Mar 1, 2016	SCG Building Materials Co., Ltd.	1102001138	Apr 12, 2011	-	Floor tile	Apr 11, 2021
509	48368	Mar 1, 2016	SCG Building Materials Co., Ltd.	1102001139	Apr 12, 2011	-	Floor tile	Apr 11, 2021
510	48471	Mar 7, 2016	SCG Building Materials Co., Ltd.	1202001165	May 3, 2012	-	Attaching device	May 2, 2022
511	48472	Mar 7, 2016	SCG Building Materials Co., Ltd.	1302002137	Jul 31, 2013	-	Ventilators	Jul 30, 2023
512	49321	May 4, 2016	SCG Building Materials Co., Ltd.	1202000189	Jan 26, 2012	-	Wall	Jan 26, 2022
513	51074	Sep 6, 2016	SCG Building Materials Co., Ltd.	1102000098	Jan 11, 2011	-	Fastener	Jan 10, 2021
514	52230	Nov 4, 2016	SCG Building Materials Co., Ltd.	1302002995	Oct 18, 2013	-	Fastener	Oct 17, 2023
515	52231	Nov 4, 2016	SCG Building Materials Co., Ltd.	1302002994	Oct 18, 2013	-	Fastener	Oct 17, 2023
516	52232	Nov 4, 2016	SCG Building Materials Co., Ltd.	1402000099	Jan 17, 2014	-	Fastener	Jan 16, 2024
517	52233	Nov 4, 2016	SCG Building Materials Co., Ltd.	1402000100	Jan 17, 2014	-	Fastener	Jan 16, 2024
518	52234	Nov 4, 2016	SCG Building Materials Co., Ltd.	1302002996	Oct 18, 2013	-	Fastener	Oct 17, 2023

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519	52235	Nov 4, 2016	SCG Building Materials Co., Ltd.	1302003588	Dec 6, 2013	-	Fastener	Dec 5, 2023
520	55988	Jul 14, 2017	SCG Building Materials Co., Ltd.	1102000097	Jan 11, 2011	-	Roof tile	Jan 10, 2021
521	55987	Jul 14, 2017	SCG Building Materials Co., Ltd.	1502000543	Feb 27, 2015	-	Bracked element	Feb 26, 2025
522	55989	Jul 14, 2017	SCG Building Materials Co., Ltd.	1502000544	Feb 27, 2015	-	Bracked element	Feb 26, 2025
523	56898	Aug 22, 2017	SCG Building Materials Co., Ltd.	1402000375	Feb 28, 2014	-	Growing unit	Feb 27, 2024
524	58157	Oct 11, 2017	SCG Building Materials Co., Ltd.	1302003804	Dec 27, 2013	-	Concrete block dividing unit	Dec 26, 2025
525	60016	Jan 12, 2018	SCG Building Materials Co., Ltd.	1402001810	Jul 17, 2014	-	Building material element	Jul 16, 2024
526	60803	Feb 16, 2018	SCG Building Materials Co., Ltd.	1502000028	Jan 6, 2015	-	Ventilation system	Jan 5, 2025
527	60813	Feb 16, 2018	SCG Building Materials Co., Ltd.	1502001743	May 29, 2015	-	Heat shield	May28, 2025
528	60816	Feb 16, 2018	SCG Building Materials Co., Ltd.	1602001695	May 4, 2016	-	Basin	May 3, 2026
529	61073	Feb 28, 2018	SCG Building Materials Co., Ltd.	1502003708	Oct 27, 2015	-	Wall and floor tile	Oct 26, 2025
530	61924	Apr 11, 2018	SCG Building Materials Co., Ltd.	1602000691	Mar 1, 2016	-	Building material element	Oct 28, 2026
531	62509	May 17, 2018	SCG Building Materials Co., Ltd.	1502003709	Oct 27, 2015	-	Floor and wall tile	Oct 26, 2025
532	65194	Sep 28, 2018	SCG Building Materials Co., Ltd.	1602004273	Nov 4, 2016	-	Wall and floor tile	Nov 3, 2026
533	66881	Dec 13, 2018	SCG Building Materials Co., Ltd.	1602004282	Nov 4, 2016	-	Wall Panel	Nov 3, 2026
534	66882	Dec 13, 2018	SCG Building Materials Co., Ltd.	1602004281	Nov 4, 2016	-	Wall Panel	Nov 3, 2026
535	66883	Dec 13, 2018	SCG Building Materials Co., Ltd.	1602004280	Nov 4, 2016	-	Wall Panel	Nov 3, 2026
536	66884	Dec 13, 2018	SCG Building Materials Co., Ltd.	1602004279	Nov 4, 2016	-	Wall Panel	Nov 3, 2026
537	66885	Dec 13, 2018	SCG Building Materials Co., Ltd.	1602004278	Nov 4, 2016	-	Wall Panel	Nov 3, 2026
538	66886	Dec 13, 2018	SCG Building Materials Co., Ltd.	1602004277	Nov 4, 2016	-	Wall Panel	Nov 3, 2026



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539	66887	Dec 13, 2018	SCG Building Materials Co., Ltd.	1602004276	Nov 4, 2016	-	Wall Panel	Nov 3, 2026
540	66888	Dec 13, 2018	SCG Building Materials Co., Ltd.	1602004275	Nov 4, 2016	-	Wall Panel	Nov 3, 2026
541	66889	Dec 13, 2018	SCG Building Materials Co., Ltd.	1602004274	Nov 4, 2016	-	Wall Panel	Nov 3, 2026
542	68318	Feb 22, 2019	SCG Building Materials Co., Ltd.	1702001392	Apr 28, 2017	-	Bracked element	Apr 27, 2027
543	69463	Apr 24, 2019	SCG Building Materials Co., Ltd.	1602004272	Nov 4, 2016	-	Wall and floor tile	Nov 3, 2026
544	70401	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000374	Feb 2, 2017	-	Roof tile	Feb 1, 2027
545	70402	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000376	Feb 2, 2017	-	Roof tile	Feb 1, 2027
546	70403	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000377	Feb 2, 2017	-	Roof tile	Feb 1, 2027
547	70404	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000378	Feb 2, 2017	-	Roof tile	Feb 1, 2027
548	70405	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000379	Feb 2, 2017	-	Roof tile	Feb 1, 2027
549	70406	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000380	Feb 2, 2017	-	Roof tile	Feb 1, 2027
550	70407	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000383	Feb 2, 2017	-	Roof tile	Feb 1, 2027
551	70408	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000384	Feb 2, 2017	-	Roof tile	Feb 1, 2027
552	70409	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000385	Feb 2, 2017	-	Roof tile	Feb 1, 2027
553	70410	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000386	Feb 2, 2017	-	Roof tile	Feb 1, 2027
554	70411	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000392	Feb 2, 2017	-	Roof tile	Feb 1, 2027
555	70412	Jun 20, 2019	SCG Building Materials Co., Ltd.	1702000393	Feb 2, 2017	-	Roof tile	Feb 1, 2027
556	70898	Jul 25, 2019	SCG Building Materials Co., Ltd.	1702003751	Sep 22, 2017	-	Celling Hanging device	Sep 21, 2027
557	71302	Aug 30, 2019	SCG Building Materials Co., Ltd.	1802001216	Mar 23, 2018	-	Ventillation system	Mar 22, 2028

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558	Petty Patent 6471	Aug 11, 2011	SCG Building Materials Co., Ltd.	1103000368	Apr 12, 2011	Cementitious floors	-	Apr 11, 2021
559	Petty Patent 6889	Jan 26, 2012	SCG Building Materials Co., Ltd.	1103000303	Mar 25, 2011	Lath installation system	-	Mar 24, 2021
560	Petty Patent 7794	Jan 24, 2013	SCG Building Materials Co., Ltd.	1103001300	Dec 6, 2011	Rain filter	-	Dec 5, 2021
561	Petty Patent 7898	Mar 4, 2013	SCG Building Materials Co., Ltd.	1203000406	Apr 24, 2012	Foundation system	-	Apr 23, 2022
562	Petty Patent 8140	Jul 15, 2013	SCG Building Materials Co., Ltd.	1103001301	Dec 6, 2011	Rain filtration	-	Dec 5, 2021
563	Petty Patent 8327	Sep 24, 2013	SCG Building Materials Co., Ltd.	1303000079	Jan 24, 2013	Heat trapping device	-	Jan 23, 2023
564	Petty Patent 8637	Feb 12, 2014	SCG Building Materials Co., Ltd.	1303000336	Mar 27, 2013	Parts for installation frame	-	Mar 26, 2023
565	Petty Patent 8916	Jun 9, 2014	SCG Building Materials Co., Ltd.	1303000299	Mar 20, 2013	Power management unit in a building with electricity reserves in itself	-	Mar 19, 2023
566	Petty Patent 9162	Sep 24, 2014	SCG Building Materials Co., Ltd.	1303001541	Dec 6, 2013	Set adjustable fan	-	Dec 5, 2023
567	Petty Patent 9215	Oct 13, 2014	SCG Building Materials Co., Ltd.	1403000092	Feb 12, 2014	System of growing plants vertically	-	Feb 11, 2024
568	Petty Patent 9216	Oct 13, 2014	SCG Building Materials Co., Ltd.	1403000050	Jan 17, 2014	System for the installation of the roof	-	Jan 16, 2024
569	Petty Patent 9217	Oct 13, 2014	SCG Building Materials Co., Ltd.	1303001325	Oct 18, 2013	Set for roof ventilation	-	Oct 17, 2023



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570	Petty Patent 9218	Oct 13, 2014	SCG Building Materials Co., Ltd.	1303001540	Dec 6, 2013	Equipment for the installation of the roof	-	Dec 5, 2023
571	Petty Patent 9306	Nov 10, 2014	SCG Building Materials Co., Ltd.	1203000444	May 3, 2012	Installation slabs	-	May 2, 2022
572	Petty Patent 9592	Feb 27, 2015	SCG Building Materials Co., Ltd.	1403000991	Sep 1, 2014	Instance concrete bathroom floor panel	-	Aug 31, 2024
573	Petty Patent 10187	Aug 7, 2015	SCG Building Materials Co., Ltd.	1403000775	Jul 17, 2014	Process of cover gable setting	-	Jul 16, 2024
574	Petty Patent 10188	Aug 7, 2015	SCG Building Materials Co., Ltd.	1503000012	Jan 6, 2015	Roof air flow set	-	Jan 5, 2025
575	Petty Patent 10438	Sep 28, 2015	SCG Building Materials Co., Ltd.	1403000776	Jul 17, 2014	Facial setting, eaves setting tools and process of that	-	Oct 16, 2024
576	Petty Patent 10440	Sep 28, 2015	SCG Building Materials Co., Ltd.	1403001403	Oct 30, 2014	Cover roof end tools and process of that	-	Oct 29, 2024
577	Petty Patent 10441	Sep 28, 2015	SCG Building Materials Co., Ltd.	1303001502	Nov 28, 2013	Process of fuel cell electric production for building	-	Nov 27, 2023
578	Petty Patent 10857	Dec 4, 2015	SCG Building Materials Co., Ltd.	1403001721	Dec 19, 2014	Plant pot on water surface	-	Dec18, 2024
579	Petty Patent 11005	Jan 11, 2016	SCG Building Materials Co., Ltd.	1503000330	Mar 16, 2015	Ventilation system	-	Mar 15, 2025
580	Petty Patent 11006	Jan 11, 2016	SCG Building Materials Co., Ltd.	1503000815	May 29, 2015	Apparatus for reducing thermal bridge and vibration	-	May 28, 2025
581	Petty Patent 11636	Jun 17, 2016	SCG Building Materials Co., Ltd.	1403000091	Feb 12, 2014	Receptacle	-	Feb 11,2024



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582	Petty Patent 12333	Jan 20, 2017	SCG Building Materials Co., Ltd.	1503001396	Sep 4, 2015	Apparatus for reducing thermal bridge and vibration	-	Sep 3, 2025
583	Petty Patent 12334	Jan 20, 2017	SCG Building Materials Co., Ltd.	1603000755	May 4, 2016	Bathtub Set	-	May 3, 2026
584	Petty Patent 12857	Jul 14, 2017	SCG Building Materials Co., Ltd.	1503001858	Oct 30, 2015	Lighting control system	-	Oct 29, 2025
585	Petty Patent 13813	May 3, 2018	SCG Building Materials Co., Ltd.	1603002401	Nov 21, 2016	Wall installation system	-	Nov 20, 2026
586	Petty Patent 13862	May 17, 2018	SCG Building Materials Co., Ltd.	1703000917	Mar 31, 2017	Ventilation system	-	Mar 30, 2027
587	Petty Patent 13861	May 17, 2018	SCG Building Materials Co., Ltd.	1703000916	Mar 31, 2017	Ventilation system	-	Mar 30, 2027
588	Petty Patent 14048	Jul 3, 2018	SCG Building Materials Co., Ltd.	1603000655	Apr 22, 2016	Air grill	-	Apr 21, 2026
589	Petty Patent 14706	Dec 13, 2018	SCG Building Materials Co., Ltd.	1703001857	Sep 22, 2017	Apparatus for cutting heat insulation and vibration damping	-	Sep 21, 2027
590	Petty Patent 14851	Jan 23, 2019	SCG Building Materials Co., Ltd	1703000719	Apr 28, 2017	Installation of wall panel	-	Apr 27, 2027
591	Petty Patent 15233	Jun 7, 2019	SCG Building Materials Co., Ltd	1703002028	Oct 11, 2017	Roof cover	-	Oct 10, 2027
592	Petty Patent 15696	Nov 14, 2019	SCG Building Materials Co., Ltd	1703002120	Oct 25, 2017	Cover panel with ventilation	-	Oct 24, 2027

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593	Petty Patent 15697	Nov 14, 2019	SCG Building Materials Co., Ltd	1703000718	Apr 28, 2017	Shock absorption floor	-	Apr 27, 2027
594	Petty Patent 15741	Dec 6, 2019	SCG Building Materials Co., Ltd	1703000717	Apr 28, 2017	Flooring tiles	-	Apr 27, 2027
595	48370 (Iran)	May 21, 2008	SCG Building Materials Co., Ltd.	38606893	Sep 19, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 18, 2027
596	ZL200710305114.7 (China)	Aug 7, 2011	SCG Building Materials Co., Ltd.	ZL200710305114.7	Sep 20, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 19, 2027
597	US8333916B2 (USA)	Dec 18, 2012	SCG Building Materials Co., Ltd.	11/859684	Sep 21, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 20, 2027
598	11310 (Vietnam)	Apr 16, 2013	SCG Building Materials Co., Ltd.	1-2007-01913	Sep 20, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 19, 2027
599	MX316352B1 (Mexico)	Dec 11, 2013	SCG Building Materials Co., Ltd.	MX/a/2007/011554	Sep 19, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 18, 2027

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600	IDP000035162 (Indonesia)	Dec 13, 2013	SCG Building Materials Co., Ltd.	P00 2007 00506	Sep 20, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 19, 2027
601	EP2036694B1 (Italy)	Mar 5, 2014	SCG Building Materials Co., Ltd.	07116535.1	Sep 17, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 16, 2027
602	EP2036694 (Spain)	Mar 5, 2014	SCG Building Materials Co., Ltd.	07116535.1	Sep 17, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 16, 2027
603	TR201406264T4 (Turkey)	Mar 5, 2014	SCG Building Materials Co., Ltd.	07116535.1	Sep 17, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 16, 2027
604	EP2036694 (Portugal)	Mar 5, 2014	SCG Building Materials Co., Ltd.	07116535.1	Sep 17, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 16, 2027
605	299630 (India)	Oct 31, 2018	SCG Building Materials Co., Ltd.	1310/KOL/2007	Sep 20, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 19, 2027

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606	BRPI0705308B (Brazil)	Jan 30, 2018	SCG Building Materials Co., Ltd.	BRPI0705308 A	Sep 20, 2007	Apparatus and method for forming a pattern in ceramic tile or slab with prescribed thickness	-	Sep 19, 2027
607	602007035323.8 (Germany)	Mar 5, 2014	SCG Building Materials Co., Ltd.	07450217.0	Apr 27, 2007	A device for making continuous veining of desired patterns extending through the entire thickness of a product, a process of making thereof	-	Apr 26, 2027
608	2065150 (Italy)	Mar 5, 2014	SCG Building Materials Co., Ltd.	07450217.0	Apr 27, 2007	A device for making continuous veining of desired patterns extending through the entire thickness of a product, a process of making thereof	-	Apr 26, 2027
609	2065150 (Spain)	Mar 5, 2014	SCG Building Materials Co., Ltd.	07450217.0	Apr 27, 2007	A device for making continuous veining of desired patterns extending through the entire thickness of a product, a process of making thereof	-	Apr 26, 2027
610	ZL201730339649 0 (China)	Jan 5, 2018	SCG Building Materials Co., Ltd.	2017303396490	Jul 28, 2017	-	Roof tile	Jul 27, 2027

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611	ZL201730339353 9 (China)	Jan 30, 2018	SCG Building Materials Co., Ltd.	2017303393539	Jul 28, 2017	-	Roof tile	Jul 27, 2027
612	68537 (India)	Nov 22, 2018	SCG Building Materials Co., Ltd.	296226	Jul 28, 2017	-	Roof tile	Jul 27, 2027
613	63841 (India)	Mar 22, 2018	SCG Building Materials Co., Ltd.	29227	Jul 28, 2017	-	Roof tile	Jul 27, 2027
614	40567	Jun 24, 2014	SCG Ceramics Public	0401002211	Apr 28, 2004	A device for making continuous veining of desired patterns extending through the entire thickness of a product, a process of making thereof	-	Apr 27, 2024
615	50454	Jul 15, 2016	SCG Ceramics Public	1302000201	Feb 1, 2013	-	Floor tile	Jan 31, 2023
616	57300	Sep 7, 2017	SCG Ceramics Public	1402000978	Apr 25, 2014	-	Patterned material sheets	Apr 24, 2024
617	61920	Apr 11, 2018	SCG Ceramics Public	1602000240	Jan 29, 2016	-	Floor and wall tile	Jan 28, 2026
618	61921	Apr 11, 2018	SCG Ceramics Public	1602000241	Jan 29, 2016	-	Floor and wall tile	Jan 28, 2026
619	61922	Apr 11, 2018	SCG Ceramics Public	1602000242	Jan 29, 2016	-	Floor and wall tile	Jan 28, 2026
620	61923	Apr 11, 2018	SCG Ceramics Public	1602000243	Jan 29, 2016	-	Floor and wall tile	Jan 28, 2026
621	61925	Apr 11, 2018	SCG Ceramics Public	1602000693	Mar 1, 2016	-	Floor and wall tile	Feb 28, 2026
622	64258	Aug 16, 2018	SCG Ceramics Public	1602001442	Apr 22, 2016	-	Floor and wall tile	Apr 21, 2026
623	64259	Aug 16, 2018	SCG Ceramics Public	1602001443	Apr 22, 2016	-	Floor and wall tile	Apr 21, 2026



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624	68319	Feb 22, 2019	SCG Ceramics Public	1602000244	Jan 29, 2016	-	Floor and wall tile	Jan 28, 2026
625	71885	Oct 4, 2019	SCG Ceramics Public	1602000245	Jan 29, 2016	-	Floor and wall tile	Jan 28, 2026
626	71886	Oct 4, 2019	SCG Ceramics Public	1702001123	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
627	71887	Oct 4, 2019	SCG Ceramics Public	1702001124	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
628	71888	Oct 4, 2019	SCG Ceramics Public	1702001125	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
629	71889	Oct 4, 2019	SCG Ceramics Public	1702001126	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
630	73001	Dec 6, 2019	SCG Ceramics Public	1702001127	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
631	73002	Dec 6, 2019	SCG Ceramics Public	1702001128	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
632	73003	Dec 6, 2019	SCG Ceramics Public	1702001129	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
633	73004	Dec 6, 2019	SCG Ceramics Public	1702001130	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
634	73005	Dec 6, 2019	SCG Ceramics Public	1702001131	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
635	73006	Dec 6, 2019	SCG Ceramics Public	1702001132	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
636	73007	Dec 6, 2019	SCG Ceramics Public	1702001133	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027

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637	73008	Dec 6, 2019	SCG Ceramics Public	1702001134	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
638	73009	Dec 6, 2019	SCG Ceramics Public	1702001135	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
639	73010	Dec 6, 2019	SCG Ceramics Public	1702001137	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
640	73011	Dec 6, 2019	SCG Ceramics Public	1702001138	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
641	73012	Dec 6, 2019	SCG Ceramics Public	1702001139	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
642	73013	Dec 6, 2019	SCG Ceramics Public	1702001140	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
643	73014	Dec 6, 2019	SCG Ceramics Public	1702001142	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
644	73015	Dec 6, 2019	SCG Ceramics Public	1702001143	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
645	73018	Dec 6, 2019	SCG Ceramics Public	1702001141	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
646	73019	Dec 6, 2019	SCG Ceramics Public	1702001136	Mar 31, 2017	-	Patterned of Floor and wall tile	Mar 30, 2027
647	Petty Patent 10185	Aug 7, 2015	SCG Ceramics Public	1403000391	Apr 25, 2014	Material sheets	-	Apr 25, 2024
648	Petty Patent 10186	Aug 7, 2015	SCG Ceramics Public	1503000634	Apr 30, 2015	Adjust surfact and setting trowel	-	Apr 30, 2025



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649	Petty Patent 10439	Sep 28, 2015	SCG Ceramics Public	1503000635	Apr 30, 2015	Setting trowel	-	Apr 30, 2025
650	ZL200510083761.9 (China)	Jun 16, 2010	Thai Ceramic Co., Ltd.	200510083761.9	Apr 25, 2005	A device for making continuous veining of desired patterns extending through the entire thickness of a product and a process of making thereof	-	Apr 24, 2025
651	602005013647.9 (Germany)	Nov 2, 2006	Thai Ceramic Co., Ltd.	05450074.9	Apr 25, 2005	A device for making continuous veining of desired patterns extending through the entire thickness of a product and a process of making thereof	-	Apr 24, 2025
652	5450074 (Spain)	Nov 2, 2006	Thai Ceramic Co., Ltd.	05450074.9	Apr 25, 2005	A Device for Making Continuous Veining of Desired Patterns	-	Apr 24, 2025
653	502009901745936 (Italy)	Nov 2, 2006	Thai Ceramic Co., Ltd.	05450074.9	Apr 25, 2005	A Device for Making Continuous Veining of Desired Patterns	-	Apr 24, 2025
654	40369	Jun 9, 2014	SCG Landscape Co.,Ltd.	1102003513	Dec 6, 2011	-	Package	Dec 5, 2021
655	44002	Apr 30, 2015	SCG Landscape Co.,Ltd.	1102003514	Dec 6, 2011	-	Floor and wall tile	Dec 6, 2021
656	46643	Oct 27, 2015	SCG Landscape Co.,Ltd.	1102003516	Dec 6, 2011	-	Seat	Dec 6, 2021
657	58154	Oct 11, 2017	SCG Landscape Co.,Ltd.	1402000975	Apr 25, 2014	-	Floor and wall tile	Apr 24, 2024
658	58155	Oct 11, 2017	SCG Landscape Co.,Ltd.	1402000974	Apr 25, 2014	-	Floor and wall tile	Apr 24, 2024



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659	60015	Jan 12, 2018	SCG Landscape Co.,Ltd.	1402001809	Jul 17, 2014	-	Floor block	Jul 16, 2024
660	60009	Jan 12, 2018	SCG Landscape Co.,Ltd.	1402003353	Oct 30, 2014	-	Floor tile	Oct 29, 2024
661	60010	Jan 12, 2018	SCG Landscape Co.,Ltd.	1402003352	Oct 30, 2014	-	Floor tile	Oct 29, 2024
662	60011	Jan 12, 2018	SCG Landscape Co.,Ltd.	1402003351	Oct 30, 2014	-	Floor tile	Oct 29, 2024
663	60012	Jan 12, 2018	SCG Landscape Co.,Ltd.	1402003350	Oct 30, 2014	-	Floor tile	Oct 29, 2024
664	60013	Jan 12, 2018	SCG Landscape Co.,Ltd.	1402003349	Oct 30, 2014	-	Floor tile	Oct 29, 2024
665	60806	Feb 16, 2018	SCG Landscape Co.,Ltd.	1502001857	Jun 12, 2015	-	Brick	Jun 11, 2025
666	60807	Feb 16, 2018	SCG Landscape Co.,Ltd.	1502001858	Jun 12, 2015	-	Brick	Jun 11, 2025
667	60814	Feb 16, 2018	SCG Landscape Co.,Ltd.	1502001859	Jun 12, 2015	-	Brick	Jun 11, 2025
668	60815	Feb 16, 2018	SCG Landscape Co.,Ltd.	1502001860	Jun 12, 2015	-	Brick	Jun 11, 2025
669	61074	Apr 4, 2018	SCG Landscape Co.,Ltd.	1502003710	Oct 27, 2015	-	Floor and wall tile	Oct 26, 2025
670	61795	Apr 4, 2018	SCG Landscape Co.,Ltd.	1502001376	Apr 27, 2015	-	Flowerpot	Apr 26, 2025
671	62040	Apr 9, 2018	SCG Landscape Co.,Ltd.	1502003712	Oct 27, 2015	-	Floor block	Oct 26, 2025
672	62041	Apr 9, 2018	SCG Landscape Co.,Ltd.	1502003713	Oct 27, 2015	-	Floor and wall tile	Oct 26, 2025
673	62042	Apr 9, 2018	SCG Landscape Co.,Ltd.	1502003714	Oct 27, 2015	-	Floor and wall tile	Oct 26, 2025
674	62043	Apr 9, 2018	SCG Landscape Co.,Ltd.	1502003715	Oct 27, 2015	-	Floor block	Oct 26, 2025
675	62044	Apr 9, 2018	SCG Landscape Co.,Ltd.	1502003716	Oct 27, 2015	-	Floor and wall tile	Oct 26, 2025
676	62039	Apr 19, 2018	SCG Landscape Co.,Ltd.	1502003711	Oct 27, 2015	-	Floor and wall tile	Oct 26, 2025
677	71654	Sep 23, 2019	The CPAC Roof Tile Co., Ltd	1201002592	Jun 1, 2012	Safety hook for roof tiles	-	May 31,2032
678	73000	Dec 6, 2019	The CPAC Roof Tile Co., Ltd	1602001694	May 4, 2016	-	Roof tiles	May 3, 2026

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679	Petty Patent 8719	Mar 14, 2014	The CPAC Roof Tile Co., Ltd.	1203001424	Jun 1, 2012	Roof tiles	-	May 31, 2022
680	61573	Mar 23, 2018	Thai Ceramic Roof Tile Co.,Ltd.	1602000766	Mar 7, 2016	-	Roof tiles	Mar 6, 2026
681	64257	Aug 16, 2018	Thai Ceramic Roof Tile Co.,Ltd.	1602003634	Sep 21, 2016	-	Roof tiles	Sep 20, 2026
682	Petty Patent 14513	Oct 25, 2018	Thai Ceramic Roof Tile Co.,Ltd.	1703002027	Oct 11, 2017	Eaves	-	Oct 10, 2027
683	61574	Mar 23, 2018	Cement Thai Ceramics Co.,Ltd.	1602000688	Mar 1, 2016	-	Basin	28 Feb, 2026
684	64260	Aug 16, 2018	Cement Thai Ceramics Co.,Ltd.	1602000685	Mar 1, 2016	-	Drawer	28 Feb, 2026
685	64261	Aug 16, 2018	Cement Thai Ceramics Co.,Ltd.	1602000686	Mar 1, 2016	-	Drawer	28 Feb, 2026
686	64262	Aug 16, 2018	Cement Thai Ceramics Co.,Ltd.	1602000687	Mar 1, 2016	-	Drawer	28 Feb, 2026
687	Petty Patent 9002	Jul 23, 2014	SCG Trading Co., Ltd.	1103000443	May 3, 2011	Liquid coal fuel	-	May 2, 2021
688	45844	Sep 11, 2015	Siam Sanitary Ware Co.,Ltd.	0901000651	Feb 16, 2009	Water supply to the front of the toilet	-	Feb 15, 2019
689	72311	Oct 31, 2019	Siam Sanitary Ware Co.,Ltd.	1201002379	May 23, 2012	toilet	-	May 22, 2032
690	72312	Oct 31, 2019	Siam Sanitary Ware Co.,Ltd.	1301005911	Oct 15, 2013	Toilet and flushing system	-	Oct 14, 2033
691	72313	Oct 31, 2019	Siam Sanitary Ware Co.,Ltd.	1501001269	Mar 9, 2015	Automatic sheet support system for sanitary ware production	-	Mar 8, 2035
692	40572	Jun 25, 2014	Siam Sanitary Ware Co.,Ltd.	1102001262	Apr 29, 2011	-	Tap	Apr 28, 2021
693	41048	Aug 6, 2014	Siam Sanitary Ware Co.,Ltd.	1102001263	Apr 29, 2011	-	Sink	Apr 28, 2021
694	41049	Aug 6, 2014	Siam Sanitary Ware Co.,Ltd.	1102001261	Apr 29, 2011	-	Sink	Apr 28, 2021
695	41695	Oct 1, 2014	Siam Sanitary Ware Co.,Ltd.	1102003640	Dec 20, 2011	-	Toilet	Dec 19, 2021

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696	42053	Nov 11, 2014	Siam Sanitary Ware Co.,Ltd.	1102001259	Apr 29, 2011	-	Sink	Apr 28, 2021
697	42054	Nov 11, 2014	Siam Sanitary Ware Co.,Ltd.	1102001260	Apr 29, 2011	-	Sink	Apr 28, 2021
698	43147	Mar 9, 2015	Siam Sanitary Ware Co.,Ltd.	1202001026	Apr 23, 2012	-	Water tank	Apr 23, 2022
699	51555	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302001680	Jun 19, 2013	-	Water tank	Jun 18, 2023
700	51556	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302001681	Jun 19, 2013	-	Water tank	Jun 18, 2023
701	51557	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302001682	Jun 19, 2013	-	Water tank	Jun 18, 2023
702	51558	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302001683	Jun 19, 2013	-	Water tank	Jun 18, 2023
703	51559	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302001684	Jun 19, 2013	-	Water tank	Jun 18, 2023
704	51560	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302001685	Jun 19, 2013	-	Water tank	Jun 18, 2023
705	51562	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302002772	Oct 7, 2013	-	Toilet	Oct 6, 2023
706	51563	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302002773	Oct 7, 2013	-	Toilet	Oct 6, 2023
707	51564	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302002775	Oct 7, 2013	-	Toilet	Oct 6, 2023
708	51565	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302002776	Oct 7, 2013	-	Sink	Oct 6, 2023
709	51566	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302002777	Oct 7, 2013	-	Sink	Oct 6, 2023
710	51567	Sep 27, 2016	Siam Sanitary Ware Co.,Ltd.	1302002778	Oct 7, 2013	-	Sink	Oct 6, 2023
711	51940	Oct 18, 2016	Siam Sanitary Ware Co.,Ltd.	1302002774	Oct 7, 2013	-	Toilet	Oct 6, 2023
712	54269	Mar 16, 2017	Siam Sanitary Ware Co.,Ltd.	1402002184	Aug 6, 2014	-	Sink	Aug 5, 2024
713	71216	Aug 22, 2019	Siam Sanitary Ware Co.,Ltd.	1802000452	Jan 30, 2018	-	Cover seat	Jan 19, 2028
714	37938	Nov 7, 2013	Siam Sanitary Fitting Co.,Ltd.	1002002824	Oct 5, 2010	-	Tap	Oct 4, 2020
715	40130	Apr 23, 2014	Siam Sanitary Fitting Co.,Ltd.	1002001700	Jul 2, 2010	-	Tap	Jul 1, 2020
716	40131	Apr 23, 2014	Siam Sanitary Fitting Co.,Ltd.	1002001702	Jul 2, 2010	-	Tap	Jul 1, 2020
717	40132	Apr 23, 2014	Siam Sanitary Fitting Co.,Ltd.	1002001703	Jul 2, 2010	-	Tap	Jul 1, 2020
718	40133	Apr 23, 2014	Siam Sanitary Fitting Co.,Ltd.	1002001704	Jul 2, 2010	-	Tap	Jul 1, 2020
719	40144	May 23, 2014	Siam Sanitary Fitting Co.,Ltd.	1102001189	Apr 21, 2011	-	Tap	Apr 20, 2021

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720	40146	Apr 23, 2014	Siam Sanitary Fitting Co.,Ltd.	1002001701	Jul 2, 2010	-	Tap	Jul 1, 2020
721	49197	Apr 21, 2016	Siam Sanitary Fitting Co.,Ltd.	1202001997	Jul 30, 2012	-	Valve	Jul 29, 2022
722	54455	Mar 28, 2017	Siam Sanitary Fitting Co.,Ltd.	1402000964	Apr 24, 2014	-	Tap	Apr 23, 2024
723	55511	Jun 19, 2017	Siam Sanitary Fitting Co.,Ltd.	1402000963	Apr 24, 2014	-	Tap	Apr 23, 2024
724	61965	Apr 17, 2018	Siam Sanitary Fitting Co.,Ltd.	1602001432	Apr 21, 2016	-	Handrail for toilet	Apr 20, 2026
725	61966	Apr 17, 2018	Siam Sanitary Fitting Co.,Ltd.	1602001860	May 18, 2016	-	Handrail	May17, 2026
726	61967	Apr 17, 2018	Siam Sanitary Fitting Co.,Ltd.	1602001861	May 18, 2016	-	Handrail	May17, 2026
727	61968	Apr 17, 2018	Siam Sanitary Fitting Co.,Ltd.	1602001862	May 18, 2016	-	Handrail	May17, 2026
728	62930	Jun 12, 2018	Siam Sanitary Fitting Co.,Ltd.	1602001431	Apr 21, 2016	-	Tap	Apr 20, 2026
729	66002	Nov 2, 2018	Siam Sanitary Fitting Co.,Ltd.	1602001430	Apr 21, 2016	-	Tap	Apr 20, 2026
730	74764	Jul 12, 2019	Siam Sanitary Fitting Co.,Ltd.	1702002392	Jun 27, 2017	-	Tap	Jun 26, 2027
731	74765	Jul 12, 2019	Siam Sanitary Fitting Co.,Ltd.	1702002393	Jun 27, 2017	-	Tap	Jun 26, 2027
732	Petty Patent 9302	Nov 7, 2014	Siam Sanitary Fitting Co.,Ltd.	1403000383	Apr 24, 2014	Tap	-	Apr 23, 2024
733	Petty Patent 9417	Jan 6, 2015	SCG Cement-Building Materials Co., Ltd.	1403000992	Sep 1, 2014	Tile support on roof structure	-	Aug 30, 2024
734	Petty Patent 11253	Mar 7, 2016	SCG Cement-Building Materials Co., Ltd.	1503000803	May 29, 2015	Apparatus for extending pathway	-	May 28, 2025
735	Petty Patent 12995	Aug 22, 2017	SCG Cement-Building Materials Co., Ltd.	1703000308	Feb 24, 2017	Apparatus for testing wall	-	Feb 23, 2027
736	Petty Patent 15234	Jun 7, 2019	Siam Fiberglass Co., Ltd.	1703000715	Apr 28, 2017	Sound insulation sheet	-	Apr 27, 2027

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
Chemicals Business and Cement-Building Materials Business								
737	11201402718T (Singapore)	Jun 22, 2016	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd.	11201402718T	Feb 29, 2012	High emissivity coating compositions and manufacturing processes therefore	-	Feb 28, 2032
738	I500721 (Taiwan)	Jul 29, 2015	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd.	102107293	Mar 1, 2013	High emissivity coating compositions and manufacturing processes therefore	-	Feb 28, 2033
739	2.863.294 (Canada)	Aug 16, 2016	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd.	2.863.294	Feb 29, 2012	High emissivity coating compositions and manufacturing processes therefore	-	Feb 28, 2032
740	5982502 (Japan)	Aug 31, 2016	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd.	2014-559867	Apr 2, 2014	High emissivity coating compositions and manufacturing processes therefore	-	Apr 1, 2034
741	9,587,120B2 (USA)	Mar 7, 2017	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd	14/240,550	Feb 24, 2014	High emissivity coating compositions and manufacturing processes therefore	-	Feb 23, 2034

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
742	602012030318.2 (Germany)	Mar 22, 2017	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd	12869694.5	Feb 29, 2012	High emissivity coating compositions and manufacturing processes therefore	-	Feb 28, 2032
743	2820364 (Netherland)	Mar 22, 2017	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd	12869694.5	Feb 29, 2012	High emissivity coating compositions and manufacturing processes therefore	-	Feb 28, 2032
744	2820364 (France)	Mar 22, 2017	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd	12869694.5	Feb 29, 2012	High emissivity coating compositions and manufacturing processes therefore	-	Feb 27, 2032
745	1908000 (Republic of Korea)	Oct 8, 2018	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd	2014-7018583	Jul 4, 2014	High emissivity coating compositions and manufacturing processes therefore	-	Jul 3, 2034
746	6461050 (Japan)	Jan 30, 2019	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd	2016-127184	Jun 28, 2016	High emissivity coating composition and manufacturing process thereof	-	Feb 27, 2032 (PCT filing date Feb 29, 2014)
747	Petty Patent 70030	May 29, 2019	SCG Chemicals Co., Ltd. and Cementhai Energy Conservation Co.,Ltd.	1702003753	Sep 22, 2017	Solar Floating System	-	Sep 21, 2037



No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
748	Petty Patent 70031	May 29, 2019	SCG Chemicals Co., Ltd. and Cementhai Energy Conservation Co.,Ltd.	1702003754	Sep 22, 2017	Solar Floating System	-	Sep 21, 2037
Packaging Business and Cement-Building Materials Business								
749	Petty Patent 15003	Mar 12, 2019	SCG Packaging PLC. and SCG Cement-Building Materials Co., Ltd.	1703000534	Mar 29, 2017	Binder with lime mud	-	Mar 28, 2027

- **Concession**

Concessions in limestone and gypsum mines are long-lived. Their maturities have been continuously extended because cement is a fundamental product for construction and infrastructure related to the country's economy.

Details of utilized concessions of The Siam Cement Public Company Limited and Companies Cement-Building Materials Business are shown in below table

Concessionaire	Location	Type of Mineral	Number of Concession (Copies)	Type of Area	Area (Rai)	Remaining Years of Concession	Expiry Year
The Siam Cement PLC.	Saraburi	Limestone for cement industry	15	RFD	3,312	17	2036
		Pyrophyllite	1	RFD	96	9	2028
			2	RFD	139	13	2032
	Nakorn Sawan	Gypsum	1	RFD	298	12	2031
			1	RFD	278	6	2025
SCG Cement Co., Ltd.	Lampang	Lignite, ball clay	1	RFD	210	13	2032
The Siam Cement (Lampang) Co., Ltd.	Lampang	Limestone for cement industry	17	RFD	4,977	23	2042
		Shale for cement industry	2	RFD	596	20	2039
			3	RFD	846	23	2042
		Industrial clay for cement industry	1	Owned by the company	51	10	2029
			1	Owned by the company	280	16	2035
The Siam Cement (Kaeng Khoi) Co., Ltd.	Saraburi	Limestone for cement industry	10	RFD	2,571	8	2027
		Shale for cement industry	3	Owned by the company	874	8	2027
	Lopburi	Industrial clay for cement industry	1	Owned by the company	218	19	2038

Concessionaire	Location	Type of Mineral	Number of Concession (Copies)	Type of Area	Area (Rai)	Remaining Years of Concession	Expiry Year
The Siam Cement (Kaeng Khoi) Co., Ltd.	Prachinburi	Industrial clay for cement industry	2	Owned by the company	507	18	2037
	Nakhon Ratchasima	Industrial clay for cement industry	4	Owned by the company	997	23	2042
The Siam Cement (Ta Luang) Co., Ltd.	Saraburi	Limestone for cement industry	5	RFD	956	11	2030
			13	RFD	3,877	23	2042
		Industrial clay for cement industry	1	Owned by the company	280	7	2026
			3	Owned by the company	840	19	2038
			1	Owned by the company	86	5	2024
			1	Owned by the company	208	22	2041
The Siam Cement (Thung Song) Co., Ltd.	Nakorn Sri Thammarat	Limestone for cement industry	19	RFD	4,971	16	2035
		Industrial clay for cement industry	1	Owned by the company	118	22	2041
			1	Owned by the company	65	14	2033
	Krabi	Industrial clay for cement industry	2	Owned by the company	372	19	2038
	Suratthani	Gypsum	1	Owned by the company	39	7	2026
Silasanon Co., Ltd.	Saraburi	Limestone for cement industry, Limestone for white cement and limestone for building industry	1	RFD	257	15	2034

Concessionaire	Location	Type of Mineral	Number of Concession (Copies)	Type of Area	Area (Rai)	Remaining Years of Concession	Expiry Year
Silathai Sanguan (2540) Co., Ltd.	Khonkaen	Limestone for construction industry	1	Owned by the company	167	1	2020
Khammouane Cement Co., Ltd.	Laos	Limestone for cement industry	1	RFD	21,500 (3,440 ha)	28	2047
		Laterite for cement industry			5,300 (848 ha)	28	2047
		Clay			4,675 (748 ha)	28	2047
Kampot Cement Co.,Ltd.	Cambodia	Limestone for cement industry	1	Ministry of industry, Mines and Energy	6,133	47	2066
PT Tambang Semen Sukabumi (For PT.Semen Jawa)	Indonesia	Limestone for cement industry (Mt. Guha)	1	Ministry of forestry	3,006	19	2038
		Limestone for cement industry (Mt. Batu)	1	Owned by resident	741	20	2039
		Shale for cement industry	1	Ministry of forestry	743	19	2038
Mawlamyine Cement Limited	Myanmar	Limestone for cement industry	1	Ministry of forestry	800 (320 Acre)	17	2036

● BOI Certificates

SCG adheres to the policy to apply for the BOI's privileges in every business it is eligible for. The Group believes that it can fully operate under all BOI's rules and regulations due to its transparent operation based on good corporate governance.

○ Chemicals Business

The Business acquired BOI tax incentives such as machinery import duty exemption, corporate tax exemption for 8 years from the date of first revenue received, and 50 percent reduction of corporate income tax for 5 years after the exemption period. Details are shown below:



Project	Date Acquired	Expiry of Tax Incentives
R&D (SCG Chem) - New process/ process improvement for Polyethylene	May 6, 2011	Oct, 2026
R&D (SCG Chem) - New product / new technology in Petrochemicals	Nov 10, 2011	Dec, 2024
R&D (SCG Chem) - New coating material / new coating process for Industrial use	Nov 22, 2013	13 years from the date of first revenue received
R&D (SCG Chem) - New process for olefins extraction in Petrochemicals industry	Jul 24, 2014	13 years from the date of first revenue received
R&D (SCG Chem) - Additive / new process for polymer product improvements	Sep 4, 2014	13 years from the date of first revenue received
R&D (SCG Chem) - Synthesis of new chemicals products for industrial use	Sep 9, 2015	13 years from the date of first revenue received
Calibration	Jun 30, 2003 May 22, 2012 May 22, 2014	May, 2019 Nov, 2025 Feb, 2030
Scientific testing services (CI BOT)	Feb 16, 2016	Nov, 2030
Scientific testing services (Oval BOT)	Feb 16, 2016	13 years from the date of first revenue received
Human resources development	Dec 16, 2011	Jan, 2027
Mould	Nov 25, 2010	Nov, 2023
Automation System Integration Machine	Oct 25, 2018	13 years from the date of first revenue received
Scientific testing services (ADC)	Feb 15, 2019	13 years from the date of first revenue received

The Business acquired BOI tax incentives such as machinery import duty exemption, corporate tax exemption for 8 years in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects from the date of first revenue received, and 50 percent reduction of corporate income tax for 5 years after the exemption period. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
PP 3	Nov 1, 2013	Mar, 2023
HDPE 4	Nov 1, 2013	Feb, 2023
Jetty and terminal	Dec 12, 2007 Aug 14, 2009 Mar 5, 2010 Jun 26, 2012	Mar, 2023 Sep, 2023 May, 2024 Dec, 2025

Project	Date Acquired	Expiry of Tax Incentives
	Aug 4, 2014	Mar, 2028
Olefins (MOC)	Dec 25, 2006	Dec, 2022
Styrene Monomer	Apr 19, 2018	13 years from the date of first revenue received
Ethylene and Propylene (Side Cracker)	Apr 23, 2018	13 years from the date of first revenue received
PE compound	Nov 1, 2013 Jan 5, 2015 Jan 5, 2015	Jul, 2020 Mar, 2026 Feb, 2028
Steam	Nov 1, 2013	Apr, 2024
Catalyst	Nov 1, 2013	13 years from the date of first revenue received
Industrial wax	Nov 1, 2013	Nov, 2026
LDPE (DPEX)	Nov 22, 2013	Apr, 2030
Waste water treatment, plant industrial waste and toxic chemicals management	Mar 20, 2008	Apr, 2023
PVC resin	Aug 5, 2005	Jul, 2020
Profile, pipe, fitting	Sep 18, 2006 Sep 18, 2006 Dec 29, 2010 Mar 11, 2011 May 14, 2012 Jul 11, 2012 Sep 25, 2012 Mar 22, 2013 Jul 23, 2014 Jul 17, 2015 Oct 8, 2015 Jan 23, 2017 Jan 23, 2017	Jul, 2019 Mar, 2020 Jan, 2024 May, 2024 Mar, 2025 Jul, 2025 Oct, 2025 Sep, 2026 Oct, 2027 Feb, 2029 Sep, 2029 13 years from the date of first revenue received 13 years from the date of first revenue received
Recycling and reuse of unwanted material	Oct 16, 2013 Mar 15, 2017	Sep, 2030 13 years from the date of first revenue received
Manufacture of biological fertilizers, organic fertilizers or soil conditioner	Apr 21, 2015	May, 2030
Floating solar farm	Aug 22, 2017	May, 2032

Project	Date Acquired	Expiry of Tax Incentives
Solar farm	Mar 29, 2018	Dec, 2031
Jigs and Metal Parts	Dec 27, 2017	13 years from the date of first revenue received
	Dec 27, 2017	13 years from the date of first revenue received
	Dec 27, 2017	13 years from the date of first revenue received

The project which receives corporate tax exemption for 8 years from the first date revenue received but doesn't receive corporate tax reduction. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
R&D (SCG Chem) - Process for removing impurity of aromatic in Petrochemicals	Aug 27, 2009	8 years from the date of first revenue received
R&D (SCG Chem) - New catalyst for Petrochemicals	Oct 20, 2011	8 years from the date of first revenue received
R&D (SCG Chem) - Additives for polymer products	Jul 21, 2016	8 years from the date of first revenue received
Scientific Testing Services (CPP)	Jun 9, 2017	Jan, 2027
R&D (TPE) New technology for polymer product (SMX)	Apr 20, 2016	8 years from the date of first revenue received
R&D (TPE-PP pilot plant)	Apr 21, 2016	Nov, 2027

The project which receives 8 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects from the first date revenue received but doesn't receive corporate tax reduction. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
R&D (PVC) additive for Petrochemicals industry	Sep 6, 2017	8 years from the date of first revenue received
R&D (PVC) chemicals products for industry	Oct 11, 2017	8 years from the date of first revenue received
Thermal cracked PE WAX	Apr 3, 2019	8 years from the date of first revenue received

The project which receives 7 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects from the first date revenue received but doesn't receive corporate tax reduction. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Pipe, fitting	Jul 11, 2012	Mar, 2020
	Jan 21, 2014	Feb, 2022
	Jul 17, 2015	Jan, 2023
	Jul 17, 2015	Nov, 2023
	Oct 8, 2015	Jul, 2023
	Apr 27, 2017	7 years from the date of first revenue received
	Apr 27, 2017	7 years from the date of first revenue received

The project which receives corporate tax exemption for 6 years from the first date revenue received but doesn't receive corporate tax reduction. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Enterprise software and digital content	Sep 13, 2016	Nov, 2022

The project which receives 8 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects with measures to reduce environmental impact. So that the project receives the corporate tax exemption on its revenue from existing operation. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
PP1	Nov 1, 2013	Feb, 2019
Jetty and terminal	Oct 10, 2012	Oct, 2020

The project which receives corporate tax exemption on net profit not exceeding 50% of an investment amount excluding cost of land and working capital of modification project for 3 years from the first date of revenue generated. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Olefins (ROC – Debottleneck)	Aug 18, 2016	Aug, 2019
HDPE3	Dec 21, 2016	Dec, 2019
LLDPE, MDPE	May 5, 2017	May, 2020

The project which receives 3 years of corporate tax exemption in an amount equivalent to 50% of an investment amount excluding cost of land and working capital for the projects with measures to reduce environmental impact. So that the project receives the corporate tax exemption on its revenue from existing operation. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Jetty and terminal	Jun 21, 2017	Jun, 2020

The project which receives 6 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects from the first date revenue received, and 50% reduction of corporate income tax for 5 years after the exemption period. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Raw Water Plant	Jan 15, 2018	Aug, 2029

○ Packaging Business

The Business acquired BOI tax incentives such as machinery import duty exemption, corporate tax exemption for 8 years in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects from the date of first revenue received, and 50% reduction of corporate income tax for 5 years after the exemption period. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Corrugated sheet and container	Jul 24, 2007	Jan, 2022
Plastic or plastic coated products	Mar 27, 2009	Sep, 2022
	Mar 27, 2013	Jul, 2026
	Apr 17, 2014	Jul, 2027
	Mar 19, 2015	Aug, 2028
	Mar 19, 2015	Jul, 2030

The project which receives corporate tax exemption for 8 years from the first date revenue received but doesn't receive corporate tax reduction. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Eucalyptus forest	Feb 6, 2013	Jun, 2021
Production of electricity from waste or refuse-derived fuel	Jul 26, 2017	Oct, 2026
Energy service company (ESCO)	Oct 3, 2018	Oct, 2030

The project which receives 8 years of corporate tax exemption in an amount equivalent to 150% of an investment amount excluding cost of land and working capital for the projects from the date of first revenue received. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Corrugated container	Apr 1, 2013	Sep, 2020
	May 14, 2013	Jun, 2025

The project which receives 8 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects. So that the project receives the corporate tax exemption on its revenue from existing operation. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Printing	Oct 12, 2015	Oct, 2023
Co-generation plant	Apr 5, 2010 Dec 11, 2014	Mar, 2019 8 years from the date of first revenue received
Corrugated container	Apr 1, 2013	Oct, 2019
Solar rooftop	Oct 26, 2018 Oct 26, 2018 Nov 22, 2019 Nov 22, 2019 Nov 22, 2019 Nov 22, 2019	May, 2027 8 years from the date of first revenue received 8 years from the date of first revenue received 8 years from the date of first revenue received 8 years from the date of first revenue received 8 years from the date of first revenue received
Solar farm and floating solar farm	Feb 8, 2019	8 years from the date of first revenue received

The project which receives 8 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects with measures to reduce environmental impact. So that the project receives the corporate tax exemption on its revenue from existing operation. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Kraft paper	Feb 14, 2013 Feb 14, 2013 Feb 14, 2013 May 20, 2013 Feb 20, 2014	Mar, 2019 Sep, 2019 Dec, 2020 May, 2021 Feb, 2022

The project which receives 6 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects from the date of first revenue received. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Hygienic plastic coated paper	Mar 7, 2013	May, 2020

The project which receives 5 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects from the date of first revenue received. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Printing	Aug 26, 2015 Oct 19, 2017	Mar, 2021 5 years from the date of first revenue received
Specialty pulp or specialty paper (Glassine paper)	Oct 18, 2017	Apr, 2022

The project which receives 3 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects from the date of first revenue received. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Pulp	Feb 10, 2016	Feb, 2019
Kraft paper	Apr 19, 2018 Jun 12, 2018	3 years from the date of first revenue received 3 years from the date of first revenue received
Industrial bag	Jan 5, 2018	3 years from the date of first revenue received
Corrugated sheet	Jul 28, 2016 Jul 28, 2016	3 years from the date of first revenue received 3 years from the date of first revenue received
Products from hygienic paper	Mar 15, 2017 Dec 18, 2017 Feb 2, 2018	Nov, 2019 Feb, 2021 Mar, 2021

The project which receives 3 years of corporate tax exemption in an amount equivalent to 50% of an investment amount excluding cost of land and working capital for the projects with measures to reduce environmental impact. So that the project receives the corporate tax exemption on its revenue from existing operation. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Pulp	Jul 21, 2017	Jul, 2020

The project which receives 3 years of corporate tax exemption in an amount equivalent to 50% of an investment amount excluding cost of land and working capital for the projects with alternative energy utilization. So that the project receives the corporate tax exemption on its revenue from existing operation. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Corrugated container	Apr 12, 2017	Apr, 2020
	Feb 27, 2018	Feb, 2021
	Sep 3, 2018	Sep, 2021
	Sep 3, 2018	Sep, 2021
	Aug 20, 2019	Aug, 2022

The project which receives 3 years of corporate tax exemption in an amount equivalent to 50% of an investment amount of modification project with measure to increase production efficiency excluding cost of land and working capital. So that the project receives the corporate tax exemption on its revenue from existing operation. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Corrugated container	Aug 20, 2019	Aug, 2022

○ Cement-Building Materials Business

The Business acquired BOI tax incentives such as machinery import duty exemption, corporate tax exemption for 8 years from the date of first revenue received, and 50% reduction of corporate income tax for 5 years after the exemption period. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Environmental laboratory	Jun 29, 2012	May, 2027
Refuse Derived Fuel (RDF)	Jan 8, 2014	Jul, 2027
Electricity and Steam Production from Refuse-Derived Fuel	Jan 25, 2019	13 years from the date of first revenue received

The project which receives 8 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects from the date of first revenue received, and 50% reduction of corporate income tax for 5 years after the exemption period. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Production of bathroom or kitchen fittings	Oct 31, 2012	Feb, 2027

The project which receives corporate tax exemption for 8 years from the first date revenue received but doesn't receive corporate tax reduction. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Refuse Derived Fuel (RDF)	Jun 22, 2015	Sep, 2023
	Apr 5, 2016	Feb, 2024
Co-generation power plant	Dec 2, 2014	Jan, 2024

The project which receives 8 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects from the first date revenue received but doesn't receive corporate tax reduction. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Solar	May 4, 2017	Oct, 2025
	Jun 21, 2017	8 years from the date of first revenue received
	Sep 6, 2017	8 years from the date of first revenue received
	Sep 22, 2017	8 years from the date of first revenue received
	Jun 13, 2018	8 years from the date of first revenue received
	Jun 13, 2018	8 years from the date of first revenue received
	Nov 22, 2019	8 years from the date of first revenue received
	Dec 13, 2019	8 years from the date of first revenue received
Solar Floating	Nov 15, 2016	Feb, 2025
	Jun 13, 2018	8 years from the date of first revenue received
	Nov 22, 2019	8 years from the date of first revenue received
	Nov 22, 2019	8 years from the date of first revenue received
Solar Rooftop	Mar 21, 2018	8 years from the date of first revenue received
	Oct 4, 2018	8 years from the date of first revenue received
Refuse Derived Fuel (RDF)	Aug 18, 2016	May, 2025
Port operations for loading vessels (Wat Ban Dai)	Aug 20, 2013	Dec, 2022

The project which receives 7 years of corporate tax exemption in an amount equivalent to 100% of an investment amount excluding cost of land and working capital for the projects from the first date revenue received but doesn't receive corporate tax reduction. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Production line of ceramic roof tiles LINE 4	Dec 4, 2012	Nov, 2020
Production line of ceramic roof tiles LINE 5	Aug 13, 2013	7 years from the date of first revenue received
Fiberglass insulation	Nov 9, 2010	Feb, 2020
Production of ceramic tile	Oct 19, 2018	Mar, 2023
Production of ceramic tile (Phase 2)	Oct 19, 2018	7 years from the date of first revenue received
Production of sanitary ware and accessories	Feb 23, 2016	7 years from the date of first revenue received

The project which receives 3 years of corporate tax exemption in an amount equivalent to 50% of an investment amount of modification project with measure to increase production efficiency excluding cost of land and working capital for the projects from the first date of revenue generated. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Refractory brick and Monolithic	Mar 21, 2018	3 years from the date of first revenue received
Production of ceramic (Except Earthen Ware and ceramic tile)	Feb 21, 2018	Feb, 2021

○ Corporate & Investments

The Business acquired BOI tax incentives such as machinery import duty exemption, corporate tax exemption for 8 years from the date of first revenue received, and 50% reduction of corporate income tax for 5 years after the exemption period. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Solar roof	Mar 20, 2014	Feb, 2027

Trademarks

The key trademarks of The Siam Cement Public Company Limited and its subsidiaries comprise of “Elephant Device in Hexagon”, “Elephant Device in Circle”, “Erawan Device in Circle”, “Tiger Device in Circle” and “Elephant Device in Hexagon and SCG” etc. There are approximately 537 trademarks, which are registered at The Department of Intellectual Property, Ministry of Commerce.



Investment policy in subsidiaries and associate companies

The Siam Cement Public Company Limited is the holding company. Therefore, to ensure clarity in business management and effective resource management to strengthen the organization management according to the long term strategy and corporate governance. SCG has diversified into three core businesses, namely Cement-Building Materials Business, Chemicals Business and Packaging Business. And Investments was established to manage investment in jointly invest with leading companies in other businesses, such as agricultural machinery business, automotive business, automotive accessories and equipments business, and steel business. The returns are in term of dividend and management fee.

Please refer to page 7-17 for shareholding structure of direct and indirect ownership of company, subsidiaries, joint ventures, associates and other companies.

5. Legal Disputes

The Case of the Theft of Company Property (Form of Ordinary Share Certificates) and Fraud to the Company's Shareholder by an ex-employee.

In the first quarter of 2009, the Company lodged a complaint in criminal case against an ex-employee for theft (form of ordinary share certificate) and the forgery of 672,000 Company's ordinary share certificates. In the second quarter of 2009, the Company was notified by the Civil Court that the heirs and the estate administrator of the shareholder whose shares were forged ("Plaintiff") filed a civil lawsuit against the Company and relevant individuals and juristic persons for compensation. At present, the case has reached the final judgment. The summary of judgments rendered by each court is as below.

In the fourth quarter of 2011, the Civil Court had the judgment that the ex-employee committed a tort against the Plaintiff and ordered him to return the shares or pay the shares prices with interest until the payment is fully made, together with the dividend which the Plaintiff should have received. In addition, the court also decided that the Company, as the employer, shall be jointly liable to the Plaintiff. The Company and the Plaintiff have appealed the judgment of the Civil Court to the Appeal Court.

On 29 April 2014, the Appeal Court has made a decision on the case, ordering (i) the ex-employee who committed a tort to return shares of the Company to the Plaintiff or to pay the Plaintiff the share price at the last trading price of the Company's shares on the date of payment, which shall not be less than Baht 314.38 per share, together with dividends and an interest until the date of payment, and (ii) the Company, as employer, Thailand Securities Depository Co., Ltd. ("TSD"), and relevant persons to be jointly responsible with the ex-employee. On 23 July 2014, the Company has appealed the judgment of the Appeal Court to the Supreme Court and lodged amendment of the Plaintiff's appellate motion to the Supreme Court on 30 September 2014. Consequently on 22 December 2015, the Supreme Court has upheld the judgment of the Appeal Court. Therefore, the Company has recorded the provision for compensation for the amount which the Company is expected to be liable, in the statement of financial position as at 31 December 2015 of Baht 201 million (31 December 2014: Baht 349 million).

On 21 January 2016, the Company has fully made compensation to the Plaintiff by returning the shares with the ordinary share certificates and making payment of dividends both from the shares prior to the commencement of a civil lawsuit with interest thereon and from the commencement date of a civil lawsuit including any costs and expenses paid for court procedure, accounting for Baht 319 million in total. Later on, TSD, the co-defendant, has filed a petition to the Supreme Court for an interpretation on the judgment. On 21 November 2017, the Supreme Court has already ordered the mentioned petition to be dismissed. In December 2018, the Company has filed a civil lawsuit against all relevant persons for resource.

On 8 March 2019, the Central Labour Court has made the judgment ordering the ex-employee, the offender committed the tort, to compensate the Company in the amount of Baht 149 million together with the interest at the rate of 7.5% per annum. There was no appeal from both sides against the Central Labour Court's judgment, therefore, the judgment was final and it is currently under the civil execution procedure. For the court case for recourse TSD, the Civil Court has made the judgment on 4 December 2019 ordering TSD to make the repayment to the Company in the amount of Baht 62.55 million together with the interest at the rate of 7.5% per annum.

TSD is considering whether to appeal the judgment.

Risk Reduction of Map Ta Phut Projects

Due to the Central Administrative Court ordered governments authorities to order the temporary suspension of the projects representing a total of 18 projects of Chemicals Business in the Map Ta Phut Industrial Estate and vicinity of Rayong Province. On 2 September 2010, the Central Administrative Court delivered its judgement to revoke permits of the projects, for which such permits were issued after the Constitution B.E. 2550 came into force, and fall within the list of 11 types of serious impact projects issued on August 31, 2010 by the Ministry of Natural Resources and Environment. As a result of the judgement, almost all projects of the Group which were considered as non-serious impact projects were able to continue their operations, except for 1 project of the Group namely the Capacity Expansion of Vinyl Chloride Monomer Project of Thai Plastic and Chemicals Public Company Limited; which fall within the list. Around the end of 2012, such project had complied with the paragraph 2 of Article 67 of the Constitution B.E. 2550. The Industrial Estate Authority of Thailand (IEAT) were of the opinion that the project has fulfilled the requirements and accordingly, IEAT had submitted the issue to the prosecutor, requesting the prosecutor to request the Supreme Administrative Court to revoke the temporary suspension order in order to allow the project to resume construction. On April 1, 2013, the prosecutor had filed the petition to the Supreme Administrative Court. Later, in July 2014, the Supreme Administrative Court had revoked the temporary suspension of the project. In October 2014, the Group obtained a permit from IEAT and the project was able to operate as normal.

As for the ongoing lawsuit filed by the Stop Global Warming Association, the plaintiffs and defendants have appealed with the Supreme Administrative Court. Despite not being a party to the lawsuit, SCG has kept close track of the pending case. However, there has been no progress on the case so far.

6. Other Related Information

1. Company Information

Name	The Siam Cement Public Company Limited
Stock code	SCC (Listed on the Stock Exchange of Thailand - SET)
Registration No	0107537000114
Type of Business	Holding Company
Website	www.scg.com
Year of Establishment	1913
First Trade Date	April 30, 1975
Headquarter Address	1 Siam Cement Road, Bangsue, Bangkok 10800
Registered capital	1,600 Million Baht
Paid-up capital	1,200 Million Baht
	Comprised of 1,200 Million Ordinary shares
Par value	1 Baht par value
Preferred Share	None
Fiscal Year	January 1 – December 31 of each year
Shareholders	His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua and CPB Equity Co., Ltd. hold 33.8% of shares while the remaining shares are held by other institutional and individual shareholders.
Contacts	<p>Corporate Headquarters</p> <p>Tel. 66-2586-3333, 66-2586-4444</p> <p>Fax 66-2586-2974</p> <p>e-mail: info@scg.com</p> <p>Corporate Secretary Office</p> <p>Tel. 66-2586-6098</p> <p>Fax 66-2586-3007</p> <p>e-mail: corporatesecretary@scg.com</p> <p>Investor Relations Department</p> <p>Tel. 66-2586-4299</p> <p>e-mail: invest@scg.com</p> <p>Enterprise Brand Management Office</p> <p>Tel. 66-2586-3770</p> <p>Fax 66-2586-2974</p> <p>e-mail: ebmo@scg.com</p>

Independent Directors as Minority Shareholders'

Representative

Fax 66-2586-3007

e-mail: ind_dir@scg.com

2. Investment in subsidiaries, joint ventures, associates and other companies of which their operations are significant are disclosed in page 7-17.

3. References

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Tel. 66-2009-9999

Fax 66-2009-9991

e-mail SETContactCenter@set.or.th

Website <http://www.set.or.th/tsd>

Auditors KPMG Phoomchai Audit Ltd.

Mr. Viroj Jindamaneevitak (Certificated Public Accountant
Registration No. 3565) or

Ms. Pornthip Rimdusit (Certificated Public Accountant
Registration No. 5565) or

Ms. Thanyalux Keadkeaw (Certificated Public Accountant
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Fax 66-2586-2976

Trustee of CIMB Thai Bank Public Company Limited

Debenture Holders (Only for debenture SCC204A, SCC20NA, SCC214A and SCC210A)

Address Capital Financial Markets and Payments Operations Department
Agency Service and Compliance Unit, 15th Floor, 44 Langsuan Road,



	Lumpini, Pathum Wan, Bangkok, 10330
Tel.	66-2626-7508
Fax	66-2657-3390
Website	http://www.cimbthai.com
Trustee of Debenture Holders	Bank of Ayudhya Public Company Limited (Only for debenture SCC22OA SCC234A and SCC23NA)
Address	1222 Rama III Road, Bang Phongphang, Yan Nawa, Bangkok, 10120
Tel.	66-2296-4776
Fax	66-2683-1298
Website	http://www.krungsri.com