

1. Business Policies and Operation

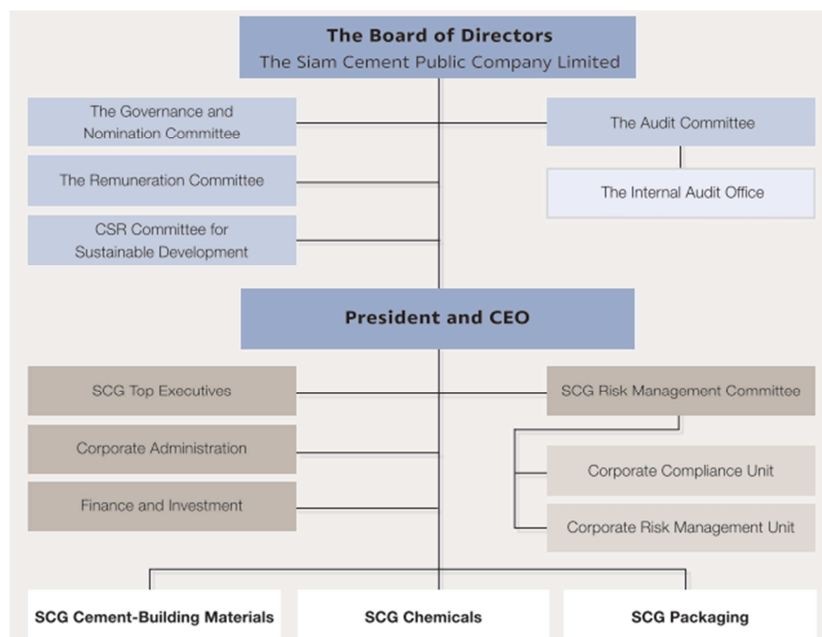
Overview of business and vision

SCG is a leading ASEAN business conglomerate with regional focus, and established commitments towards business conducts that are in line with good corporate governance and sustainable development principles. Established in 1913, following the royal decree of His Majesty King Rama VI, SCG's cement products were the essential materials for the construction of Thailand's infrastructure projects during that period, which have contributed greatly towards the country's modernization. Since its inception, SCG has grown continuously and has earned widespread recognition as a role model for other businesses, both locally and internationally. SCG is also a role model company that has adopted the principles of Sufficiency Economy in business operations, resulting in sustainable business achievement.

Today, SCG is comprised of three core business units, namely 1) SCG Cement-Building Materials, 2) SCG Chemicals and 3) SCG Packaging.

Our vision is that, SCG will be a regional market leader, contributing to the sustainable progress of ASEAN and the local communities where SCG operates. SCG is the first in Thailand to have been included in the prestigious Dow Jones Sustainability Indices (DJSI) by Robeco Sustainable Asset Management (RobecoSAM) and has been ranked the longest; for 13 consecutive years since 2004. Through SCG's world class business practices, corporate governance principles and uncompromising safety standards, we are committed to creating value for our customers, employees, and all other stakeholders. We will constantly ensure that our operational excellence, technology development and innovation will allow us to provide quality products and services in order to enhance the quality of life for all.

Organization Structure of SCG



Please refer to page 5-13 for shareholding structure of direct and indirect ownership of company, subsidiaries, joint ventures, associates and other companies.

Significant developments during 2014 – 2016 are as followed:

2016

- **SCG Cement – Building Materials**

The company had major investment projects and changed in shareholder proportion both in Thailand and abroad as follow;

- Acquired construction rock business with capacity of 4 million ton per year, for the amount of 1,161 million baht at Chalermphrakiat district, Saraburi Province. The business has been running since Q3/2016 with propose of uplifting and improving quarry and cement mill in Thailand. To do so, SCG applied production technology from cement plant to reduce cost of production and decrease any effects to environmental and surrounding society. Also, SCG has improved production process to make all natural resources used by the process worth.
- The Company has invested in establishing SCG Yamato Express Co., Ltd, a joint venture company between SCG Cement-Building Materials Co., Ltd and Yamato Asia Pte., Ltd. In proportion of 65% and 35% respectively. The total investment amount is 633 M-THB. The purpose is to run a logistics business in Thailand with an expertise in shipping small parcel in both B2C and C2C market. Since e-commerce, m-commerce and Urbanization play important role in supporting the growth of B2C and C2C of logistics business. It is expected that an average growth of such markets are more than 10% per year for the next 5 year.
- The company increased shareholder proportion in JBT, a leading SCG vessel contractors in Thailand, from 45% to 55% in order to reduce risk in lacking vessel for transferring coal and cement products in the future.
- The company increased shareholder proportion in Prime Group, Vietnam to 100% in order to create sustainable growth of the company.
- The company sold shareholder proportion of 10.4% in Holcim Cement (Bangladesh) Ltd. (“HCBL”), a grinding cement plant in Bangladesh, to Holderfin B.V., a wholly-owned subsidiary of LafargeHolcim.
- The company sold shareholder proportion of 33% in Maker-Manifatture Ceramiche S.r.l, which is the Italy-based joint venture for manufacturing ceramics between SCG Cement – Building Materials Business Unit, a major business unit of SCC, and Florim Ceramiche S.p.A.

- **SCG Chemicals** – the company has completed the tender offer to delist Thai Plastic and Chemicals Public Company Limited (or “TPC”) from the Stock Exchange of Thailand.

- **SCG Packaging** – SCG Packaging has expanded flexible packaging capacity in Thailand to serve food and consumer products (e.g. diaper or refill packaging). Prepack, a leading producer of flexible packaging products, is expanding its capacity by 70 million sq. meters at the new facility in

Samut Sakhon province (35 kilometers from Bangkok). The production is commencing in the first quarter of 2016. Furthermore, SCG Packaging has expanded the manufacturing base for packaging paper in Vietnam through capacity upgrade and expansion project at Vina Kraft Paper Co.,Ltd (VKPC). This project increased the company's production capacity by 243,000 tons per year; enable it to meet the fast-growing demand for packaging paper in Vietnam. The expansion project was commenced operations in the first quarter of 2017, three months earlier than previously planned. This as a result of a well-planned strategy.

Furthermore, SCG has sold all of its 21% stake in Musashi Auto Parts Co., Ltd. (or "Musashi"). Musashi was a 1988 joint venture formed between SCC, Musashi Seimitsu Industry Co., Ltd. (Japan), and other shareholders, and is a leading manufacturer of motorcycle parts and automotive parts.

2015

- **SCG Packaging** – SCG Paper Public Company Limited has registered its name change. Effective June 2, 2015, the official name becomes "SCG Packaging Public Company Limited" while "SCG Packaging" will be the branded business name. This name change reflects the company's strategic focus towards packaging products and applications, with the aim of providing total and sustainable packaging solutions for its customers. Key examples are the continued development of high-quality packaging products and services, which include non-paper based flexible packaging products. The name change is also aligned with the company's drive to expand its packaging business in ASEAN countries. In June 2015, TC Flexible Packaging Company Limited (TCFP), a 52.5:47.5 joint venture between SCG Packaging and Rengo Company Limited (Japan) has expand Flexible packaging line in ASEAN by acquiring an 80% stake in Tin Thanh Packing Joint Stock Company (or "BATICO") from the existing shareholders. BATICO is Vietnam's top-five manufacturer of flexible packaging products, with a capacity of 230 million square meters per year. Furthermore, SCG Packaging has acquired an additional stake in Prepack Thailand Company Limited (or "Prepack") through the share purchase from the existing shareholders. As a result, SCG Packaging's stake in Prepack has been increased to 72%, from 22% on January 2015. Moreover, SCG Packaging proceeded to expand packaging paper line in Vina Kraft Paper Company Limited (or "VKPC"), a subsidiary of SCC in Vietnam, with additional capacity of approximately 243,000 tons per annum to tap Vietnam's rapid demand growth of packaging paper. The new production facility is scheduled to start up in the second quarter of 2017.

2014

- **SCG Cement – Building Materials** – the company has announced the Greenfield investment for 1.8 million tons per year cement plant in Laos which is expected to start up in 1st quarter of 2017 and also expand its annual production capacity of 2 million tons per year of Mortar in Khonkaen and Lampang. In addition, SCG Cement – Building Materials and Siam Global House have established joint venture called Global House International to create the construction retail opportunities in warehouse format in ASEAN. Furthermore, the company has acquired stake in Florim Ceramiche S.p.A. (“Florim”) in Italy to manufacture high-end ceramic tiles with capacity of 5 million sq.m. per year which will start up in early 2015. Finally, the company has acquired 55% in Panel World Company Limited which produces and distributes woodchip cement board. Currently, Panel World has capacity of 2.4 million sq.m. per year and is expanding its capacity of 2.4 million sq.m. per year which was started operation in 2014.
- **SCG Chemicals** – the company has invested 51% stake in Norner Holding AS, Norwegian research and innovation center specialized in polymerization and plastics application. This investment emphasized our continuous focus in High Valued Added products and services. The other 49% stake was acquired in September 2015.
- **SCG Paper** – Thai Containers Group (TCG), a 70:30 joint venture between SCG Paper and Rengo Company Limited (Japan), acquired 90% shares of PT Indoris Printingdo, a manufacturer and distributor of offset cartons in Indonesia and 22% shares of Prepack Thailand Company Limited, a manufacturer and distributor of flexible packaging in Thailand. This transaction is the first flagship expansion into the flexible packaging industry. In addition, Dyna Packs Company Limited (a 75% subsidiary of Thai Containers Group Company Limited) acquired 100% shares of D-In-Pack Company Limited, a manufacturer and distributor of corrugated container in Thailand. Furthermore, SCG Paper invested to upgrade the existing asset of Fibrous Chain to produce glassine paper (used in pressure sensitive labels) with 60,000 tons per year capacity, which is expected to start up by early 2016. This investment makes SCG Paper the first major glassine paper producer in ASEAN.

Furthermore, SCG has increased the stake to 20% in Lysando AG, which is a life sciences related R&D firm for HVA growth.

Supplementary Information

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

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)
SCG Cement-Building Materials Subsidiaries									
1 SCG Cement Co., Ltd.	Holding company	Bangkok	66-2586-3060-1	66-2586-3072	Ordinary shares	122	4,894	100	100
2 The Concrete Products and Aggregate Co., Ltd.	Holding company and 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	Saraburi	66-3624-0000-98	66-3624-0099	Ordinary shares	6	625	100	100
4 The Siam Cement (Ta Luang) Co., Ltd.	Cement	Saraburi	66-3628-8900	66-3628-8909	Ordinary shares	6	575	100	100
5 The Siam Cement (Thung Song) Co., Ltd.	Cement	Nakorn Sri Thammaraj	66-7553-8222	66-7553-8111	Ordinary shares	35	700	100	100
6 The Siam Cement (Lampang) Co., Ltd.	Cement	Lampang	66-5423-7500	66-5423-7501	Ordinary shares	94	589	100	100
7 Khammouane Cement Co., Ltd.	Cement	Lao PDR	(85621) 243-435-6	(85621) 243-437	Ordinary shares	28	9,616	100	100
					Preferred shares	0.05	18		
8 Siam Mortar Co., Ltd.	Dry mortar	Saraburi	66-3624-0000-98	66-3624-0083	Ordinary shares	4	443	100	100
9 The Siam White Cement Co., Ltd.	White cement	Saraburi	66-3621-8400	66-3635-1219	Ordinary shares	2	200	100	100
10 The Siam Refractory Industry Co., Ltd.	Refractory	Bangkok	66-2586-3230	66-2586-2982	Ordinary shares	3	300	100	100
11 Cementhai Energy Conservation Co., Ltd.	Energy service	Bangkok	66-2586-2410	66-2586-3098	Ordinary shares	13	1,310	100	100
12 Eco Plant Services Co., Ltd.	Technical services and plant installation	Saraburi	66-3628-9103	66-3628-1212	Ordinary shares	1	50	100	100
13 Siam Research and Innovation Co., Ltd.	Research and development	Saraburi	66-3627-3152-63	66-3627-3151	Ordinary shares	1	100	100	100
14 SCI Eco Services Co., Ltd.	Industrial waste disposal	Bangkok / Saraburi / Nakorn Sri Thammaraj	66-2962-7295-7	66-2962-7298	Ordinary shares	2	187	100	100
15 PT Pion Quarry Nusantara	Aggregates	Indonesia	(6221) 797-1190	(6221) 797-1090	Ordinary shares	0.001	16	100	100
16 PT SCG Pipe and Precast Indonesia	Concrete products	Indonesia	(6221) 797-1190	(6221) 797-1090	Ordinary shares	15	466	100	100
17 PT Semen Lebak	Cement	Indonesia	(6221) 791-83751	(6221) 791-80919	Ordinary shares	0.04	1,193	100	100
18 PT SCG Readymix Indonesia	Ready-mixed concrete	Indonesia	(6221) 797-1190	(6221) 797-1090	Ordinary shares	9	264	100	100
19 PT CPAC Surabaya	Ready-mixed concrete	Indonesia	(6231) 732-1512	(6231) 732-1512	Ordinary shares	1	43	100	100
20 Q Mix Supply Co., Ltd.	Ready-mixed concrete	Bangkok	66-2728-8800	66-2728-8801	Ordinary shares	8	800	100	100
21 CPAC Lao Co., Ltd.	Ready-mixed concrete	Lao PDR	(85621) 720-385	(85621) 720-224	Ordinary shares	0.05	31	100	100
22 The Concrete Products and Aggregate (Vietnam) Co., Ltd.	Ready-mixed concrete	Vietnam	(8483) 602-7111	(8483) 713-3707	**	-	178	100	100
23 Myanmar CPAC Service Co., Ltd.	Ready-mixed concrete	Myanmar	(951) 681-351	(951) 681-351	Ordinary shares	4	148	100	100
24 CPAC Concrete Products (Cambodia) Co., Ltd.	Precasted slab	Cambodia	(88523) 990-406	-	Ordinary shares	0.001	17	100	100
25 Silathai Sanguan (2540) Co., Ltd.	Aggregates	Khonkaen	66-4335-8031	66-4335-8033	Ordinary shares	1	54	100	100
26 Silasanon Co.,Ltd	Aggregates	Saraburi	66-2555-5000	66-2555-5003	Ordinary shares	5	505	100	100
27 SCG Building Materials Co., Ltd.	Holding company	Bangkok	66-2586-3333	66-2586-2761	Ordinary shares	190	19,009	100	100
28 Cementhai Gypsum Co., Ltd.	Holding company	Bangkok	66-2586-3333	66-2586-2761	Ordinary shares	7	193	100	100
29 MRC Roofing Co., Ltd.	Holding company	Bangkok	66-2555-0055	66-2555-0001	Ordinary shares	8	762	100	100
30 Cementhai Ceramics Co., Ltd.	Holding company	Bangkok	66-2586-3333	66-2586-2761	Ordinary shares	60	6,037	100	100

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31 Cementhai Roof Holdings Philippines, Inc.	Holding company	Philippines	(6343) 778-2942	(6343) 778-2934	Ordinary shares	14	136	100	100
32 Cementhai Ceramics Philippines Holdings, Inc.	Holding company	Philippines	(6343) 778-2942	(6343) 778-2934	Ordinary shares	174	192	100	100
33 Cementhai Building Materials (Singapore) Pte. Ltd.	Holding company	Singapore	(65) 6534-9661	(65) 6534-9662	Ordinary shares	1	14	100	100
34 Cementhai Gypsum (Singapore) Pte. Ltd.	Holding company	Singapore	(65) 6297-9661	(65) 6297-9662	Ordinary shares	14	278	100	100
35 Cementhai Ceramic (Singapore) Pte. Ltd.	Holding company	Singapore	(65) 6297-9661	(65) 6297-9662	Ordinary shares	37	1,280	100	100
36 Keating Capital Partners Pte. Ltd.	Holding company	Singapore	(65) 6338-1888	(65) 6337-5100	Ordinary shares	14	400	100	100
37 Kitchener Limited	Holding company	Hong Kong	(852) 2846-1888	(852) 2845-0476	Ordinary shares	16	452	100	100
38 The Siam Fibre-Cement Co., Ltd.	Fiber cement roof	Saraburi	66-2586-3333	66-2586-2761	Ordinary shares	110	11,000	100	100
39 The Fibre-Cement Products (Lampang) Co., Ltd.	Fiber cement roof	Lampang	66-5433-7301-5	66-5433-7300	Ordinary shares	2	230	100	100
40 Tip Fibre-Cement Co., Ltd.	Fiber cement roof	Bangkok	66-2286-7888	66-2286-8951-2	Ordinary shares	1	3	100	100
41 SCG Landscape Co., Ltd.	Concrete blocks for floor wall and fence	Saraburi	66-2586-6822	66-2586-6800	Ordinary shares	16	1,630	100	100
42 Siam Fiberglass Co., Ltd.	Insulation and glass wools	Saraburi	66-3637-3441-4	66-3637-3445-6	Ordinary shares	13	422	100	100
43 The CPAC Roof Tile Co., Ltd.	Concrete roof tiles	Nakorn Prathom / Saraburi / Chonburi / Khonkaen / Nakorn Sri Thamaraj / Lamphun / Nakorn Rajchasrma	66-2586-4032-4 66-2586-4037-9	66-2586-4308	Ordinary shares	10	1,030	100	100
44 SCG Concrete Roof (Vietnam) Co., Ltd.	Concrete roof tiles	Vietnam	(84650) 3767-581-4	(84650) 3767-686	**	-	235	100	100
45 SCG Roofing Philippines, Inc.	Concrete roof tiles	Philippines	(6343) 778-2942	(6343) 778-2934	Ordinary shares	206	153	100	100
46 SCG Concrete Roof (Cambodia) Co., Ltd.	Concrete roof tiles	Cambodia	(85523) 454-388	-	Ordinary shares	0.1	43	100	100
47 Thai Ceramic Roof Tile Co., Ltd.	Ceramic roof tiles	Saraburi	66-2586-5999	66-2586-5017	Ordinary shares	4	400	100	100
48 Thai Ceramic Co., Ltd.	Floor and wall ceramic tiles	Bangkok	66-2586-4094-8	66-2587-8800	Ordinary shares	32	3,160	100	100
49 The Siam Ceramic Group Industries Co., Ltd.	Floor and wall ceramic tiles	Saraburi	66-3637-6400	66-3637-6411	Ordinary shares	96	960	100	100
50 Cementhai Home Services Co., Ltd.	Home-related services	Bangkok	66-2586-4111	66-2586-4017	Ordinary shares	5	115	100	100
51 Gemago Co., Ltd.	Marketing and sales of floor and wall ceramic tiles	Bangkok	66-2586-3333	66-2586-2761	Ordinary shares	1	95	100	100
52 PT SCG Lightweight Concrete Indonesia	Light-weight concrete	Indonesia	(6226) 7861-0360	(6226) 7861-0361	Ordinary shares	4	1,253	100	100
53 SCG Distribution Co., Ltd.	Holding company	Bangkok	66-2586-3333	66-2586-5454	Ordinary shares	220	12,150	100	100
54 SCG Cement-Building Materials Company Limited	Domestic distribution	Bangkok	66-2586-3333	66-2586-2961	Ordinary shares	976	11,401	100	100
55 SCG Trading Co., Ltd.	International trading	Bangkok	66-2586-2222	66-2587-2159	Ordinary shares	4	400	100	100
56 SCG Trading Australia Pty. Ltd.	International trading	Australia	(612) 9438-1225	(612) 9436-0195	Ordinary shares	0.2	5	100	100
57 SCG Trading Guangzhou Co., Ltd.	International trading	China	(86) 208-365-2559	(86) 208-365-2595	Ordinary shares	0.03	24	100	100
58 SCG Trading Hong Kong Limited	International trading	Hong Kong	(852) 2838-6456	(852) 3549-7219	Ordinary shares	45	220	100	100
59 SCG Trading Philippines Inc.	International trading	Philippines	(632) 501-8634	(632) 501-8635	Ordinary shares	0.5	38	100	100
60 SCG Singapore Trading Pte. Ltd.	International trading	Singapore	(65) 6295-3455	(65) 6292-5241	Ordinary shares	1	23	100	100
61 SCG Trading USA Inc.	International trading	USA	(1310) 323-2194-106	(1310) 324-9528	Ordinary shares	0.1	36	100	100
62 PT SCG Trading Indonesia	International trading	Indonesia	(6221) 350-9488	(6221) 352-0718	Ordinary shares	0.002	5	100	100
63 SCG Trading Lao Co., Ltd.	International trading	Lao PDR	(85621) 454-596-7	(85621) 454-598	Ordinary shares	0.02	11	100	100
64 SCG Marketing Philippines Inc.	International trading	Philippines	(632) 501-8634 (632) 501-8630	(632) 501-8635	Ordinary shares	1	37	100	100
65 SCGT Malaysia Sdn. Bhd.	International trading	Malaysia	(603) 5632-0168	(603) 5632-0158	Ordinary shares	2	14	100	100

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66 SCG Trading (Cambodia) Co., Ltd.	International trading	Cambodia	(85523) 990-401-5	(85523) 990-400	Ordinary shares	0.0001	1	100	100
67 SCG Trading Middle East Dmcc	International trading	United Arab Emirates	9714-5520-293	9714-5520-294	Ordinary shares	0.001	11	100	100
68 SCG Trading Vietnam Co., Ltd.	Logistics service, international trading and local distribution	Vietnam	(848) 3526-9001	(848) 3526-9009	**	-	64	100	100
69 SCG Logistics Management Co., Ltd.	Logistics service	Bangkok	66-2586-3333	66-2586-2158	Ordinary shares	33	3,340	100	100
70 SCG Logistics Management (Lao) Co., Ltd.	Logistics service	Lao PDR	(85620) 9591-9650	-	Ordinary shares	0.004	0.4	100	100
71 SCG Logistics Lao Co., Ltd.	Logistics service	Lao PDR	(85620) 9591-9650	-	Ordinary shares	0.1	13	100	100
72 SCG Logistics Management (Cambodia) Co., Ltd.	Logistics service	Cambodia	(85523) 966-206	(85523) 966-205	Ordinary shares	0.03	11	100	100
73 SCG Trading Services Co., Ltd.	Business services	Bangkok	66-2586-2222	66-2586-2250	Ordinary shares	0.1	10	100	100
74 Myanmar CBM Services Co., Ltd.	Business services	Myanmar	(951) 966-2014	(951) 966-2014	Ordinary shares	0.02	66	100	100
75 SCG Sourcing Co., Ltd.	Retail	Bangkok	66-2586-3333	66-2586-5625	Ordinary shares	1	100	100	100
76 SCG Experience Co., Ltd.	Exhibition center services and consultation	Bangkok	66-2101-9922	66-2101-9920	Ordinary shares	5	500	100	100
77 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
78 Prime Group Joint Stock Company	Holding company	Vietnam	(84) 211-3888-987	(84) 211-3888-986	Ordinary shares	101	1,413	100	100
79 Prime Trading, Import and Export One Member Limited Liability Company	Marketing and sales of floor and wall ceramic tiles	Vietnam	(84) 211-3888-986	(84) 211-3898-276	**	-	420	100	100
80 Ceramic Research Institution	Research and development new technology, materials and products	Vietnam	(84) 211-3888-987	(84) 211-3888-986	**	-	7	100	100
81 Prime International Import-Export and Service Trading Company Limited	Marketing and sales of machine and spare part	Vietnam	(84) 43-7877-139	(84) 43-7877-138	**	-	6	100	100
82 Prime Ngoi Viet Joint Stock Company	Clay roof tiles	Vietnam	(84) 211-3597-696	(84) 211-3597-702	Ordinary shares	25	350	100	100
83 Prime Pho Yen Joint Stock Company	Floor ceramic tiles	Vietnam	(84) 280-3866-632	(84) 280-3866-474	Ordinary shares	15	210	100	100
84 Prime Yen Binh Joint Stock Company	Wall ceramic tiles	Vietnam	(84) 211-3866-152	(84) 211-3866-154	Ordinary shares	13	182	100	100
85 Prime Tien Phong Joint Stock Company	Floor and wall ceramic tiles	Vietnam	(84) 211-3888-174	(84) 211-3887-747	Ordinary shares	12	168	100	100
86 Prime Vinh Phuc Joint Stock Company	Floor and wall ceramic tiles	Vietnam	(84) 211-3866-637	(84) 211-3887-347	Ordinary shares	25	350	100	100
87 Prime Truong Xuan Joint Stock Company	Water heater and mechanical	Vietnam	(84) 211-3726-552	(84) 211-3721-786	Ordinary shares	6	84	99	99
88 Buu Long Industry and Investment Joint Stock Company	White cement	Vietnam	(8461) 396-5475	(8461) 396-5478	Ordinary shares	4	56	99	99
89 PT Semen Jawa	Cement	Indonesia	(6221) 350-9491	(6221) 350-9704	Ordinary shares	287	9,210	98	98
90 PT KIA Serpih Mas	Floor and wall ceramic tiles	Indonesia	(6221) 386-2322	(6221) 386-2253	Ordinary shares	3,143	1,528	97	97
91 PT KIA Keramik Mas	Ceramic roof tiles	Indonesia	(6221) 386-2322	(6221) 386-2253	Ordinary shares	2,926	2,162	96	96
92 PT Keramik Indonesia Assosiasi, Tbk.	Floor and wall ceramic tiles	Indonesia	(6221) 386-2322	(6221) 386-2253	Ordinary shares	14,929	5,603	96	96
93 Prime Dai An Joint Stock Company	Exploration and processing material	Vietnam	(84) 211-3728-770	(84) 211-3726-547	Ordinary shares	3	35	95	95
94 Kampot Cement Co., Ltd.	Cement	Cambodia	(85523) 996-839	(85523) 996-849	Ordinary shares	13	4,275	95	95
95 PT Tambang Semen Sukabumi	Limestone Quarry	Indonesia	(6221) 350-9491	(6221) 350-9704	Ordinary shares	3	8	93	93
96 PT Kokoh Inti Arebama Tbk.	Building materials distribution	Indonesia	(6221) 350-6227	(6221) 350-1767	Ordinary shares	981	350	91	91
97 The Siam Sanitary Fittings Co., Ltd.	Faucets and fittings	Bangkok	66-2973-5101-7	66-2973-5108-9	Ordinary shares	2	200	91	91
98 Sосуco and Group (2008) Co., Ltd.	Marketing and sales of floor and wall ceramic tiles	Bangkok	66-2938-9833	66-2973-3473	Ordinary shares	1	50	90	90

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99 Prime Dai Viet Joint Stock Company	Floor and wall ceramic tiles	Vietnam	(84) 211-3845-238	(84) 211-3844-464	Ordinary shares	13	182	90	90
100 Prime Thein Phuc Joint Stock Company	Exploration and processing material	Vietnam	(84) 54-3626-282	(84) 54-3752-292	Ordinary shares	5	70	90	90
101 Prime Phong Dien Joint Stock Company	Manufacture of material	Vietnam	(84) 54-3751-222	(84) 54-3751-222	Ordinary shares	3	35	90	90
102 Prime Dai Loc Joint Stock Company	Floor and wall ceramic tiles	Vietnam	(84) 510-3761-762	(84) 510-3761-763	Ordinary shares	30	414	90	90
103 CPAC Cambodia Co., Ltd.	Ready-mixed concrete	Cambodia	(85523) 356-677	-	Ordinary shares	0.002	128	90	90
104 Saraburirat Co., Ltd.	Concrete floor and wall tiles	Saraburi	66-2586-3333	66-2586-6800	Ordinary shares	1	96	83	83
105 Mariwasa-Siam Ceramics, Inc.	Floor and wall ceramic tiles	Philippines	(632) 717-6901	(6343) 778-2934	Ordinary shares	600	430	80	83
106 SCG Myanmar Concrete and Aggregate Co., Ltd.	Ready-mixed concrete and related products	Myanmar	(84) 940-3723-905	-	Ordinary shares	6	207	80	80
107 PT Surya Siam Keramik	Ceramic floor tiles	Indonesia	(6221) 5397-091	(6221) 5397-094	Ordinary shares	0.01	87	80	80
108 Thai-German Ceramic Industry Public Company Limited	Floor and wall ceramic tiles	Saraburi	66-2790-9800	66-2790-9890	Ordinary shares	1,698	1,698	75	75
109 Green Conservation Solution Co., Ltd.	Service municipal solid waste management and use refuse derived fuel as alternative energy	Bangkok	66-2586-3333	66-2586-2979	Ordinary shares	2	185	74	74
110 Siam Sanitary Ware Co., Ltd.	Holding Company	Bangkok	66-2973-5040-54	66-2973-3473	Ordinary shares	1	60	71	71
111 Siam Sanitary Ware Industry Co., Ltd.	Sanitary ware	Saraburi	66-2973-5040-54	66-2973-3470	Ordinary shares	2	200	71	71
112 Siam Sanitary Ware Industry (Nongkae) Co., Ltd.	Sanitary ware	Saraburi	66-2973-5040-54	66-2973-3470	Ordinary shares	2	160	71	71
113 Mawlamyine Cement Limited	Cement	Myanmar	(951) 966-2014	(951) 966-2014	Ordinary shares	0.1	1,631	70	70
114 Quality Construction Products Public Company Limited	Light-weight concrete	Phra Nakhon Si Ayutthaya	66-3522-1271	66-3522-1270	Ordinary shares	400	400	68	68
115 Q-Con Eastern Co., Ltd.	Light-weight concrete	Rayong	66-3865-0515	66-3895-6468	Ordinary shares	59	590	68	68
116 SCGT Automobile Co., Ltd.	Dealer	Bangkok	66-2586-1402	66-2586-2203	Ordinary shares	15	146	67	67
117 SCG Yamato Express Co., Ltd.	Logistics service	Samut Prakarn	6689-115-8022	-	Ordinary shares	0.3	260	65	65
118 Prime Dai Quang Joint Stock Company	Packaging	Vietnam	(84) 510-2471-993	(84) 510-3761-444	Ordinary shares	2	28	56	56
119 Guangxi SCG Logistics Co., Ltd.	Logistics service	China	66-2586-1590	-	**	-	34	55	55
120 Panel World Co., Ltd.	Cement-bonded particleboard	Samutsakorn	66-3447-2033-4	66-3447-1404	Ordinary shares	2	245	55	55
121 SCG-Shwe Me Logistics (Myanmar) Co., Ltd.	Logistics service	Myanmar	(951) 256-745 (9599) 7096-6716-111	(951) 392-994	Ordinary shares	1	1	55	55
122 Jumbo Barges and Tugs Co., Ltd.	Transportation by lighter	Bangkok	66-2872-3014-5	66-2872-3016	Ordinary shares	5	457	55	55
123 Sosuco Ceramic Co., Ltd.	Floor and wall ceramic tiles	Saraburi	66-3637-6300	66-3637-6309	Ordinary shares	0.01	800	54	54
124 SCG-Sekisui Sales Co., Ltd.	Construction & Sales of modular houses manufactured	Bangkok	66-2586-1323	66-2586-1481	Ordinary shares	8	825	51	51
125 Mingalar Motor Co., Ltd.	Dealer	Myanmar	(951) 514-940	-	Ordinary shares	0.004	141	50	50
126 PT Siam-Indo Gypsum Industry	Gypsum boards	Indonesia	(6221) 8832-0028	(6221) 8832-0036	Ordinary shares	0.03	306	50	50
127 PT Siam-Indo Concrete Products	Natural-fibre roofing sheets	Indonesia	(6226) 743-2140	(6225) 743-2149	Ordinary shares	0.03	446	50	50
128 Prime Hao Phu Joint Stock Company	Exploration and processing material	Vietnam	(84) 27-3821-118	(84) 27-3821-118	Ordinary shares	3	35	49	49
129 Kampot Land Co., Ltd.	Land investment	Cambodia	(85523) 996-839	(85523) 996-849	Ordinary shares	0.001	0.2	47	47
Joint Ventures, Associates and Other Companies									
130 Global House International Company Limited	Holding Company	Bangkok	0-2586-3333	0-2586-5454	Ordinary shares	8	752	50	65
131 Global House Franchise (Myanmar) Co., Ltd.	Franchise - Retail Business	Myanmar	(9599) 7785-0145	-	Ordinary shares	0.01	3	-	65

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132 CMPI Land, Inc.	Land rental	Philippines	(632) 908-3720	(632) 750-6650	Ordinary shares	50	49	40	64
					Preferred shares	50	48		
133 SCG Nichirei Logistics Co., Ltd.	Cold Chain	Bangkok	66-2586-6610	66-2586-3136	Ordinary shares	6	570	51	51
134 Thai Prosperity Terminal Co., Ltd.	Shipping port	Samut Prakarn	66-2754-4501-9	66-2754-4513	Ordinary shares	1	63	50	50
135 Sekisui-SCG Industry Co., Ltd.	Manufacture and distribute of home components	Saraburi	66-3637-3478	66-3637-3480	Ordinary shares	23	2,325	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 Mariwasa Holdings, Inc.	Holding company	Philippines	(632) 717-6901	(6343) 778-2934	Ordinary shares	248	235	40	40
139 Green Siam Resources Corporation	Bailing business	Philippines	(632) 501-8631	(632) 501-8631	Ordinary shares	13	95	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	3,658	3,658	30	30
142 Anhui Conch-SCG Refractory Co., Ltd.	Refractory	China	(86) 553-839-9857	(86) 553-839-9877	**	-	497	30	30
143 The Siam Gypsum Industry Co., Ltd.	Gypsum boards	Bangkok	66-2555-0055	66-2555-0001	Ordinary shares	2	150	29	29
144 The Siam Gypsum Industry (Saraburi) Co., Ltd.	Gypsum boards	Saraburi	66-3637-3500-9	66-3637-3510	Ordinary shares	5	470	-	29
145 The Siam Gypsum Industry (Songkhla) Co., Ltd.	Gypsum boards	Songkhla	66-7420-6000-5	66-7420-6006	Ordinary shares	1	120	-	29
146 PT M Class Industry	Clay roof tiles	Indonesia	(6202) 6743-6888	(6221) 539-7094	Ordinary shares	34	222	28	28
147 Asia Pacific Logistics and Transportation Joint Stock Company	Logistic	Vietnam	(84) 43-7738-420	(84) 43-7738-421	Ordinary shares	2	28	25	25
148 Souvanny Home Center Public Company	Building materials and home improvement products distribution	Lao PDR	(85621) 415-645	(85621) 262-984	Ordinary shares	165	1,328	-	22
149 Asia Cement Public Company Limited	Cement	Bangkok	66-2641-5600	-	Ordinary shares	778	4,671	10	10
SCG Chemicals Subsidiaries									
150 SCG Chemicals Co., Ltd.	Holding company	Bangkok	66-2586-4762	66-2586-5561	Ordinary shares	344	32,277	100	100
151 Thai Polyethylene Co., Ltd.	Polyethylene and polypropylene	Rayong	66-3868-3393-7	66-3868-3398	Ordinary shares	52	5,190	100	100
152 SCG Plastics Co., Ltd.	Trading	Bangkok	66-2586-6161	66-2910-4022	Ordinary shares	0.1	5	100	100
153 SCG Performance Chemicals Co., Ltd.	Trading	Bangkok	66-2586-4115	66-2586-3676	Ordinary shares	0.1	3	100	100
154 Rayong Engineering & Plant Service Co., Ltd.	Engineering and plant service	Rayong	66-3868-5040-8	66-3891-1309	Ordinary shares	0.04	2	100	100
155 Protech Outsourcing Co., Ltd.	Engineering and plant service	Rayong	66-3868-2632-3	66-3868-2633	Ordinary shares	0.01	1	100	100
156 RIL 1996 Co., Ltd.	Industrial estate	Rayong	66-3868-9471-2	66-3891-1955	Ordinary shares	11	1,100	100	100
157 Texplora Co., Ltd.	Chemical technology licensing	Rayong	66-2586-6353	66-2586-2086	Ordinary shares	0.01	1	100	100
158 Vina SCG Chemicals Co., Ltd.	Holding company	Bangkok	66-2586-5435	-	Ordinary shares	33	1,369	100	100
159 SCG Chemicals (Singapore) Pte. Ltd.	Holding company	Singapore	(65) 6297-9661	-	Ordinary shares	38	804	100	100
160 Tuban Petrochemicals Pte. Ltd.	Holding company	Singapore	(65) 6297-9661	-	Ordinary shares	112	2,349	100	100
161 Hexagon International, Inc.	Holding company	USA	66-2586-4444	-	Ordinary shares	2	67	100	100
162 Norner Holding AS	Holding company	Norway	(47) 3557-8000	(47) 3557-8124	Ordinary shares	0.01	3	100	100
163 Norner AS	R&D service	Norway	(47) 3557-8001	(47) 3557-8125	Ordinary shares	0.001	0.1	100	100

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164 Norner Research AS	Research Institute	Norway	(47) 3557-8002	(47) 3557-8126	Ordinary shares	0.001	0.1	100	100
165 Norner IP AS	Technology service and licensing	Norway	(47) 3557-8003	(47) 3557-8127	Ordinary shares	0.001	0.1	100	100
166 Norner Verdandi AS	Technology service and licensing	Norway	(47) 3557-8004	(47) 3557-8128	Ordinary shares	0.01	3	100	100
167 CO2 Technologies AS	Holding company	Norway	(47) 3557-8005	(47) 3557-8129	Ordinary shares	0.001	0.5	100	100
168 SMH Co., Ltd.	Research and development service and technology service	Bangkok	66-2586-4859	66-2586-6277	Ordinary shares	2	170	100	100
169 PT TPC Indo Plastic and Chemicals	PVC	Indonesia	(6231) 395-2945	(6231) 395-2944	Ordinary shares	0.03	1,020	96	96
170 Rayong Pipeline Co., Ltd.	Rights of pipe rack use	Rayong	66-3893-7065	66-3803-5381	Ordinary shares	4	200	92	92
171 Thai Plastic and Chemicals Public Company Limited	PVC	Bangkok	66-2827-7272	66-2827-7273	Ordinary shares	875	875	91	91
172 TPC Paste Resin Co., Ltd.	PVC paste resins	Bangkok	66-2827-7272	66-2827-7273	Ordinary shares	3	333	91	91
173 The Nawaplastic Industries (Saraburi) Co., Ltd.	PVC pipe and fittings	Bangkok	66-2586-3930-5	66-2586-4305	Ordinary shares	4	400	91	91
174 Nawaplastic Industries Co., Ltd.	PVC pipe and PVC products	Bangkok	66-2586-3930-5	66-2586-2444	Ordinary shares	4	426	91	91
175 Nawa Intertech Co., Ltd.	Molding products	Rayong	66-3889-2190	66-3889-2244	Ordinary shares	0.4	40	91	91
176 Chemtech Co., Ltd.	Plastic compound	Vietnam	(84650) 3784-992	(84650) 3784-993	**	-	103	91	91
177 Total Plant Service Co., Ltd.	Holding company	Rayong	66-3868-7320-3	66-3892-5299	Ordinary shares	12	1,180	91	91
178 SCG Ico Polymers Company Limited	Rotomolding compound	Bangkok	66-2586-2006	-	Ordinary shares	4	380	87	87
179 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
180 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
181 Rayong Olefins Co., Ltd.	Raw materials for plastic resins	Rayong	66-3868-5040-8	66-3868-5036	Ordinary shares	108	10,820	50	67
182 Viet-Thai Plastchem Co., Ltd.	PVC compound	Vietnam	(84650) 3710-993	(84650) 3740-065	**	-	75	66	66
183 Alliance Petrochemical Investment (Singapore) Pte. Ltd.	Holding company	Singapore	(65) 6221-5318	-	Ordinary shares	46	1,881	65	65
184 TPC Vina Plastic and Chemicals Corporation Ltd.	PVC	Vietnam	(848) 3823-4730	(848) 3823-4725	**	-	1,013	64	64
185 Siam Stabilizers and Chemicals Co., Ltd.	Stabilizer	Rayong	66-3868-3451-3	66-3868-3449	Ordinary shares	190	190	55	55
186 Nawaplastic (Cambodia) Co., Ltd.	PVC pipe and fittings	Cambodia	(855) 2388-2072	(855) 2388-5172	Ordinary shares	1	179	55	55
187 Grand Nawaplastic Myanmar Co., Ltd.	PVC pipe and fittings	Myanmar	(959) 863-3988	-	Ordinary shares	1	237	52	52
188 Flowlab & Service Co., Ltd.	Calibration service	Rayong	66-3891-1321-2	66-3891-1381	Ordinary shares	0.02	4	51	51
Joint Ventures, Associates and Other Companies									
189 SCG Plastics (China) Co., Limited	Trading	Hong Kong	(852) 2544-9991	(852) 2544-9992	Ordinary shares	0.1	4	58	58
190 SCG Plastics (Shanghai) Co., Ltd.	Trading	China	(8621) 6888-6091	(8621) 6888-6092	**	-	25	-	58
191 Siam Mitsui PTA Co., Ltd.	Raw materials for polyester and PET	Rayong	66-3868-5100	66-3868-7333	Ordinary shares	48	4,800	50	50
192 Siam Styrene Monomer Co., Ltd.	Raw materials for polystyrene	Rayong	66-3868-3215-6	66-3868-3991	Ordinary shares	48	4,755	50	50
193 Siam Synthetic Latex Co., Ltd.	Synthetic latex	Rayong	66-3868-3215-6	66-3868-3991	Ordinary shares	59	5,789	50	50
194 Siam Polyethylene Co., Ltd.	Polyethylene	Rayong	66-3868-3215-6	66-3868-3991	Ordinary shares	45	4,455	49	50
195 Siam Polystyrene Co., Ltd.	Polystyrene	Rayong	66-3868-3215-6	66-3868-3991	Ordinary shares	10	995	50	50
196 MTP HPPPO Manufacturing Co., Ltd.	Propylene oxide	Rayong	66-3868-3215-6	66-3868-3991	Preferred shares	48	4,750	-	50
					Ordinary shares	32	3,150		
197 Rayong Terminal Co., Ltd.	Tank and terminal service	Rayong	66-3868-9471-2	66-2586-6220	Ordinary shares	14	1,325	-	50
198 PT Siam Maspion Terminal	Tank and terminal service	Indonesia	(6231) 395-2945-8	-	Ordinary shares	0.01	327	50	50

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199 SD Group Service Co., Ltd.	Holding company	Bangkok	66-2365-7000	66-3868-3991	Ordinary shares	1	78	50	50
200 Bangkok Synthetics Co., Ltd.	Raw materials for synthetic rubber	Bangkok	66-2679-5120	66-2679-5119	Ordinary shares	12	1,173	49	49
201 Thai MMA Co., Ltd.	Raw materials for acrylic	Rayong	66-3868-5040-8	66-2586-5393	Ordinary shares	56	5,590	46	47
202 Grand Siam Composites Co., Ltd.	Polypropylene compound	Rayong	66-3868-4241	66-3868-4255	Ordinary shares	1	64	46	46
203 Thai MFC Co., Ltd.	Melamine compound	Rayong	66-3868-4241	66-3868-4255	Ordinary shares	2	200	45	45
204 Siam Tohcello Co., Ltd.	Raw materials for packaging film	Rayong	66-3801-0500	66-3801-0506	Ordinary shares	1	592	45	45
205 Long Son Petrochemicals Co., Ltd.	Raw materials for plastic resins	Vietnam	(848) 3825-7226	(848) 3825-7268	**	-	4,408	44	44
206 Mehr Petrochemical Company (P.J.S.C.)	Polyethylene	Iran	(9821) 8850-0641	(9821) 8805-0642	Ordinary shares	0.1	1,755	39	39
207 PT Trans-Pacific Polyethylene Indonesia	Polyethylene	Indonesia	(6221) 574-5880	-	Ordinary shares	0.2	472	39	39
208 PT Trans-Pacific Polyethylindo	Polyethylene	Indonesia	(6221) 574-5880	-	Ordinary shares	0.1	337	39	39
209 Riken (Thailand) Co., Ltd.	PVC compound	Bangkok	66-2501-1054	66-2501-1198	Ordinary shares	1	120	32	32
210 PT Chandra Asri Petrochemical Tbk.	Raw materials for plastic resins	Indonesia	(6221) 530-7950	(6221) 530-8930	Ordinary shares	3,287	14,679	31	31
211 PT Styrimo Mono Indonesia	Raw materials for polystyrene	Indonesia	(6221) 530-8505	(6221) 530-8506	Ordinary shares	0.3	10,093	-	31
212 GTC Technology US, LLC	Chemical technology licensing	USA	66-2586-4444	-	Ordinary shares	0.2	102	25	25
213 GTC Technology International, LP	Chemical technology licensing	USA	66-2586-4444	-	Ordinary shares	13	191	25	25
214 Tien Phong Plastics Joint Stock Company	PVC pipe	Vietnam	(843) 1385-2073	(843) 1364-0133	Ordinary shares	74	1,116	22	22
215 Thai PET Resin Co., Ltd.	PET resins	Rayong	66-3868-5900	66-3868-5999-609	Ordinary shares	9	900	20	20
216 Mitsui Advanced Composites (Zhongshan) Co., Ltd.	Polypropylene compound	China	(86) 760-533-2138	(86) 760-389-8880	Ordinary shares	15	596	20	20
217 Binh Minh Plastics Joint Stock Company	PVC pipe	Vietnam	(848) 3969-0973	(848) 3960-6814	Ordinary shares	45	682	19	19
218 PT Sritai Maspon Indonesia	Melamine compound	Indonesia	(6231) 891-3630	-	Ordinary shares	0.01	118	10	10
219 PT Trans-Pacific Polypropylene Indonesia	Polypropylene	Indonesia	(6221) 574-5880	-	Ordinary shares	0.1	220	10	10
220 PT Trans-Pacific Styrene Indonesia	Raw materials for polystyrene	Indonesia	(6221) 574-5880	-	Ordinary shares	0.1	314	10	10
221 PT Trans-Pacific Petrochemical Indotama	Raw materials for aromatics	Indonesia	(6221) 574-5880	-	Ordinary shares	15	8,931	5	5
SCG Packaging Subsidiaries									
222 SCG Packaging Public Company Limited	Holding company	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	156	1,563	99	99
223 Siam Kraft Industry Co., Ltd.	Kraft paper	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	35	3,450	99	99
224 Invenique Co., Ltd. (Formerly: InfoZafe Co., Ltd.)	Asset and Intellectual property management service	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	1	70	99	99
225 SCGP Excellence Training Center Co., Ltd.	Training and Seminar	Bangkok	66-2586-3876	66-2586-4507	Ordinary shares	1	49	99	99
226 SCG Paper Energy Co., Ltd.	Energy	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	2	150	99	99
227 United Pulp and Paper Co., Inc.	Kraft paper	Philippines	(632) 870-0100	(632) 870-0409	Preferred shares	840	3,246	98	98
					Ordinary shares	141	1,082		
228 Paperlink Inter-Trade Corporation	Kraft paper	Philippines	(632) 870-0100	(632) 870-0409	Ordinary shares	0.1	1	98	98
229 Thai Cane Paper Public Company Limited	Kraft paper	Kanchanaburi	66-3461-5800	66-3461-5899	Ordinary shares	358	3,583	93	93
230 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
231 Thai Containers Khonkaen Co., Ltd.	Corrugated boxes	Khonkaen	66-2586-3333	66-2586-2164	Ordinary shares	0.2	150	69	69

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232 Thai Containers Rayong Co., Ltd.	Corrugated boxes	Rayong	66-2586-3333	66-2586-2164	Ordinary shares	1	650	69	69
233 Vina Kraft Paper Co., Ltd.	Kraft paper	Vietnam	(848) 268-0240-2	(848) 268-0239	**	-	6,069	69	69
234 TCG Rengo (S) Limited	Corrugated boxes	Singapore	(65) 6261-5846	(65) 6265-3144	Ordinary shares	2	56	69	69
235 New Asia Industries Co., Ltd.	Corrugated boxes	Vietnam	(848) 3729-4160	(848) 3729-3028	**	-	345	69	69
236 Alcamax Packaging (Vietnam) Co., Ltd.	Corrugated boxes	Vietnam	(84650) 374-303-1	(84650) 378-281-6	**	-	607	69	69
237 AP Packaging (Hanoi) Co., Ltd.	Corrugated boxes	Vietnam	(84320) 375-386-2	(84) 320-3752868	**	-	248	69	69
238 Packamex (Vietnam) Co., Ltd.	Corrugated boxes	Vietnam	(8483) 729-1030	(8483) 729-1031	**	-	220	69	69
239 Thai Paper Co., Ltd.	Printing and writing paper	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	35	3,500	68	68
240 Thai Union Paper Public Company Limited	Printing and writing paper	Samut Prakarn	66-2754-2100-10	66-2754-2118	Ordinary shares	43	430	68	68
241 Siam Cellulose Co., Ltd.	Bleached pulp	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	78	7,770	68	68
242 The Siam Forestry Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	2	184	68	68
243 Panas Nimit Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.02	2	68	68
244 Thai Panason Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.02	2	68	68
245 Thai Panadorn Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.02	2	68	68
246 Thai Panaram Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.02	2	68	68
247 Suanpa Rungsaris Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.02	2	68	68
248 Siam Panawes Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.03	3	68	68
249 Thai Panaboon Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.03	3	68	68
250 Thai Wanabhum Co., Ltd.	Forestry	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	0.03	3	68	68
251 Phoenix Pulp & Paper Public Company Limited	Bleached pulp	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	236	2,365	68	68
	Printing and writing paper				Preferred shares	10	98		
252 Phoenix Utilities Co., Ltd.	Utilities	Khonkaen	66-4343-3104-6	66-4343-3101	Ordinary shares	15	1,500	68	68
253 PT Primacorr Mandiri	Corrugated boxes	Indonesia	(6221) 596-2345	(6221) 596-2000	Ordinary shares	0.1	294	62	62
254 PT Indoris Printingdo	Corrugated boxes	Indonesia	(6221) 596-0772-3	(6221) 596-0774	Ordinary shares	0.02	55	62	62
				(6221) 596-3076					
255 TC Flexible Packaging Co., Ltd.	Holding company	Bangkok	66-2586-5991	66-2586-4723	Ordinary shares	20	1,877	52	52
256 Dyna Packs Co., Ltd.	Corrugated boxes	Samutsakorn	66-2810-9346-7	66-2810-9103	Ordinary shares	1	90	52	52
257 Orient Containers Co., Ltd.	Corrugated boxes	Samutsakorn	66-3488-3422-4	66-3488-3421	Ordinary shares	26	260	52	52
258 D-In Pack Company Limited	Corrugated boxes	Nakhonpathom	66-3498-1401-4	66-3498-1406-7	Ordinary shares	0.01	50	52	52
259 Tawana Container Co., Ltd.	Corrugated boxes	Samut Prakarn	66-2324-0781	66-2324-0079	Ordinary shares	3	300	50	50
260 Tin Thanh Packing Joint Stock Company	Flexible Packaging	Vietnam	(84) 72-3779-747	(84) 72-3779-750	Ordinary shares	10	158	41	41
261 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 and Other Companies									
262 Siam Toppan Packaging Co., Ltd.	Offset-printed cartons	Samut Prakarn	66-2709-3110-7	66-2324-0336	Ordinary shares	5	500	48	48
263 P&S Holdings Corporation	Holding company	Philippines	(632) 870-0100	(632) 870-0409	Ordinary shares	28	263	39	39
264 Siam Nippon Industrial Paper Co., Ltd.	Specialty paper	Bangkok	66-2586-3333	66-2586-2164	Ordinary shares	11	1,100	30	30
265 Thai British Security Printing Public Company Limited	Securities document	Samut Prakarn	66-2754-2650-8	66-2183-2763	Ordinary shares	11	110	18	18

* Directly and indirectly holding through the Company, subsidiaries, joint ventures, associates and other companies.

** No issuance of share for the Limited Liability Company incorporated in Vietnam. The capital contribution is as stipulated in the investment certificate of the invested company.



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)
266 Thai British Security Printing Overseas Co., Ltd.	Holding company	Samut Prakarn	66-2380-1320	66-2380-1326-27	Ordinary shares	4	37	-	18
267 Rengo Packaging Malaysia Sdn. Bhd.	Corrugated boxes	Malaysia	(603) 5101-9192	(603) 5101-9184	Ordinary shares	81	804	17	17
268 Thai British DPost Co., Ltd.	Digital printing	Samut Prakarn	66-2709-4201	66-2790-4200	Ordinary shares	3	34	-	9
Other Subsidiaries									
269 Cementhai Holding Co., Ltd.	Holding company	Bangkok	66-2586-2104	66-2586-2008	Ordinary shares	0.01	1	100	100
270 Cementhai Property (2001) Public Company Limited	Holding company	Bangkok	66-2586-2104	66-2586-2008	Ordinary shares	7	72	100	100
271 Property Value Plus Co., Ltd.	Land business and land lease service	Bangkok	66-2586-2104	66-2586-2008	Ordinary shares	8	820	100	100
272 SCG Accounting Services Co., Ltd.	Accounting, financial and tax services	Bangkok	66-2586-3333	66-2586-2398	Ordinary shares	1	5	100	100
273 SCG Legal Counsel Limited	Legal consultant	Bangkok	66-2586-5777	66-2586-2976	Ordinary shares	0.2	15	100	100
274 CTO Management Co., Ltd.	Marketable securities investment	Bangkok	66-2586-3333	66-2587-2157	Ordinary shares	25	380	100	100
275 Cementhai Captive Insurance Pte. Ltd.	Insurance	Singapore	66-2586-3333	66-2587-2157	Ordinary shares	0.3	34	100	100
276 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
277 SCG Learning Excellence Co., Ltd	Training service	Bangkok	66-2586-3333	66-2586-2684	Ordinary shares	0.2	20	100	100
278 SCG Vietnam Co., Ltd.	Management consulting service	Vietnam	(848) 3526-9011-13	(848) 3526-9014	**	-	16	100	100
279 PT SCG Indonesia	Management consulting service	Indonesia	(6221) 350-9491	(6221) 352-0718	Ordinary shares	0.1	26	100	100
280 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									
281 Siam Kubota Corporation Co., Ltd.	Agricultural machinery	Pathumthani	66-2909-0300-1	66-2909-1698	Ordinary shares	31	2,739	40	40
282 Siam Kubota Metal Technology Co., Ltd.	Cast iron	Chachoengsao	66-3885-5115	66-3885-5110	Ordinary shares	9	900	-	40
283 Siam Kubota Leasing Co., Ltd.	Leasing	Pathumthani	66-2909-0300	66-2909-1697	Ordinary shares	80	2,000	-	40
284 Maxion Wheels (Thailand) Co., Ltd.	Aluminium alloy wheels	Saraburi	66-3637-3309-21	66-3637-3312-3	Ordinary shares	0.1	126	30	30
285 Siam AT Industry Co., Ltd.	Automotive parts	Chonburi	66-3845-4266-8	66-3845-4266	Ordinary shares	2	240	30	30
286 Thai Engineering Products Co., Ltd.	Automotive parts	Pathumthani	66-2529-3518-22	66-2529-1677	Ordinary shares	1	85	29	30
287 The Nawaloha Industry Co., Ltd.	Cast iron	Saraburi	66-3633-6531-4	66-3622-3209	Ordinary shares	3	300	30	30
288 Aisin Takaoka Foundry Bangpakong Co., Ltd.	Cast iron	Chonburi	66-3845-4671-7	66-3845-4670	Ordinary shares	5	475	30	30
289 Muang Thong United Co., Ltd.	Football team	Bangkok	66-2508-8100	66-2508-3369	Ordinary shares	3	233	30	30
290 The Siam Nawaloha Foundry Co., Ltd.	Cast iron	Saraburi	66-3628-8300	66-3628-8309	Ordinary shares	3	308	20	25
291 Lysando AG	Research and development	Liechtenstein	(423) 262-5753	(423) 262-5752	Ordinary shares	1	39	20	20
292 IT One Co., Ltd.	Technical services	Bangkok	66-2271-5111	66-2271-5112	Ordinary shares	1	80	20	20
293 Toyota Motor Thailand Co., Ltd.	Automotives	Samut Prakarn	66-2386-1000	66-2386-1883	Ordinary shares	8	7,520	10	10
294 Siam Yamato Steel Co., Ltd.	Structural steel	Rayong	66-3868-3723-30	66-3868-3200	Ordinary shares	30	3,000	10	10
295 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 2016

	(in Million Baht)				
	Revenue from sales	Other Income	Total Revenue	Sale breakdown (%)	Equity in Associates *
SCG Cement-Building Materials	170,944	2,407	173,351	37.62	884
SCG Chemicals	188,163	2,108	190,271	43.98	14,220
SCG Packaging	74,542	447	74,989	17.33	5
Other	86	4,560	4,646	1.07	2,812
Total Consolidated	423,442	9,198	432,640	100.00	17,933

Remark: Financial figures are classified according to business unit before intersegment elimination, as disclosed in note 25 to the financial statements pages 212-216 of the Annual Report 2016.

*share of profit of associates and joint ventures entities recognized by using equity method.

Key operations of each business unit

SCG Cement-Building Materials

SCG Cement-Building Materials Co., Ltd, (SCG CBM) business consists of cement, building materials, and distribution, 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) 23 million tons per year Grey cement (Outside Thailand) 3.8 million tons per year Ready-mixed concrete 767 plants Roof products 97.2 million Sq. M. per year Ceiling/board/wood substitutions 113.8 million Sq. M. per year Floor and wall ceramic tile 225 million Sq. M. per year 		
Brand	<ul style="list-style-type: none"> Cement: SCG and K-Cement Brands Mixed/Masonry Cement: Tiger, SCG, and K-Cement Brands Mortar cement: Tiger, Mortar, SCG Brands Decorative cement: Tiger Decor, SCG Brands White cement: Tiger, Elephant, and SCG Brands Ready-mixed concrete: CPAC, Jayamix by SCG and SCG Brands 		

Key Information

- Fireclay bricks and special refractory: SRIC Brand
- Aerated Lightweight Concrete: Q-CON and SCG Brands
- PVC pipe and accessories: SCG, Elephant, and Tiger Brands
- Concrete pipe and precast: SCG Brand
- Roofing products: SCG Brand
- Ceiling/board/wood substitutions: SCG Brand
- Concrete blocks, concrete floor tiles, and precast concrete walls: SCG Brand
- Reinforcing steel: SCG Brand
- Thermal and acoustic insulations: SCG Brand
- Building service: SCG Heim
- Precast concrete system: SCG Building Tech
- Solar roof system: SCG Living Tech
- Active Airflow™ system: SCG Living Tech
- Prefabricated wall system (S Wall, Fulfill Wall): SCG Building Tech
- Prefabricated wall system (Walli-T): Tiger Brand
- Unit bathroom: SCG Building Tech
- Products/service/installation for elderly: SCG elder care solution
- An expert consultant specializing in sustainability advice and services on both national and international green building standard practices – SCG Green Building Solution
- Ceramic floor and wall tiles: COTTO, SGI, SOSUCO, CAMPANA, Prime, KIA, and Mariwasa Brands
- Pyrolithic stone: GEOLUXE
- Sanitary ware, sanitary fittings, bathroom, and kitchen: COTTO Brand
- Building material outlet: SCG Home Solutions and Home Mart
- Product outlet and solution center for ceramic floor, wall tiles, sanitary ware, sanitary fittings, bathroom, and kitchen: COTTO brand: COTTO studio
- Flagship retail store for SCG: SCG Experience
- Logistic service: SCG logistics, SCG Express
- Import/export service: SCG Trading

Key Information	
Strengths	<ul style="list-style-type: none"> • Major integrated producer of cement and building material products in ASEAN • The largest production capacity in floor/wall ceramic tiles in the world • Embedded sustainable development philosophy as part of company policy 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 a regional leader • Maintain price and market stability as well as enhance its domestic market leadership • Develop high value added products and services (HVA) • Continuously conserve natural resources and environment and join social development program with local community for sustainable development

2.1 Product or Service Features

Products and services are primarily classified by companies as follows:

Cement group

1. Grey cement
2. White cement
3. Mortar cement
4. Ready mixed-concrete
5. Fireclay bricks and special refractory
6. Aerated Lightweight Concretes (ALC)
7. Precast concrete system

Building Material Group

8. Roof tile (Fiber cement roof, concrete roof, ceramic roof, metal roof, clay roof, and glasolit roof), roof truss and accessories
9. Ceiling, wall, floor, fiber cement board and cement board products
10. Wood substitute products
11. Landscape products (such as paving block, paving tile, wall tile and fence)
12. Reinforcing steel
13. Thermal and acoustic insulation
14. PVC pipe and accessories
15. Concrete pipe and precast

16. Solar roof system
17. Active Airflow™ system
18. Prefabricated wall system (S Wall, Fulfill Wall)
19. Prefabricated wall system (Walli-T)
20. Unit bathroom

Ceramic group

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

Other products and services

24. Logistic service
25. Import/export service
26. Disposal of industrial waste
27. Other products and services such as insulation, roofing center, and home product and service
28. An expert consultant specializing in sustainability advice and services on both national and international green building standard practices.
29. Products/service/installation for elderly
30. Home building service
31. Product outlet and solution center for ceramic floor, wall tiles, sanitary ware, sanitary fittings, bathroom, and kitchen

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 create differentiation and response to customer needs such as continuing improvement, becoming trend settler, and developing eco-friendly products to reduce natural resource consumption. In addition, SCG Cement is the only Thai cement company that has its own Research and Development unit that allows SCG Cement to efficiently develop its goods and services to serve the needs of each customer segment such as SCG hybrid cement (Eco-friendly), Special tiger cement, Tiger super cement, SCG transformer cement, SCG marine cement, Portland composite cement, Tiger crack resistant mortar cement, Grey-White skim coat, Walli-T sound insulation, SmartWOOD

with advanced bonding technology, Thai classic Klet Pla ceramic tile, COTTO digital, The convenic toilet seat and cover, and wash basin Tunio serie.

- The business has policy to continuously increase production efficiency and implement cost reduction, for example, energy cost reduction, raw material consumption reduction, and waste reduction. Furthermore, SCG CBM also has its own technical teams to provide customers professional advice and recommendation about production process, quality control, and cost reduction as well as suggest 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 social and environment by providing many marketing and social activities such as “Membership program for contractors”, skill improvement and living standard enhancement activity and “Project to educate architecture students”, education activity for increase knowledge about building materials and construction technology.

2) Customer Features and Target Groups

- Cement product: cement is sold to affiliate companies such as ready mixed concrete, concrete roof, board, etc. Besides SCG customers, cement is sold to dealers, major concrete building material producers, and major contractors.
- Building material products: target groups are classified by price, and group of customers to match with product categories, designs, and customer behavior in each area.
- Ceramic products can be classified into two customer segments: medium-to-low and medium-to-high segments.

3) Channel of Distribution

- Domestic distribution: the business provides strong domestic distribution network through 500 dealers nationwide through sales campaign and activities. In project segment, the business has enhanced customer's efficiency of product utilization with project management system “One stop solution”. 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 Studio.
- ASEAN distribution: For strategic countries, the business provides distribution network and sales campaign and activities which focus on the market situation in each country. For example Indonesia, PT KOKOH Inti Arebama Tbk, SCG subsidiary, manages distribution network with more than 2,000 dealers throughout Indonesia.

- Distribution in other regions, SCG Trading, SCG's subsidiary, is the SCG exporting agent to other countries. The export will focus on needs of destination customer or dealer in each country.

In addition, SCG CBM focuses on increasing efficiency of SCG dealers as follow:

- Wholesales channel: The business increases dealers' capabilities through loyalty program "Chang Family" by supporting and co-implementing system of cost reduction, warehouse and logistics management.
- Project channel: the business strengthens project channel through advance information technology (IT) and supply chain management to connect all operations and serve customer needs.
- Retail channel: The business develops network sustainably through SCG Home solution in order to response home owner's requirements such as designing, price estimation, material selection, service installation, and guarantee. The business also expands network through loyalty program "Chang Puean Chang", educate installers to improve their professional skills and through SCG contact center 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, and 3) Kaeng Khoi cement plant (Saraburi), 4) Thung Song cement plant (Nakorn Sri Thammarat), 5) Lampang cement plant (Lampang) with the production capacity 23 million tons with the highest market share compared to other domestic cement producers. For building materials, the business has factories, producing roof, ceiling, and board, in Saraburi, Nakhon Prathom, Lampang, Lamphun, Chonburi, Khonkaen, Nakhon Ratchasima, and Nakhon Si Thammarat. Recently, SCG CBM rigorously expands marketing activities of cement and building materials products in 5 countries in ASEAN: Indonesia, Myanmar, Cambodia, Vietnam, and Philippines by focusing on strengthening distribution channels.

For Ceramic business, there are floor and wall tiles plant in domestic and regional with total capacity of 225 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. SCG 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 followings;

- 1.) Expand production capacity of SCG Hybrid Cement (Eco-Friendly), which is not only friendly to the environment, but also answering to customers' need. The product has the special feature of reducing CO2 emissions in the manufacturing process, a major cause of global warming. Furthermore, it is ideal for structures that demand strength and durability.
- 2.) Continue expanding production capacity of Mortar under Tiger Brands to regional areas focusing on Lampang in order to capture rising demand growth. The business also creates competitive advantage over competitors through Silo & Spraying Service System by increasing capacity of Silo and service teams and expands to big cities nationwide in order to provide feature of convenience and solve labour shortage problem.
- 3.) Increase production capacity of Tiger cement under brand "Tiger Cement Decorative", which is for floor and wall decorative to serve customers that need unique and outstanding covering cement decorative.
- 4.) Produce special Mortar for Cast in Place. This special Mortar is used for the panel work in high rise building or single house with fast, convenience, and strong benefits.
- 5.) CPAC Smart Series, new ready mixed concrete, serves customers who require better flow ability divided in 2 products
 - CPAC Smart Flow concrete develops better concrete quality while remaining the attribute of flowable concrete.
 - CPAC Smart Fast concrete combines attribute of flowable and fast setting which are suitable for customers who need to finish the job fast.
- 6.) Tiger decor white cement for architectural heritage is a high-porosity plastering cement. Its special feature is innovatively designed to enhance the inner wall's moisture circulating air. As a result, The product's feature will help preserve, and prolong, various heritage buildings which can also facilitate its current working process, to be able to finish each job faster and more standardized.
- 7.) Research and develop Active Airflow™ system to improve living comfort condition in closed house by using stack ventilation and passive technique, which is able to create ventilation path inside house. This ventilation system is using electric power from its own solar power generation system, which can be controlled via mobile application.
- 8.) Research and develop living solutions for elderly people with wide variety of innovative products to make the house safe and convenience for elderly to live. We are focusing heavily on elderly with osteoarthritis symptoms such as knee osteoarthritis, hip osteoarthritis, sarcopenia which are regularly found in Thai elderly.

- 9.) Research and develop a Unit bathroom with concrete prefabricated technology and fully decorated from factory. With this technology, construction at site is more convenience than conventional: work load, waste and labors at construction site are decreased and manageable. It also gives the same beauty as conventional one.
- 10.) Research and develop a Tiger décor white plastering cement for ancient heritage through molecular structural cement technology. This technology could help to increase ventilation capability in concrete so the accumulated moisture in building is decreased. The product itself is environment friendly, easy to use and safe for users than the conventional one.
- 11.) Research and develop a concrete fabric which is a combination between two technologies: cement technology and fabric technology. It is lightweight and could be used easily so the construction with concrete fabric is faster comparing to conventional method and it could be applied in various applications.
- 12.) Research and develop wood substitute products using fiber cement composite material and extrusion forming technology to improve product strength, durability, and ability of forming complex shape. These products can be formed as cornice, door and window frame for internal and external use with digital printing technology for superior look and design.

- **Domestics Market and Competition**

In 2016, domestic demand for cement slightly decreases compared to the previous year, largely attributable to government investments. Whereas cement demand from household users and the private sector retracted, exports slightly decreases compared to last year.

Domestic demand for building products continued to slow down due to the lack of consumer confidence and declining purchasing power. Nonetheless, SCG CBM 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.

SCG CBM focuses on maintaining its market leadership by creating value to customers by 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**

Our business in ASEAN have been expanding with the growth of cement and building material market in regional countries. In Cambodia, the growth mainly comes from

residential sector, commercial sector and government spendings in infrastructure projects such as road building project. In Myanmar, infrastructure and the investment in private sector especially industrial factories has been growing. However, some projects in Myanmar such as high-building projects still decelerated in 3rd quarter of 2016 due to the Myanmar government has been considering suitability in implementing such projects. Vietnam and The Philippines gain advantages from infrastructure projects of their government such as underground railway project of Vietnam and residential project stimulation policy in The Philippines. In Indonesia, construction market has been improved from the previous year mainly because of investment in infrastructure of the government such as highway, airport, dam and high speed train.

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 long - term suppliers	100% / 0%	Own supply sources kept as reserve Currently buy from external sellers
Clay	~ 3	Long-term contracts with external contractors	100% / 0%	Own supply sources. Currently have long-term contracts with contractors
Copper Slag	2	3-year contracts with external suppliers and occasional purchase	0% / 100%	Buy from external suppliers
Gypsum	~ 7	Long-term contracts with suppliers and partly operate from own sources	100% / 0%	Currently buy from external sellers and partly operate from own sources
Kraft Paper	5	Yearly contracts with SCG affiliates and international suppliers	10% / 90%	Currently buy international suppliers and partly from domestics suppliers
Fuel				

Type	Number of Sellers	Procurement method	Local / Foreign	Remark
Lignite	~ 2	Long-term contracts with suppliers	100% / 0%	Self-operate from its supply sources and buy from external suppliers
Petroleum Coke	~ 2	Occasional purchase	0% / 100%	Buy from external suppliers
Coal	~ 9	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	14	Long-term contracts with suppliers and occasional purchase	35% / 65%	Buy from external suppliers

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

B) Environment Protection

SCG Cement-Building Materials has enacted environment and safety policies by applying Self-sufficient economy principle into business operation and aiming to balance between sustainable growth and happiness.

Green mining & Biodiversity

Cement business applies environmental friendly mining principle such as semi open cut mining, the most environmental friendly mining system, to every area. For expired mine, the Company has prepared the closure plan: final land use & mine closure plan, by altering the landscape and creating collaboration with all stakeholders under the project called The Li Coalmine, the “Mining Model, caring for environment, caring for community”. With the purpose of being a role model in sustable mining of the future, the Company develops the water source in the mine for the community to use in agriculture and be recreational space.

In 2016, the Company inititates the business & biodiversity check project by co-developing with Biodiversity-Based Economy Development Office(Public Organization) (BEDO), Biodiversity-Based Economy Development Office. Foundation (BEDO.FDN), and Global Nature Fund (GNF) to evaluate the Company's business effect on biodiversity and whole supply chain. The pilot project is at The Siam Cement (Lampang) Co., Ltd.

Green plant

- Companies that improve and increase machine energy efficieny in order to reduce Green House Gas (GHGs):

- The Siam Cement (Ta Luang) Co., Ltd. – vertical cement mill, vertical raw mill, maximize WHG.
- Siam Sanitary Ware Industry Co., Ltd. – High pressure casting machine.
- Companies that improve air pollution controlling system efficiency
 - The Siam Cement (Ta Luang) Co., Ltd. – Change EP to BF, modify dust setting chamber, install new main burner project.
 - The Siam White Cement Co., Ltd. – Adjust production process to reduce Nitrogen Oxide (NOx) emission by bringing “Low NOx Burner” technology in clinker burner process that can reduce NOx up to 30% comparing with current burner technology. Furthermore, there is production process improvement by using Alkali capturing SO₂ technology to reduce Sulfur Dioxide (SO₂).
- To reduce the effect from sharing public water source with the community and to prevent water shortage, the Company has developed spare water sources:
 - The Siam Cement (Ta Luang) Co., Ltd. (Khao Wong Plant) has enlarge its internal reservoir capacity from 300,000 m³ to 650,000 m³.
 - The Siam Cement (Lampang) Co., Ltd. has enlarge its internal reservoir capacity from 70,000 m³ to 200,000 m³.
- Develop safe operation system by focusing on working on height safety which can simplify into 6 steps:
 1. Estimate the risk and set the working procedure on the height before start working.
 2. Select contractors who have the ability to achieve the work safely.
 3. Explain working procedures and rules for operators.
 4. Train contractors about how to work on height, check blood pressure, and test alcohol limit before start working.
 5. Clarify the safety issue before starting, request work permit, set the responsible person at the site (watch man), and team-up safety patroller.
 6. Summarize the project result and assess the performance for the next hiring.

From the above steps, it will lead SCG to both design and develop a better working procedure, install new tools and equipments in order to make working on height is more convenient and safer e.g. invent “Truss Sky Walker” for installing roof structure (patent filing); set up safety value indicator at cement silo for checking cement level in silo so as to avoid working on height, build working station for putting canvas at loading area or even build automatic one, launch working on height checklist mobile application for management, thus, supervisor can check the site realtime.

Apart from creating awareness of working on height safety, training is also important since it allows the trainee to have a hands-on experience on tools and equipment.

Green product & Service

- Study, research, and develop new products to match with the new life style society such as elder care and to limit the usage on natural resources by replacing it with recycled materials about 50%.
- In 2016, SCG adds 22 various SCG eco value-certified products and services, with environmental friendly qualification:
 - Reduce GHGs emission - Tiger Décor, White cement – special plastering, Tiger white cement – multipurpose.
 - Reduce energy consumption - CAMPANA-CASA ceramic floor tile and wall tile, SGI-premium home ceramic floor tile and wall tile, Europa, Caramo, and COTTO - Glazed porelain tile.
 - Repalce natural material with substitute material - Medium-duty fireclay brick (SK 30), SCG wood substitutes, SCG fiber cement roof – Prima, Roman tile, Curve tile, Fiber cement roof – Ayara flat sheet.
 - Reduce natural resources usage – SCG concrete roof – Prestige.

In addition, SCG conducts life cycle assessment of Mortar products such as Tiger, lightweight plastering Mortar, Tiger tile adhesive - Silver series for smaller tiles and fast dry, Tiger tile grout – acid resistance, coloring skim coat, grey skim coat, and was received Carbon footprint label.

CSR& Networking

SCG is doing business by applying sustainable development concept which follows self-sufficient economy principle. To clarify, it is a balance between sufficiency and rationale that bring sustainable growth and happiness together.

The Siam Cement (Kaeng Khoi) Co., Ltd. has created a strong relation with the community under the Our village (OV) Project. The Company allows its employees to co-take care and create trust in each sub-district. Moreover, Cement partnership project, puts an effort on developing Green Plant, CSR activities, and communicate its performance. To clarify, the plant success is depending on the community satisfaction survey, satisfaction rate is 92%.

The Siam Cement (Lampang) Co., Ltd. is the first company that has done the research for the local community by collaborating with The Thailand Research Fund (TRF) in order to integrate the knowledge to raise CSR standard. With the support from the community, the Company has created Huayhok Forest Management at SasobHok village, the resources (soil, water, forest)

management tool kits at Sa Village, SCG's Water for Life by community knowledge sharing center in Ban-Sasobhok and Ban-Pantai Village. Sra Puang water management project, which prevents drought, at Ban-SaPae, Ban-Sa sub-district, Lampang province.

The Siam Cement (Ta Luang) Co., Ltd. has built the supporting center for manila tamarind planters in Huay Pa Whai sub-district and cement tank lime planters in Khao Wong sub-district, Saraburi. The support is aiming to allow the community to has a practical career and sustainable income.

CPAC (Ready Mix) plants are awarded CSR-DIW Continuous Award 2016 for 35 plants and CSR-DIW Award 2016 for 42 plants. Both awards will prevent and solve environmental problems and reduce the conflict between industrial plants and society as a whole, leading to green industry at last.

SCG Landscape Co., Ltd. has launched the project "Love Canal" so as to enhance the environment at Klong Song Ton Nun to be convenient to travel by the water and prevent flood.

The Siam Fibre Cement Co., Ltd. (Saraburi Plant) has launched "SCG education clinic" Project to lift up the educational standard for the children in the neighbourhood and create an inspiration to the children through our employees. Moreover, the Company is an educational partner for nearby schools, the satisfaction survey on the activities is above 80%.

2.4 Undelivered Projects or High-Valued Purchase Agreements

None

SCG Chemicals

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 2,900,000 tons per year. Byproducts from the olefins plant such as Mix-C4, Benzene and Toluene are mainly consumed within the business's and/or SCG subsidiaries' downstream plants.

- **Polyolefins**

Polyolefins are the business's main products. The business has total polyolefins capacity of 1,900,000 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 and high tensile strength. 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 and high stiffness. It is normally used as the main raw material for the production of cold food bags, food preservation films, lids, plastic boxes, surface coatings, and etc.
- 5) Polypropylene (PP) Outstanding features are 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, battery shells, electrical appliance parts, car components, and etc.

- **Polyvinyl Chloride (PVC)**

PVC products from Thai Plastics and Chemicals Public Company Limited, the largest PVC producer in Thailand and ASEAN with total production capacity of 886,000 tons per year (Thailand, Vietnam and Indonesia), can be divided into two 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 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 insulator, sheath for electrical wire, telephone cable, pipes, and etc.

- **Jetty & Tank Terminal**

The business provides its affiliates with pipe transportation as well as jetty and tank terminal for storage of petrochemical gases and liquids such as Naphtha, Olefins, Benzene, Paraxylene, Butadiene, MMA, and etc. At present, the business owns four jetties with deadweight tonnage of 100,000, 80,000, 20,000 and 10,000 tons.

2.2 Market and Competition

A) Policy and Market Features of Main Products and Services

- Policy and Market Features

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

- 1) Competitive Strategy

- **High Value-Added Products**

The company 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 invested in the enhancement of research and development capability and efficiency. At present, sales of high value-added products accounts for 54% of total sales of downstream products. High value-added products are namely:

- Pipe: large HDPE pipe for water work system, mining and natural gas industry
- Rotational molding: water tank, kayak boat, and components of agricultural machinery
- Wire and Cable: insulation for power cord, fiber optic, and telephone cable
- PE Wax: processing aid, dispersant, and hot melt adhesive
- Medical and Healthcare: syringe, saline bottle and medical equipment
- High quality packaging material: plastic caps for beverages, freeze-to-heat packaging for frozen food and flexible packaging
- Propylene compound: compounds for automotive parts, battery and electrical appliances

- PVC: pipe and fitting, medical equipment film, and automotive parts
- Other specialties: construction materials, and plastic doors and windows

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

As both domestic and export prices of Polyolefins and PVC resins move in-line with the global market prices, the business aims to create a price premium by offering high quality products and services to its customers. The business has adopted Total Quality Management (TQM), which emphasizes on customer and quality, and was awarded with the Deming Application Prize.

In terms of cost management, the business gives priorities to maintaining competitive cost position. As petrochemical industry requires high investment, the business has to constantly de-bottlenecking the plant capacities to achieve economy of scale with lowest investment cost per ton. The business's whole-stream integration also provides significant advantage in the market place.

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 advanced IT and e-Business systems, such as e-Supply Chain, e-Ordering, advanced process control and CRM Portal to achieve best-in-class efficiency and customer satisfaction.

● Product Quality Management

One of the business's main policies is to produce high quality products without any effects on the environment and communities. In addition, the business also gives great importance to occupational health and safety management systems. Therefore, it integrated ISO system with TQM and TPM to come under one quality management resulted in being certified by the international quality system, namely ISO 9001, ISO 14001, and TIS 18001. In addition, the business also applied for ISO17025 which is related to laboratory management since the business invests in research and development to constantly improve its product quality to truly meet customers' needs.

- **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.

Moreover, the business provides technical advices on plastics conversions and engages in collaboration with customers to co-create values from development of products and services that better satisfy customers’ latent needs and help them develop 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 respond 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 invited 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

Target groups are polyolefin converters which can be classified according to conversion methods, such as film, injection molding, monofilament and yarn, blow molding, and others which are lamination, extrusion, and pipe.

For PVC business, target groups are plastic converters, classified based on product types such as pipe and fitting, calendaring and profile and others.

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.

3) Channel of Distribution

In 2016, the business's domestic and export sales of polyolefins are accounted for 44% and 56%, respectively.

- **Domestic**

Domestic customers can be categorized in 2 groups; customers who convert and sell in domestic market represent 94% of the total domestic sales, whereas those who convert and export (re-export customers) represent 6%. Within the former group, 64% of transactions are made through direct sales by the business, while the remaining 36% are made through agents who also help business absorb the financial risks and distribute the products to polyolefin converters. For re-export customers, goods are sold mostly through direct sales.

- **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. At present, the business has 6 representative companies internationally which are located in Myanmar, Vietnam, Philippines, Indonesia, and China (Shanghai and Guangzhou). The proportion for the export market is 35% in East Asia, 31% in Southeast Asia, 9% in South Asia, and 25% in other regions.

The business exports around 1.2 million tons of polyolefins this year. 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.

In 2016, domestic and export sales of PVC through Thai Plastic and Chemicals Public Company Limited are 65% and 35%, respectively.

- **Competition and Capacity**

1) **Domestic**

Thailand has Polyolefins capacity of approximately 5.6 million tons per year while the country's demand in 2016 was approximately 2.8 million tons. Moreover, Thailand export Polyolefins around 50% of total production. However, when comparing with local producers, the business has around 34% 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 2016, Polyolefins demand in Asia equaled 82 million tons, with China as the largest importer. Major exporters are producers in the Middle East, USA, Korea, and Singapore. For PVC, demand in 2016 was 27 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 and 9 Polyolefins plants located in Map Ta Phut Industrial Estate, Rayong Province. Nameplate capacities are displayed below:

Company	Product / Service	Capacity (Ton / Year)	Year First Operated	% Shareholding
Rayong Olefins	Ethylene	800,000	1999	67
	Propylene	400,000		
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	
	HDPE 3	240,000	2001	

Company	Product / Service	Capacity (Ton / Year)	Year First Operated	% Shareholding
Thai Polyethylene	HDPE 4	400,000	2010	100
	LLDPE	120,000	1990	
	LDPE	100,000	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	91
	PVC Compound	63,500		
TPC Paste Resin	PVC Paste Resin	36,000	1993	91
PT. TPC Indo Plastic & Chemicals	PVC Resin	120,000	1996	96
TPC Vina Plastic and Chemicals Corporation	PVC Resin	200,000	1995	63
Viet-Thai Plastchem	PVC Compound	16,500	1994	66
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 20% of total naphtha from local producers, and 80% 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 Polyolefins production is Olefins. The business has olefins purchasing contracts with olefins producers in SCG Chemicals of 1,590,000 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 oversea imports.

B) Environmental Impact

The business has always placed importance on the environment and communities, conducting business with policies that support sustainable development between industry, environment, and communities. SCG Chemicals is the first company in Thailand to achieve Eco Factory certification on 100% of its production facilities, and has collaborated with the Federation of Thai Industries to help other industrial factories to achieve Eco Factory certification by leveraging its knowledge and practices in areas such as reduction of power consumption, management of water and industrial effluent, and reduction of green-house gas emission. The business has also supported the communities 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 environmentally friendly industries in the country.

The business has also shared knowledge and helped communities surrounding industrial areas with projects that took care of the environment and improved their living conditions such as building check dam in Khao Yaida, Eco learning center that focuses on water conservation management, Sufficient Economy learning center, Neun Kho Fishery Learning Center, conservation and management of sea and coastal resources. The business also supported the founding of 13 community enterprises in Rayong that helped the people generate more than 15 million baht of cash flow. All of these activities contribute significantly to the sustainability between the industries and communities.

2.4 Undelivered Projects on High-Valued Purchase Agreements

None

SCG Packaging

SCG Packaging PLC. was established in 1980 by The Siam Cement PLC. and Siam Kraft Co., Ltd. to engage in manufacturing and sale of pulp. Its initial registered capital was Baht 100 million under the name of The Siam Pulp and Paper Co., Ltd. The Company was later converted into a public company in 1994 and raised its capital to Baht 1,400 million. Currently, the registered capital is amounted to Baht 1,563 million. The Company was delisted from the Stock Exchange of Thailand in 2003 and was thereafter renamed to SCG Paper PLC. in April 2007. In 2015, The Company has registered its name change. Effective June 2, 2015, the official name becomes “SCG Packaging Public Company Limited”. This name change reflects the company’s strategic focus towards packaging products and applications, with the aim of providing total and sustainable packaging solutions for its customers.

The SCG Packaging PLC. and subsidiaries is the country’s only integrated producer of high quality pulp, paper, and containers. Their main business chain are Packaging chain and Fibrous chain.

Key Information	
Capacity	<p>Packaging Chain</p> <ul style="list-style-type: none"> • Packaging paper 2,306,600 tons per year • Containers <ul style="list-style-type: none"> - Corrugated containers 1,013,000 tons per year - Flexible packaging 590,000,000 square meter per year <p>Fibrous Chain</p> <ul style="list-style-type: none"> • Pulp 406,000 tons per year • Dissolving pulp 96,000 tons per year • Semi-Chemical pulp 139,000 tons per year • Unbleached Euca kraft pulp 25,000 tons per year • Printing and writing paper 495,000 tons per year
Main Products	<p>Packaging Chain</p> <ul style="list-style-type: none"> • Kraft paper, duplex board, corrugated containers, flexible packaging <p>Fibrous Chain</p> <ul style="list-style-type: none"> • Pulp, dissolving pulp, printing & writing paper
Brand	<ul style="list-style-type: none"> • 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, Matt PRO New, Gloss Pro New, Card PRO, Note PRO, Text PRO

Key Information	
	<p>Green Series – Green Offset, Green Card, Green Matt, Green MattCard, Green Form</p> <p>Idea Green Plus</p> <p>Idea Carepack</p>
Strengths	<ul style="list-style-type: none"> ● Response to customer needs by provide “Total packaging solution” ● World-class quality ● Continual offering innovative products and services ● Strong domestic distribution channel and marketing system, as well as the worldwide exports ● Efficient production cost control ● Total Quality Management – TQM
Major Business Policy	<ul style="list-style-type: none"> ● Maintain domestic market leadership ● Aspiring for regional leadership in paper and packaging business ● Focus on sustainable growth strategy and providing good returns to shareholders and stakeholders ● Conserve the environment
Business Development Policy	<ul style="list-style-type: none"> ● Improve existing machines for higher efficiency ● Develop innovative products to better serve customers' needs ● Seek opportunities in expanding its business with Merger and Acquisition as a priority ● Develop knowledge, skill and experience for all levels of employees to maintain competitive advantage and become a regional leader

2.1 Product or Service Features

SCG Packaging is the country's leading manufacturer of paper and corrugated containers. The business is the only integrated producer in Thailand with production process starting from pulp preparation to manufacture of printing and writing paper, packaging paper, corrugated containers and flexible packaging. Being in such position allows it to appropriately allocate the production capacity, efficiently control the costs, make it relatively less vulnerable to external changes, and add value to its products. There are two major business chains as follows:

- **Packaging Chain**

The major products comprise of kraft paper for the manufacturing of corrugated containers, extensible sacks, kraft bags, paper core, processed-finished products, gypsum linerboard, coated duplex board and various types of corrugated containers, flexible packaging, logistics materials, merchandising display, and total packaging design solutions.

- **Fibrous Chain**

The main products are eucalyptus pulp, dissolving pulp and printing & writing paper. It also provides specialty paper, and paper & packaging for food and beverage.

Eucalyptus pulp is used as raw material for various paper grades e.g. printing & writing paper which is used for magazines, notebooks, textbooks, photocopy paper, kraft paper which is used for packaging and containers, specialty paper which is used for industrial applications such as label paper, paper for furniture uses, paper for medical & hygiene uses and also paper & packaging for food and beverage such as cup stock paper and cone cup.

In addition, eucalyptus pulp is also used as raw material for molded fiber for food packaging, rayon fibers, melamine compound resin as well as construction materials.

2.2 Market and Competition

A) Policy and Market Features of Main Products and Services

- **Policy and Market Features**

- 1) **Marketing strategy**

SCG Packaging focuses on continuous development of products and services to satisfy customers' needs. "Innovation" is the key strategy to increase our sustainable competitiveness in high competitive market. For Packaging Paper Business, SCG Packaging has developed new packaging paper called "Hi-Strength" paper, lower basis weight with the same strength comparing with the relative basis weight paper. It saves production cost and environmental resources.

Moreover, SCG Packaging continuously improves and develops environmentally friendly products. Our products are awarded for promotion of raw material reduction and reuse by the Green Label, the national environmental certification awarded to specific products which have less detrimental impact on the environment in comparison with other products serving the same function. Additionally, SCG also has its own environmentally friendly certification, called 'SCG eco value'. For example, linerboard (KA, KH, KT), corrugating medium (CA, CS), coated duplex board and gypsum linerboard were certified by SCG eco value for their higher recycled content comparing with competitors' in the market.

Furthermore, SCG Packaging is manufacturer of packaging paper who has obtained the FSC-CoC (Chain of Custody) certification. This internationally-recognized certification is granted for products that come from FSC-certified forest and processes. The FSC or the Forest Stewardship Council has taken into account the raw material selection, raw material handling and storage, product amount control, sales and delivery of products before environmentally friendly product guarantee. Our products, e.g. containerboard, sack kraft paper, coreboard, gypsum linerboard and coated duplex board, have gained several types of the FSC-CoC certification (FSC Recycled 100%, FSC Mix 100%, and FSC Mix 70%), ensuring that our products are environmentally friendly, and commit to social responsibility.

The packaging business has aimed at being a total packaging solutions provider who offers such wide range of packaging as corrugated containers, flexible packaging, logistics materials, and merchandising display that could respond to all the customers' packaging requirements. corrugated containers packaging business has developed and expanded production capacity especially the printing technologies including flexographic preprint, offset printing and digital printing in order to meet the rising demand for packaging with higher printing quality in Thailand, Vietnam and Indonesia. Focus is specially put on the flexographic preprint since its capacity expansion is aimed to serve mainly footwear industry and food & beverage industry.

And since the company has foreseen the impressive growth potential of the flexible packaging industry which allies with the current consumer behavior requiring greater convenience in shorter time, the company, therefore, has been continuously expanding its flexible packaging business in both Thailand and Vietnam. The new plant established last year in Samutsakorn province, Thailand, has officially operated at full capacity. Other than the capacity expansion, the company has also developed more innovative products such as flat bottom bag and self-venting microwavable food packaging: Eazy Steam[®].

Furthermore, as for packaging design services, the company has continued focusing on the development of designer team for more proactive work and a better skill set of integrated design, including the design of logo, brand, merchandising display, exhibition, and other printing materials. The design experts, together with the plants with well-equipped facilities across the country and the region, can certainly increase customer confidence on our premium quality products and services.

For printing and writing paper business, the company expanded its photocopy paper's customer base domestically and internationally. The marketing promotion was continuously implemented for domestic market. Meanwhile, for international market, it increased marketing activities, focusing on neighboring countries and others in Asia as well as the America.

For non-printing and writing paper business, the capacity expansion projects already ramped up the production last year. The investment added semi-bleached chemical pulp with a capacity of 70,000 tons per year, starting in Q1 2016, as well as, increased unbleached short fiber chemical pulp with a capacity of 25,000 tons per year, starting in Q2 2016. The projects aim to cope with an increasing demand of paper packaging.

With regard to paper and packaging for food & beverages, “FEST”, a brand for food packaging products made of food grade paper, expanded its sales channel to modern trade and SMEs to take an opportunity from a strong growth in domestic and international markets. It offers various food packaging products made of molded pulp and paper, including lunch box, plate, bowl, and other related products. Furthermore, to serve customer needs, it provides a wide range of services associated with design solutions. In addition, last year, business decided to expand the production line of molded pulp and paper food packaging which is expected to start in Q3 2017.

2) Customer Features and Channel of Distribution

Packaging Chain

Packaging Paper

Channel: Directly sold to affiliated firms under SCG Packaging and external customers. Products include paper rolls for converting plants and converted products such as sheet board, paper bags, ream paper, and small rolls. The products are also exported to several countries such as Malaysia, Indonesia, Singapore, Vietnam, Cambodia, Myanmar and China etc.

Packaging

Channel: Packaging business (Corrugated Containers) offers direct sales by sales representatives and account executives who work closely with the customers; Packaging business now possesses 24 corrugated containers plants and 4 flexible packaging plants. All the plants' location is both nationwide and ASEAN-wide including Thailand, Vietnam, Indonesia, Singapore, and Malaysia.

Fibrous Chain

Pulp

Channel: Directly sold to affiliates in the paper business and external customers and sold through agents for export markets.

Printing & Writing Paper

Channel: 70% of total sales served domestic market by different channels, including printing house, industry uses, agents, converter, modern trade and stationeries stores. The rest, 30%,

is sold to export markets; Vietnam, USA, Myanmar, Australia, Malaysia, Hongkong, India, other ASEAN countries, and the Middle East countries.

Specialty paper for industrial uses

Channel: Directly sold to industrial customers or convertors and agents for export markets.

Paper & Packaging for food and beverage

Channel: Sold through convertors, food packaging stores, modern trade and agents for export market.

- Industry, Competition, and Trend

1) Packaging Chain

Demand of packaging paper in Thailand grew up 1.8% y-o-y. For ASEAN, demand for packaging paper increased 4% y-o-y. In 2017, Demand of packaging paper in Thailand expects to increase by 3% y-o-y, as a result of higher domestic consumptions. For ASEAN market, demand of packaging paper expects to growth 5% attributed to economic growth, higher private consumption and production for export. However, Packaging paper producers plan to increase additional capacity 1 million tons per year in 2017.

Demand of corrugated containers in Thailand 2016 was up 1.8% y-o-y. Overall domestic consumptions remained sluggish since the unemployment rate became stagnant and the prices of prominent agricultural products such as rice, cassava, and rubber remained low. As the consequent, lower income of agricultural sectors affected on declining consumer confidence and cautiously purchasing decision. Packaging demand for the domestic market decreased consequently. Overall export also dropped due to the depression economic situation in partner countries, such as U.S., China, the European Union, and Japan. Packaging demand for export products, therefore, did not show any significant growth compared to the previous year.

Thanks to manufacturers' marketing campaign, new product launches, and the expansion of E-Commerce business, food & beverage and consumer products industries generated comparable growth to last year. For beverage sector, non-alcoholic drinks have been an ongoing trend. Fruit juice grew modestly in export market, while green tea developed its growth from continuous marketing activities plus new product launches. On the alcoholic beverage side, consumption rate declined from lower household income, therefore, the manufacturers focus on packaging design in order to attract consumers. As for frozen and processed chicken sector, producers were able to export to Japan and South Korea after they abolished imported chicken products restriction from Thailand. Frozen shrimp production also

expanded after Early Mortality Syndrome (EMS) was resolved; moreover, IUU Fishing lowered human trafficking warning from Tier 3 to Tier 2 – watch list. As a result, frozen shrimp sector has a progressive prospect towards export.

Less packaging demand can be seen in 2 sectors which are electrical appliance and canned food. For electrical appliance, domestic packaging demand decreased as several producers have shifted production bases away from Thailand to neighboring countries. Its export rate also dropped due to depressing economic situation. As for canned food sector, shortages of raw material (pineapple) caused the lower production than expected.

For ASEAN market situation in 2016, demand of corrugated containers in Vietnam grew up 6-7% y-o-y mainly from electrical and electronics products industry, which growth was expanded from 2 major manufacturers including Samsung and LG, which intended to continuously expand their production line. Consequently, demand of corrugated containers will be elevated. As a global potential production base, Vietnam footwear and garment industries have been continuous developing. And it is expected to be the brighter future for the industry since there has been continuous production base shift from China. As well as in Indonesia, the president election brought up to 4% growth in corrugated industry. For the food, beverage and footwear sectors, the demand constantly grew as the second large market after Vietnam, while electrical and electronics products are affected by worldwide economic downturn; hence the expansion did not reach the expectation.

In 2017, growth rate for packaging industry is expected to be brighter than as of 2016. The growth is projected to be similar to GDP's growth rate; in which 3% came from food, beverage, and consumer products. Furthermore, Vietnam market trend in 2017 is estimated to remains growth at the range of 6-7%. The driving segments are electrical and electronics products, footwear and garment. While Indonesia market trend is projected to grow by 5-6% as in 2016. However, price pressure remains the major challenge for packaging industry since packaging producers aim to expand their business continuously. Production efficiency and cost reduction will turn to be the key success factors, which could not only increase competitive advantage but also allow the organization to perform with profitability, sustainably.

2) Fibrous Chain

Bleached chemical long and short fiber pulp

In 2016, World bleached chemical long and short fiber pulp demands have been increased by 2.8% y-o-y. The tissue sectors remain one of the key growth drivers for pulp market, although more slowly than in previous years. Nevertheless, the average pulp price was pressured by numerous long and short pulp new capacity expansions in 2016. To close pulp price differential

with short fiber, many paper producers increase the proportion of short fiber pulp to low pulp cost.

In 2017, world bleached chemical long and short fiber pulp demand is expected to be increased by 2.6% y-o-y but the average pulp price is still be pressured by the new capacity ramp up and expansion especially short fiber from Latin America and Asia around 4 million tons .

Dissolving pulp

In 2016, the growth in demand for dissolving pulp grew by 6% y-o-y, which has been driving by the expansion of viscose market in China. Furthermore, dissolving pulp price increased due to higher demand from viscose producers and limited cotton linter in mid-year.

In 2017, global dissolving pulp demand is projected to grow 8% y-o-y from viscose segment. dissolving pulp demand growth is expected to be strongest in China where most of the newly proposed viscose staple fiber capacities are concentrated. However, dissolving pulp price is expected to be lower than previous year because of the ramp-up of dissolving pulp capacity in China and Latin America.

Printing and writing paper

In 2016 , The growth in demand for printing and writing paper industry in Thailand still decreased by 8% from last year mainly from the substitution of digital media, especially in promotional materials and magazine segments. While import paper volume decreased 32% y-o-y. Copy paper remained high competition affected to severe price competition from China and Indonesia players.

In 2017, printing and writing paper demand is projected to drop further by 16% y-o-y due to continuously sluggish demand in promotional materials and magazine segments. Copy paper market remains high competition as 2016.

2.3 Product or Service Procurement

A) Product Procurement Feature

- Raw Material and Suppliers

Packaging Chain

Packaging Paper

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

Source:

- Wastepaper: 65% from local vendors and 35% from import

- Bleached and unbleached short fiber pulp: 60% from local vendors and 40% from import
- Bleached and unbleached long fiber pulp: All from import
- Main chemicals such as starch, sizing agent, color, and others: From local vendors and import

Obstacles: Bleached and unbleached short fiber pulps are imported. Unbleached long fiber pulp is entirely imported from a few suppliers within 30-45 days lead-time. The domestic supply of wastepaper is also limited, leading to requiring imported wastepaper, which has higher price than domestic wastepaper.

Packaging

Raw Material Type: Kraft paper

Source: From Siam Kraft Industry Co.,Ltd., a subsidiary of SCG Packaging.

Obstacles: Raw materials are efficiently secured due to adequate supplies and consistent quality control. Selling price is set by referring to current market price to optimize fair and competitive cost.

Fibrous Chain

Pulp

Raw Material Type: Eucalyptus logs and chips.

Source: Eucalyptus logs and chips are bought mainly from open market and contract farming.

Printing & writing paper and non-printing & writing paper such as specialty paper for industrial uses and paper & packaging for food and beverage

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

Source:

- Bleached long fiber pulp from import
- Bleached short fiber pulp from local and import
- Wastepaper from local and import
- Chemicals, synthetic latex, kaolin powder, calcium carbonate, and others from local and import

Obstacles: Bleached long and short fiber pulps are entirely imported with 30-45 days lead-time.

B) Environmental Impact

SCG Packaging conduct business with the concern of 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:

- A project designed to reduce energy consumption in the manufacturing process by recapturing waste heat for reuse
- A project dedicated to improving the efficiency of steam traps
- A project designed to replace fluorescent tubes with LEDs
- A project designed to generate biomass gases from eucalyptus chips, waste from the pulp production process, for use in lieu of fuel oil in lime kilns

Streamlined the manufacturing process to minimize waste materials and water consumption. In addition, water from under the machine was recycled and waste water such as cooling water and water for cleaning felts and wire were treated for reuse.

Reduced and reused waste materials by installing a 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.

Furthermore, SCG Packaging took care of communities surrounding the plants and all stakeholders to ensure sustainable coexistence through numerous socially responsible projects. For example, SCG has joined forces with the communities to construct over 70,000 check dams across Thailand according to the Royal Initiatives. The Green Mart project provided channels for communities nearby the plants to promote their community products. SCG Packaging Happy Community project was dedicated to promoting careers and supporting community enterprises to earn supplementary income. To promote community products, they were packaged as New Year gifts for sale. SCG Packaging 9th Green Academy was designed to instill a sense of environmental concern among the youths in the communities surrounding the plants. On top of this was SCG Packaging x Wallpaper the Challenge 2016 under the theme of “Creating Value for Society”. The contest provided opportunities for a new generation of young people to showcase their creativity and talent in packaging design. The winning designs have helped add value to the community products.

2.4 Undelivered Projects on High-Valued Purchase Agreements

None

3. Risk Management

Risk Management

Amid global economic uncertainties and various other risk aspects which are becoming more complex and more severe, SCG has adopted the “Sufficiency Economy” principles through the implementation of enterprise risk management to ensure that the organization achieve its business goals. SCG has continuously raised risk management awareness throughout the organization and aimed for better risk management efficiency from strategic formulation, to operation, to decision for new investment. We believe that this effort will add value to the organization and stakeholders and contribute to SCG’s sustainable growth.

SCG Enterprise Risk Management Framework

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

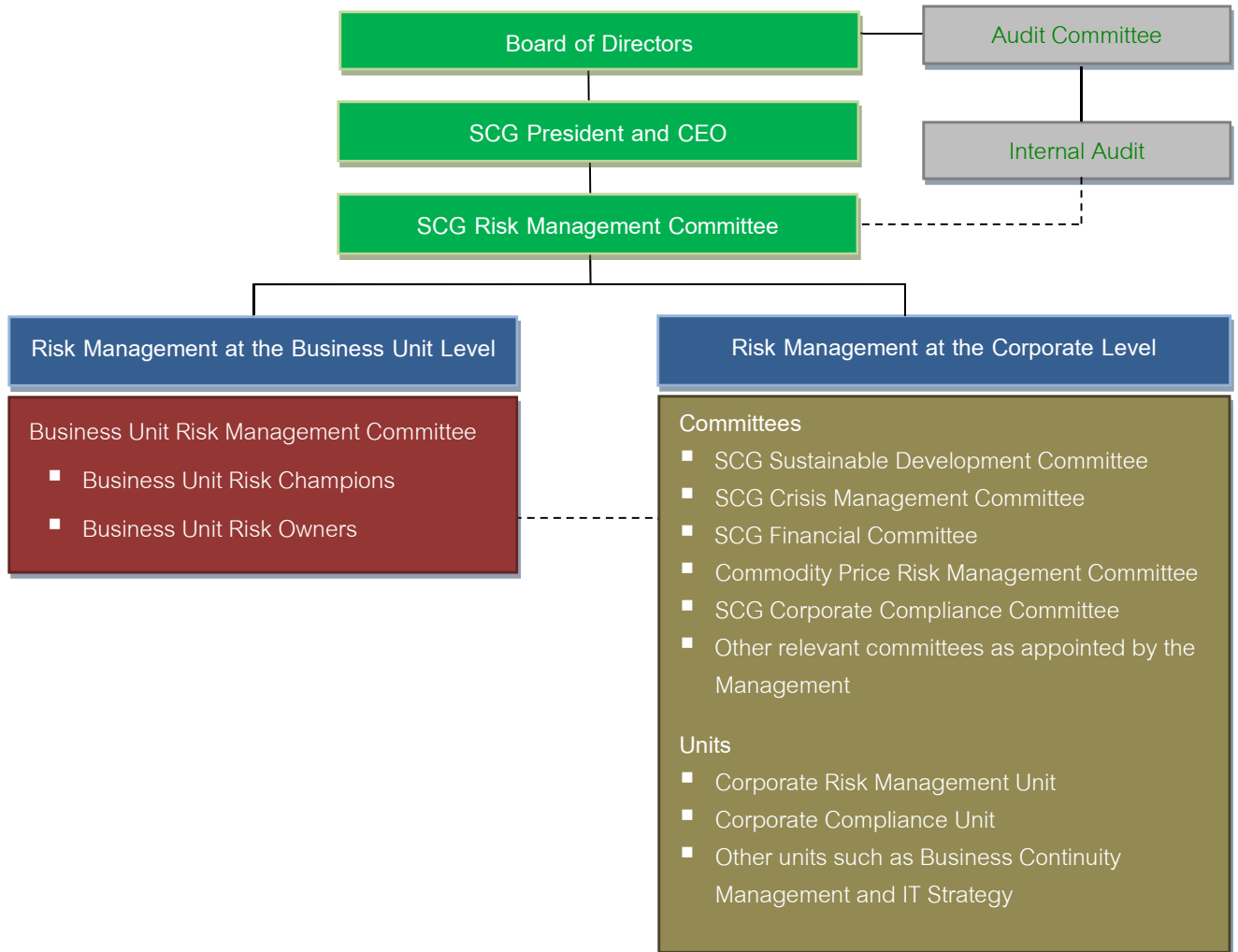
1. Strategy Establishment

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 as follows:

Enterprise Risk Management Organizational Structure



— Reporting line

- - - Coordination and information exchange

The Board of Directors and Audit Committee

The Audit Committee, on behalf of the Board of Directors, establishes risk management policies and oversees 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

SCG Internal Audit's role is to conduct audit of the first line (Operating Unit) 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. The internal audit also reports the audit outcomes to the Audit Committee. Additionally, the Unit provides consultation and communicates Audit Committee's opinions to the first line and functions that are being audited for improvements.

The SCG Risk Management Committee

The SCG Risk Management Committee consists of the President and Vice President of each business unit. The SCG President and CEO serves as the Committee Chairman. The 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 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, documented in the "SCG Risk Management Manual" for the above areas, includes 1) Risk / Opportunity Identification, 2) Risk Assessment, 3) Risk Response and 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 common risk language, risk appetite, common risk assessment system, and accountability of each risk owner. Moreover, SCG has encouraged employees to include risk management as an agenda in major meetings at each company. Apart from that, risk management was designated as a component of training and development programs

for directors, top executives and SCG staff. Learning materials in digital format was recently developed to increase risk awareness and coverage for SCG staff.

In 2016, SCG conducted “SCG People Culture Survey 2016” to measure employee’s behaviors in accordance with SCG 4 core values and organization’s culture in various aspects, including risk culture. The result shows that over 75% of SCG employees have embedded risk management in their works and acknowledged that SCG encourages employees to take calculated risks before making decisions.

Key Risks, Opportunities and Management Strategies

In 2016, SCG has assessed and mitigated significant risks in alignment with material sustainability issues as illustrated below.

Safety, Health, and Environment Risk

1. Safety and Health Risks

Overseas operations in countries where environment, safety and health are sub-standard can pose as risks.

- Implemented various safety & health standards such as Occupational Health and Safety standard (OHSAS 18001) and Safety Performance Assessment Program (SPAP) in overseas companies and disseminated the application of safety management principles to its trading partners to extend the practice to the wider society.
- Developed “9 Life Saving Rules” which focus on the concept of “life saver” for oneself and others to better promote safety awareness, covering safety both in the workplace and on the road. In 2017, communication effort will be extended to cover all employees and contractors.

SCG believes that safety and healthy workplace environment will allow the operations to run efficiently and smoothly, reduce unnecessary production cost and create trust among customers, business partners and stakeholders.

2. Climate Change Risk

Climate change and global warming caused by energy consumption in production process could result in SCG’s exposure to environmental impact risk that may affect the continuity of business operations, organization’s reputation, or cost.

- Continuously improves production efficiency through enhancing the use of renewable and alternative energy, for example, the use of alternative energy in a gasifier to reduce combustion and the use of solar power to produce electricity to lower greenhouse gas emissions.
- Developed environmentally-friendly products and services, for example, Active AIRflow™ System, a solar-powered automatic airflow and ventilation system that vent heat from inside the house. Another example is Emisspro[®], a coating substance for energy-saving burners,

which was developed out of an attempt to reduce energy use and greenhouse gas emission. The research and development of this innovation technology eventually led to technology licensing business for SCG.

Compliance Risk

3. Compliance Risks from Changes in Laws & Regulations

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

- Constantly updates SCG Code of Conduct according to changes in laws and regulations. This includes conducting "Ethics e-testing focusing on SCG Philosophy, anti-corruption and human right policies.
- Communicates good risk management and control practices in accordance to the "Three Lines of Defense" concept to SCG staff at all levels to prevent non-compliance.
- Closely monitors changes from government policies as well as laws and regulations in the countries where SCG operates.

In 2016, all of SCG's listed subsidiaries were certified by the Private Sector Collective Action Coalition against Corruption Council (CAC), a proof of SCG's commitment to Anti-corruption policies and practices against corruptions and briberies.

Reputation and Intellectual Property Risk

4. Reputation Risk from Social Media

Social media has been widely used as a channel to communicate and exchange opinions on products, services, and organizations. In the event that SCG becomes the topic of negative news coverage on social media, its outstretch nature may cause serious impact on the brand and reputation of the organization.

- Established a Brand Committee who oversees the monitoring of online risk events, and the preparation of countermeasures and communication system, which includes crisis management drill.
- Applied digital technology to analyze voice of customers and stakeholders regarding SCG's products, services and businesses using information from social media to proactively assess market movement, stakeholders' satisfaction and expectations.

5. Intellectual Property Risks

SCG has continuously supported the development of High Value Added products and services (HVA) to increase competitive advantage and elevate industry performance. Therefore,

Intellectual Property (IP) management plays a crucial role in risk mitigation to prevent SCG's trademarks and innovations from being infringed.

- Established IP division and IP management system at corporate and business unit levels to prevent SCG from infringing others or being infringed. This includes organizing IP trainings for SCG employees to raise awareness and promote practice.

After years of IP strategy and IP management implementation, SCG received "Asia IP Elite 2016" award for the 3rd consecutive years at the IP Business Congress Asia 2016 conference hosted by Intellectual Asset Management (IAM). This award has truly represented SCG as an ASEAN leader in intellectual property and allowed the organization to create more opportunities in introducing new products and building trust among business partners.

Hazard Risk

6. Drought in Thailand

In the past years, Thailand faced severe drought situation caused by climate change which impacted SCG operations and its business continuity.

- Business Continuity Management (BCM) unit at corporate and business unit levels led the effort to manage the situation to minimize impact.
- For the manufacturing process, SCG strictly adheres to the application of 3R concept (Reduce, Reuse/Recycle, and Replenish) and collaborates with related government organizations in order to support water shortage prevention projects.
- SCG has initiated various corporate social responsibility (CSR) projects. For example, "SCG: United against Drought" was organized to provide large tanks to the communities in drought-affected areas. In addition, in 2016, under "SCG Conserving Water for Tomorrow Project", SCG opened Khao Yaida learning center, a result from collaborative project between SCG and the communities in Rayong province. These activities allow SCG's operations and surrounding communities to live together sustainably.

Input Risk

7. Labor Shortage and Rising Wages Risk

As the world including Thailand is entering an era of aging society, problem from labor market imbalance in ASEAN countries has caused competition for labor and rapid wage hikes in some countries.

- Collaborated with the Thai government in Competitive Workforce project under Pracha Rat (people's state) to advance the status of vocational students with the aim to supply skilled labors to the market.

- Continuously build relationship with universities and other institutions in ASEAN.
- Implementation of automatic machines and robots to enhance production efficiency and to prepare for labor shortage situation, for example, PVC manufacturing robots to increase production capacity and reduce defective products, and an inspection robot to deliver inspection and repair services in hazardous areas both in-house and to large industrial customers outside SCG.

8. Fluctuation in Energy and Major Raw Material Prices Risk

The possibility of oil production cut by the Organization of the Petroleum Exporting Countries (OPEC) has caused the volatility and rising trend of global crude oil price. As a result, energy and commodity prices such as naphtha and fuel oil have increased. In addition, the price of coal, one of the main energy sources for SCG Cement-Building Materials and SCG Packaging, showed sign of soaring due to Chinese coal mining restriction policy and its effect on decreased coal supply.

- Commodity Price Risk Management Committee has adjusted risk management strategy to response to the changing circumstances. For example, hedging instrument is applied to reduce risks from commodity price fluctuation and maintain competitive cost in the global market.
- SCG developed HVA products and services such as a new hybrid-formula cement which consumes less energy during combustion and 'The NEST,' the prototype of energy plus house that generates more electricity than the consumed amount.

Process Risk

9. Supply Chain Risks

SCG considers all risk factors throughout the supply chain, starting from raw material procurement, materials and equipment used in the production and transportation, to sales and delivery of products and services, to prevent any misalignment that may affect the confidence of consumers and other stakeholders as well as the impact on SCG's operations.

- Conducts "Spend Analysis" to assess risks and impact on SCG's operations in various dimensions covering economic, environment and society. Results from the analyses will be applied to classify suppliers, and develop strategy and plan to develop these suppliers, for example, co-created projects to reduce energy consumption and improve lime quality for paper production.
- Developed "SCG Supplier Code of Conduct" for all suppliers to oblige to in order to help enhance operating standards for the mutual benefits of SCG and the suppliers.

10. Human Resources Management and Capability Risks

In preparation for human resources readiness and capability to accommodate future business expansion in Thailand and ASEAN countries, SCG has consistently improved its human resources management to better align with its business strategies.

- Communicated human rights policy and practices to SCG employees, business partners and related parties to create understanding, fair and equitable business practices.
- Established learning and coaching culture using 70:20:10 approach. This method emphasizes on on-the-job training and learning from mistakes with support from supervisors. Further, an employee at each level will be given an opportunity to develop their business knowledge, as well as leadership and teamwork skills.

Having constantly placed importance on an equal treatment to all employee, staff competency development and employee engagement, in 2016, results from SEEK Asia company survey showed that SCG is one of the most attractive employers in Thailand. This has accordingly resulted in SCG's ability to better recruit talents to work with the company.

Business Environment Risk

11. Foreign Exchange Rates Fluctuation Risk

Thai Baht against the dollar is expected to be volatile due to various uncertainties such as impact from powerful countries' international policies, US Fed's interest rate trends and US economic stimulus measures.

- SCG's Financial Committee considers using financial instruments to hedge foreign exchange rate exposure when appropriate. This includes, matching revenue and expense in foreign currency (Natural Hedge) and making agreement with trading partners in using local currency at an appropriate level.
- SCG has leveraged cross-currency competitiveness and focused on export to countries within and outside ASEAN where appropriate.

12. Risks to ASEAN Economic Growth and Competition

In 2017, the world's economy will continue to face uncertainties pending powerful countries' economic and political policies, for example, political uncertainties and banking crisis in Europe, non-performing loans and slowdown in Chinese economy and direction on foreign trade from the new US president. All these factors will likely affect ASEAN economy directly or indirectly. Moreover, market entries of new players, both large and small, in countries where SCG has presence will intensify competition for SCG.

- Established Country Business Support Office (CBSO) to evaluate and monitor risks in the countries where SCG has invested. Besides, reports on significant risk events in each strategic country are presented quarterly to audit committee and top management for country risk management and portfolio management. In addition, Scenario Planning and Sensitivity Analysis are conducted to assess potential consequences from such risks.
- Continue to develop HVA products and services to serve niche markets, increase sales from export, and accelerate sales from export to ASEAN and non-ASEAN countries to compensate for domestic slowdown and intense competition as well as explore future investment opportunities.

Emerging Risks

1. Risk from lower level of Thailand's potential economic growth compared to that of the past

The study on "Thailand's New Normal" by Thailand Future Foundation shows that Thai economy could grow at a lower growth trajectory, compared to that of the past. It is expected that in the next decade, the growth potential is likely to be at an annual GDP of 3% (reduce from averaged of 5% in 2000-2010). Such a slower growth rate is mainly a consequence from the country's structural changes such as aging workforce, which impacts productivity, and the reduction from export from double to low single digit. At the same time, domestic spending is hurt by low farm income due to extreme weather and high household debt. Moreover, external economic and political uncertainties could pose as risks to growth. Therefore, SCG has been focusing on the expansion of overseas operations to manage such risks and capture ASEAN growth, for example, establishing cement plants in Myanmar and Indonesia, conducting trading business outside ASEAN regions, as well as developing high value added products and services.

2. Risk from digital technology transformation

Digital technology has and will play a crucial role in daily lives and businesses, for example, the adoption of digital technology in delivery service, marketing and sales through online channels. In the long term, such development may impact SCG business model and traditional distribution channels, which threatens SCG's competitive advantage. On the contrary, such trend could create new business opportunities. For this reason, SCG has dedicated effort to monitor and analyze trends and changes in digital technology and adopt them to prevent disruption risks and capture new opportunities. Examples include the adoption of Big Data to investigate customers' need and behavior in introducing products and services, the development of marketing strategy focusing on Omni channel that allows customers to access products and services through

physical stores and websites, and the offering of express service for small parcel delivery to accommodate rapid growth of e-commerce, m-commerce and urbanization in Thailand.

3. Risk from higher cost of energy in Thailand

Various sources have forecasted that major source of energy supply in Thailand is diminishing while demand for energy is on a rising trend, which would likely lead to an increase in energy and electricity prices impacting SCG's energy cost. Therefore, emphasis has been placed on reducing energy risk. SCG established Energy Committee who is responsible for setting out and monitoring the organization's energy policy to increase energy utilization efficiency. Additionally, the organization appointed a taskforce who is responsible for the exploration of both the main and alternative sources of energy that are also environmentally-friendly. Moreover, the organization has encouraged the use of technology that allows for the utilization of low-cost, but not commonly used energy, the production of electricity from process waste, along with the development of products that requires lower production cost per unit or reduces energy consumption when in use.

4. Risk from climate change, natural disaster and greenhouse gas emission control

Climate change from greenhouse gas accumulation, resulting in more extreme weather has become a vital risk that has drawn the world's attention. In 2016, Thailand signed the Paris Agreement, according to the UN Framework Convention on Climate Change, to keep global temperature rise below 2 degrees Celsius. SCG has therefore established measures to reduce greenhouse gas emission including increasing the proportion of alternative energy and generating power from waste heat, developing products and services that reduce greenhouse gas emission such as rooftop solar power generation system and Emisspro[®], and raising awareness among staff on the importance of energy conservation and the use of clean and environmental friendly energy.

4. Assets Used in Operation

Total Assets

Total assets of The SCG as at 31 December 2016 were Baht 539,688 million of which 29 percent of them are current assets, comprising of cash and cash equivalents, short-term investment, trade accounts and notes receivable, and inventories. The rest (71 percent) are investments, property, plant and equipment.

Most assets shown in the financial statements of the Company and its subsidiaries were built by and belonged to the Company and its subsidiaries. SCG has no policy to place any assets as collateral.

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

	<u>2016</u>	<u>2015</u>	
SCG Cement-Building Materials	203,068	187,976	Million Baht
SCG Chemicals	193,465	185,583	Million Baht
SCG Packaging	85,369	83,218	Million Baht
Other	289,326	281,443	Million Baht

From the consolidated financial statements as at 31 December 2016, SCG's property, plant and equipment have carrying values of Baht 245,183 million, which are 45 percent of total assets.

Property, Plant and Equipment - Net

(in million Baht)								
Business Unit	Land		Building		Machine and Others		Total	
	Dec 31, 16	Dec 31, 15	Dec 31, 16	Dec 31, 15	Dec 31, 16	Dec 31, 15	Dec 31, 16	Dec 31, 15
SCC	435	557	1,759	1,768	1,041	1,048	3,235	3,373
SCG Cement-	16,297	15,454	18,241	18,020	76,722	66,717	111,260	100,191
SCG Chemicals	2,791	2,877	4,878	5,209	67,934	66,275	75,603	74,361
SCG Packaging	2,675	2,406	7,043	6,752	46,299	44,947	56,017	54,105
Other	436	557	1,776	1,769	1,083	1,090	3,295	3,416
Consolidated	21,272	20,363	31,690	31,386	192,221	179,183	245,183	230,932

Remark: Figures in financial statements are classified according to Business Groups before adjustment of inter-business transactions.

Intangible Assets

- Patent

At the end of 2016, SCG has 399 valid patents comprising 69 invention patents, 94 petty patents and 236 design patents. The number of patents owned by the Siam Cement PLC., SCG Chemicals, SCG Packaging and SCG Cement-Building Materials are 3 patents, 72 patents, 40 patents, and 284 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	18017	Jan 11, 2005	The Siam Cement PLC.	9901000939 (049446)	Mar 22, 1999	A process for producing pozzolan from kaolin clay and rice husk ash	-	Mar 21, 2019
2	19730	Mar 21, 2006	The Siam Cement PLC.	9901000940 (049447)	Mar 22, 1999	A manufacturing process for cement products and/or concrete with ceramic coating	-	Mar 21, 2019
3	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, 2020
<u>SCG Chemicals</u>								
4	37715	Oct 25, 2013	SCG Chemicals Co., Ltd.	1102000374	Feb 4, 2011	-	Container for plant growing	Feb 3, 2021

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
5	37716	Oct 25, 2013	SCG Chemicals Co., Ltd.	1102000373	Feb 4, 2011	-	Container for plant growing	Feb 3, 2021
6	47452	Dec 17, 2015	SCG Chemicals Co., Ltd.	1102002684	Sep 6, 2011	-	Shelter	Sep 5, 2021
7	48910	Mar 28, 2016	SCG Chemicals Co., Ltd.	1102000372	Feb 4, 2011	-	Holder for plant growing	Feb 3, 2021
8	51321	Sep 16, 2016	SCG Chemicals Co., Ltd.	1202003037	Nov 20, 2012	-	Container	Nov 19, 2022
9	Petty Patent 6747	Dec 9, 2011	SCG Chemicals Co., Ltd.	0903000414	Apr 28, 2009	Fire retardant polyethylene compound composition and product formed from the fire retardant polyethylene compound composition	-	Apr 27, 2019
10	Petty Patent 7762	Jan 16, 2013	SCG Chemicals Co., Ltd.	1103000619	Jun 21, 2011	Water container	-	Jun 20, 2021
11	Petty Patent 11924	Sep 9, 2016	SCG Chemicals Co., Ltd.	1403001033	Sep 5, 2014	Product comprising natural materials	-	Sep 4, 2024

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
12	Petty Patent 11942	Sep 16, 2016	SCG Chemicals Co., Ltd.	1503001818	Oct 27, 2015	Flexible ready-made splint	-	Oct 26, 2025
13	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)
14	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 2, 2034
15	102712853B (China)	Dec 24, 2014	SCG Chemicals Co., Ltd.	200980163165.8	Jun 25, 2012	Process for reducing the bromine index of a hydrocarbon	-	Dec 24, 2029
16	2816051 B1 (Germany)	Nov 4, 2015	SCG Chemicals Co., Ltd.	602013003718.3	Jun 19, 2013	Catalyst for olefin polymerization, method for its preparation and use	-	Jun 19, 2033
17	2799485 (Germany)	Mar 23, 2016	SCG Chemicals Co., Ltd.	602013005635.8	Apr 30, 2013	Polymer composition and cable spacer comprising the polymer composition	-	Apr 30, 2033

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
18	2799485 (France)	Mar 23, 2016	SCG Chemicals Co., Ltd.	13165931.0	Apr 30, 2013	Polymer composition and cable spacer comprising the polymer composition	-	Apr 30, 2033
19	60 2014 002 301.0 (Germany)	Jun 15, 2016	SCG Chemicals Co., Ltd.	14166673.5	Apr 30, 2014	Polymer composition for a container closure	-	Apr 30, 2034
20	2939814 (France)	Jun 15, 2016	SCG Chemicals Co., Ltd.	14166673.5	Apr 30, 2014	Polymer composition for a container closure	-	Apr 30, 2034
21	2939814 (Italy)	Jun 15, 2016	SCG Chemicals Co., Ltd.	14166673.5	Apr 30, 2014	Polymer composition for a container closure	-	Apr 30, 2034
22	2939814 (Austria)	Jun 15, 2016	SCG Chemicals Co., Ltd.	14166673.5	Apr 30, 2014	Polymer composition for a container closure	-	Apr 30, 2034
23	2939814 (Belgium)	Jun 15, 2016	SCG Chemicals Co., Ltd.	14166673.5	Apr 30, 2014	Polymer composition for a container closure	-	Apr 30, 2034
24	9382123 (USA)	Jul 5, 2016	SCG Chemicals Co., Ltd.	14/367,437	Jun 20, 2014	Modification of layered double hydroxides	-	Dec 18, 2032 (PCT filing date Dec 18, 2012)

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
25	20122800702770 (China)	Sep 14, 2016	SCG Chemicals Co., Ltd.	2012800702770	Jun 20, 2014	Modification of layered double hydroxides	-	Dec 18, 2032 (PCT filing date Dec 18, 2012)
26	60 2013 014 937.2 (Germany)	Dec 7, 2016	SCG Chemicals Co., Ltd.	13162080.9	Apr 3, 2013	Process for converting paraffin to olefin and catalyst for use therein	-	Apr 3, 2033
27	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 3, 2033
28	2786978 (Great Britain)	Dec 7, 2016	SCG Chemicals Co., Ltd.	13162080.9	Apr 3, 2013	Process for converting paraffin to olefin and catalyst for use therein	-	Apr 3, 2033
29	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 3, 2033
30	Petty Patent 9803	Apr 22, 2015	SCG Chemicals Co., Ltd., Thammasat University	1403000748	Jul 9, 2014	DIY spacer	-	Jul 8, 2024

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
31	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
32	I500721 (Taiwan)	Jul 29, 2015	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd.	20130107293	Mar 1, 2013	High emissivity coating compositions and manufacturing processes therefore	-	Feb 28, 2033
33	2012371687B2 (Australia)	Jun 16, 2016	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd.	2012371687	Feb 29, 2012	High emissivity coating compositions and manufacturing processes therefore	-	Feb 29, 2032
34	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
35	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 29, 2032

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
36	5982502 (Japan)	Aug 31, 2016	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd.	2014-559867	Feb 29, 2012	High emissivity coating compositions and manufacturing processes therefore	-	Feb 29, 2032
37	2605880 (Russia)	Dec 6, 2016	SCG Chemicals Co., Ltd. and Siam Refractory Industry Co., Ltd.	2014131465	Feb 29, 2012	High emissivity coating compositions and manufacturing processes therefore	-	Feb 29, 2032
38	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
39	60106 (Iran)	Jul 22, 2009	Thai Polyethylene Co., Ltd.	387091337	Dec 20, 2008	Method for preparing a catalyst component for ethylene	-	Dec 19, 2027
40	272518 (India)	Apr 5, 2016	Thai Polyethylene Co., Ltd.	2658/MUM/2008	Dec 22, 2008	Method for preparing a catalyst component for ethylene	-	Dec 22, 2028

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
41	33133	Jul 6, 2012	Nawaplastic Industries Co., Ltd.	0702000288	Feb 2, 2007	-	Cross section	Feb 1, 2017
42	33232	Jul 23, 2012	Nawaplastic Industries Co., Ltd.	0702000285	Feb 2, 2007	-	Cross section	Feb 1, 2017
43	33233	Jul 23, 2012	Nawaplastic Industries Co., Ltd.	0702000287	Feb 2, 2007	-	Cross section	Feb 1, 2017
44	Petty Patent 9305	Nov 10, 2014	Nawaplastic Industries Co., Ltd.	1303000468	Apr 30, 2013	Decoration element	-	Apr 29, 2023
45	Petty Patent 9500	Jan 5, 2015	Nawaplastic Industries Co., Ltd.	1403000069	Jan 31, 2014	Frame for fast installation	-	Jan 30, 2024
46	Petty Patent 10535	Oct 9, 2015	Nawaplastic Industries Co., Ltd.	1403000468	May 15, 2014	Deck structure	-	May 14, 2024
47	Petty Patent 10795	Nov 26, 2015	Nawaplastic Industries Co., Ltd.	1403001034	Sep 5, 2014	Lathing system	-	Sep 4, 2024
48	Petty Patent 11343	Apr 4, 2016	Nawaplastic Industries Co., Ltd.	1503000102	Jan 30, 2015	Rain Gutter System	-	Jan 29, 2025
49	Petty Patent 11417	Apr 25, 2016	Nawaplastic Industries Co., Ltd.	1403000501	May 23, 2014	PVC Composition	-	May 22, 2024
50	Petty Patent 8293 (Philippines)	Jul 15, 2016	Nawaplastic Industries Co., Ltd.	22015000036	Jan 29, 2014	Frame for Fast Installation	-	Jan 29, 2021

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
51	49700	Jun 3, 2016	SCG Performance Chemicals Co., Ltd.	1402003238	Oct 22, 2014	-	Mo-Bike	Oct 21, 2024
52	49701	Jun 3, 2016	SCG Performance Chemicals Co., Ltd.	1402003240	Oct 22, 2014	-	Mo-Bike	Oct 21, 2024
53	50654	Aug 4, 2016	SCG Performance Chemicals Co., Ltd.	1402002322	Aug 20, 2014	-	Play ground	Aug 19, 2024
54	Petty Patent 10316	Aug 31, 2015	SCG Performance Chemicals Co., Ltd. and Ceramic Cement Thai	1403000301	Mar 28, 2014	Tile for a blind	-	Mar 27, 2024
55	Petty Patent 10860	Dec 4, 2015	SCG Performance Chemicals Co., Ltd. and Ceramic Cement Thai	1403000302	Mar 28, 2014	Tile	-	Mar 27, 2024
56	Petty Patent 11586	Jun 8, 2016	Rayong Engineering & Plant Service Co., Ltd.	1502003862	Nov 6, 2015	Corrosion Inspection Detector	-	Nov 5, 2021
57	2809717 (Romania)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033
58	2809717 (Portugal)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033
59	2809717 (Poland)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
60	2809717 (Italy)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033
61	2809717 (Hungary)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033
62	2809717 (France)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033
63	2809717 (Spain)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033
64	2809717 (Germany)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033
65	2809717 (Belgium)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
66	2809717 (Austria)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033
67	2809717 (Turkey)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033
68	2809717 (Great Britain)	Jul 13, 2016	Norner AS	EP13702439.4	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033
69	ZL201380017952.8 (China)	Oct 12, 2016	Norner AS	201380017952.8	Jan 31, 2013	Multimodal polyethylene polymers and processes preparing said polymer (NTT)	-	Jan 31, 2033
70	9340646 (USA)	May 17, 2016	Norner IP AS	US14/232250	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 11, 2032
71	2731981 (France)	Aug 31, 2016	Norner IP AS	EP12733739.2	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 11, 2032

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
72	2731981 (Spain)	Aug 31, 2016	Norner IP AS	EP12733739.2	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 11, 2032
73	2731981 (Netherland)	Aug 31, 2016	Norner IP AS	EP12733739.2	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 11, 2032
74	2731981 (Germany)	Aug 31, 2016	Norner IP AS	EP12733739.2	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 11, 2032
75	2731981 (Great Britain)	Aug 31, 2016	Norner IP AS	EP12733739.2	Jul 11, 2012	Process for purifying poly (alkylene carbonate)	-	Jul 11, 2032
SCG Packaging								
76	35489	Apr 10, 2013	SCG Packaging PLC.	0802003034	Oct 3, 2008	-	Container Blank	Oct 2, 2018
77	35918	Jun 18, 2013	SCG Packaging PLC.	0802003033	Oct 3, 2008	-	Container Blank	Oct 2, 2018
78	36654	Aug 19, 2013	SCG Packaging PLC.	0902000310	Feb 11, 2009	-	Folding Chair	Feb 10, 2019
79	37375	Oct 4, 2013	SCG Packaging PLC.	0902003323	Oct 29, 2009	-	Container	Oct 28, 2019
80	37766	Oct 29, 2013	SCG Packaging PLC.	0902001102	Oct 14, 2009	-	Seat	Oct 13, 2019
81	38819	Jan 17, 2014	SCG Packaging PLC.	0902001873	Jun 23, 2009	-	Table	Jun 22, 2019
82	39942	May 6, 2014	SCG Packaging PLC.	1002003047	Oct 20, 2010	-	Display	Oct 19, 2020
83	40389	Jun 11, 2014	SCG Packaging PLC.	1102003701	Dec 28, 2011	-	Carton Blank	Dec 27, 2021
84	40434	Jun 16, 2014	SCG Packaging PLC.	1102003702	Dec 28, 2011	-	Carton Blank	Dec 27, 2021

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
85	45914	Sep 15, 2015	SCG Packaging PLC.	0902001103	Oct 14, 2009	-	Seat Blank	Oct 13, 2019
86	45915	Sep 15, 2015	SCG Packaging PLC.	0902001874	Jun 23, 2009	-	Seat	Jun 22, 2019
87	45916	Sep 15, 2015	SCG Packaging PLC.	0902001908	Jun 23, 2009	-	Table	Jun 22, 2019
88	45917	Sep 15, 2015	SCG Packaging PLC.	0902000311	Feb 11, 2009	-	Folding Chair Blank	Feb 10, 2019
89	46617	Oct 26, 2015	SCG Packaging PLC.	1202002433	Sep 14, 2012	-	Container Blank	Sep 13, 2022
90	46752	Oct 30, 2015	SCG Packaging PLC.	1002003046	Oct 20, 2010	-	Stand Blank	Oct 19, 2020
91	49032	Apr 4, 2016	SCG Packaging PLC.	1102003704	Dec 28, 2011	-	Container Blank	Dec 27, 2021
92	50419	Jul 14, 2016	SCG Packaging PLC.	1102001273	May 3, 2011	-	Paper Splint	May 2, 2021
93	Petty Patent 6859	Jan 13, 2012	SCG Packaging PLC.	0903001383	Nov 25, 2009	Mobile Pressure Testing Equipment	-	Nov 24, 2017
94	Petty Patent 7328	Jul 20, 2012	SCG Packaging PLC.	1003000688	Jul 30, 2010	Pallet	-	Jul 29, 2020
95	Petty Patent 8877	May 23, 2014	SCG Packaging PLC.	0803001134	Sep 15, 2008	Bolt	-	Sep 14, 2018
96	Petty Patent 11664	Jun 28, 2016	SCG Packaging PLC.	1503001838	Oct 29, 2015	Investigated method of macro sticky in paper pulp	-	Oct 28, 2025

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
97	Petty Patent 9259	Oct 24, 2014	SCG Packaging PLC. and Khon Kaen University 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
98	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
99	Petty Patent 10041	July 2, 2015	Siam Kraft Industry Co., Ltd.	1403000945	Aug 22, 2014	Wireless hygrometer	-	Aug 21, 2020
100	31692	Jan 17, 2012	Thai Containers Group Co., Ltd.	0702002359	Sep 11, 2007	-	Paper Splint	Sep 10, 2017
101	34441	Nov 29, 2012	Thai Containers Group Co., Ltd.	0702002360	Sep 11, 2007	-	Paper Splint Blank	Sep 10, 2017
102	34990	Feb 5, 2013	Thai Containers Group Co., Ltd.	0702001297	May 16, 2007	-	Paper Pallet	May 15, 2017
103	34991	Feb 5, 2013	Thai Containers Group Co., Ltd.	0702001298	May 16, 2007	-	Paper Pallet	May 15, 2017
104	34992	Feb 5, 2013	Thai Containers Group Co., Ltd.	0702001299	May 16, 2007	-	Paper Pallet	May 15, 2017
105	35765	May 28, 2013	Thai Containers Group Co., Ltd.	0702002882	Oct 31, 2007	-	Carton Blank	Oct 30, 2017

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
106	35766	May 28, 2013	Thai Containers Group Co., Ltd.	0702002883	Oct 31, 2007	-	Carton Blank	Oct 30, 2017
107	35767	May 28, 2013	Thai Containers Group Co., Ltd.	0702003392	Dec 21, 2007	-	Container Blank	Dec 20, 2017
108	36314	Jul 26, 2013	Thai Containers Group Co., Ltd.	0702003153	Nov 28, 2007	-	Carton Blank	Nov 27, 2017
109	Petty Patent 3724	Oct 15, 2007	Thai Containers Group Co., Ltd.	0703000328	Mar 16, 2007	Equipment for keeping and delaminate backing sheet of Black Tape	-	Mar 15, 2017
110	Petty Patent 4714	Jan 28, 2009	Thai Containers Group Co., Ltd.	0803000764	Jun 12, 2008	Box Partition	-	Jun 11, 2018
111	Petty Patent 9838	Apr 28, 2015	Thai Containers Group Co., Ltd.	1403000528	May 30, 2014	Water-proof sheath for pallet leg	-	May 29, 2020
112	49033	Apr 4, 2016	Thai Containers Group Co., Ltd.	1202002432	Sep 14, 2012	-	Container	Sep 13, 2022
113	49034	Apr 4, 2016	Thai Containers Group Co., Ltd.	1202002431	Sep 14, 2012	-	Container	Sep 13, 2022
114	49890	Jun 17, 2016	Thai Containers Group Co., Ltd.	1202002393	Sep 11, 2012	-	Paper Pallet Axis	Sep 10, 2022
115	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

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
SCG Cement-Building Materials								
116	19083	Nov 7, 2005	The Concrete Products and Aggregate Co., Ltd.	0201004833	Dec 24, 2002	The rotatable concrete or mortar (mixed cement and sand) mixer system, powered by the engine of the compact truck for installing on the 4 and 6 wheel truck	-	Dec 23, 2022
117	27668	Mar 17, 2010	The Concrete Products and Aggregate Co., Ltd.	0701002440	May 17, 2007	Air brake system for motor	-	Mar 17, 2026
118	27669	Mar 17, 2010	The Concrete Products and Aggregate Co., Ltd.	0702001549	Jun 12, 2007	-	Hydraulic Concrete Bucket Conveyor	Jun 11, 2017
119	33783	Sep13, 2012	The Concrete Products and Aggregate Co., Ltd.	0802001402	Apr 23, 2008	-	Concrete Cube	Apr 22, 2018
120	40409	Jun 13, 2014	SCG Cement Co., Ltd.	0902001876	Jun 23, 2009	-	Mortar injection tip	Jun 22, 2019
121	40433	Jun 16, 2014	SCG Cement Co., Ltd.	0902001877	Jun 23, 2009	-	Mortar injection tip	Jun 22, 2019
122	40467	Jun 18, 2014	SCG Cement Co., Ltd.	0902001878	Jun 23, 2009	-	Mortar injection tip	Jun 22, 2019
123	Petty Patent 4831	Apr 20, 2009	SCG Cement Co., Ltd.	0803001101	Jul 14, 2008	Round column surface polishing Equipment	-	Jul 13, 2018

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
124	Petty Patent 6227	May 23, 2011	SCG Cement Co., Ltd.	0803000151	Jan 21, 2008	Equipment for use in cutting or extraction of construction materials	-	Jan 21, 2018
125	Petty Patent 7048	Mar 23, 2012	SCG Cement Co., Ltd.	0903000048	Jan 21, 2008	Method and testing kit for the closed packaging	-	Jan 20, 2017
126	Petty Patent 7049	Mar 23, 2012	SCG Cement Co., Ltd.	0803000884	Jul 14, 2008	Dust-free by water-curtain	-	Jul 14, 2017
127	Petty Patent 8391	Oct 4, 2013	SCG Cement Co., Ltd.	1303000220	Mar 1, 2013	Equipment used to test the strength of the concrete blocks	-	Feb 29, 2019
128	Petty Patent 1303001469	Oct 27, 2014	SCG Cement Co., Ltd.	1303001469	Nov 21, 2013	Mortar plaster reology testing apparatus	-	Nov 20, 2023
129	US8864903	Oct 21, 2014	SCG Cement Co., Ltd.	US13/717,054	Oct 29, 2012	Composite plaster including an organic additive (USA)	-	Oct 28, 2032
130	AU2012275037	Dec 24, 2014	SCG Cement Co., Ltd.	AU2012275037	Dec 24, 2012	Composite plaster including an organic additive (Australia)	-	Oct 28, 2032

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
131	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
132	25337	Jan 23, 2009	The Siam Refractory Industry Co., Ltd.	0301003133	Aug 22, 2003	Spraying or Mortar Refractory	-	Aug 21, 2023
133	49089	Apr 8, 2016	The Siam Refractory Industry Co., Ltd.	1102000784	Mar 21, 2011	-	Mortar Refractory	Mar 20, 2021
134	49090	Apr 8, 2016	The Siam Refractory Industry Co., Ltd.	1102000782	Mar 21, 2011	-	Mortar Refractory	Mar 20, 2021
135	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, 2018
136	49317	May 4, 2016	The Siam Fibre-Cement Co., Ltd.	1202002474	Sep 17, 2012	-	Building material element	Sep 16, 2022
137	49596	May 30, 2016	The Siam Fibre-Cement Co., Ltd.	1402000487	Mar 14, 2014	-	Patterned tile	Mar 13, 2024
138	49595	May 30, 2016	The Siam Fibre-Cement Co., Ltd.	1202002887	Nov 2, 2012	-	Seat	Nov 1, 2022
139	51075	Sep 6, 2016	The Siam Fibre-Cement Co., Ltd.	1302000153	Jan 24, 2013	-	Shelter	Jan 23, 2023

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140	Petty Patent 8721	Mar 17, 2014	The Siam Fibre-Cement Co., Ltd.	1303001128	Sep 24, 2013	Installation of plaques	-	Sep 23, 2023
141	Petty Patent 11004	Jan 11, 2016	The Siam Fibre-Cement Co., Ltd.	1503000960	Jun 25, 2015	Eave	-	Jun 24, 2025
142	Petty Patent 11738	Jul 15, 2016	The Siam Fibre-Cement Co., Ltd.	1503001907	Nov 9, 2015	Ventilating ceiling	-	Nov 8, 2025
143	32678	May 16, 2012	SCG Building Materials Co., Ltd.	0702002967	Nov 7, 2007	-	Construction material	Nov 6, 2017
144	32764	Jun 1, 2012	SCG Building Materials Co., Ltd.	0802003120	Oct 17, 2008	-	Growing unit	Oct 16, 2018
145	32919	Jun 20, 2012	SCG Building Materials Co., Ltd.	0702002667	Oct 5, 2007	-	Roof tile	Oct 4, 2017
146	32920	Jun 22, 2012	SCG Building Materials Co., Ltd.	0702001035	Apr 10, 2007	-	Roof tile	Apr 9, 2017
147	33217	Jul 20, 2012	SCG Building Materials Co., Ltd.	0702000251	Jan 31, 2007	-	Curb	Jan 30, 2017
148	33218	Jul 20, 2012	SCG Building Materials Co., Ltd.	0702002417	Sep 13, 2007	-	Construction material	Sep 12, 2017
149	33219	Jul 20, 2012	SCG Building Materials Co., Ltd.	0702002410	Sep 13, 2007	-	Fence	Sep 12, 2017
150	33220	Jul 20, 2012	SCG Building Materials Co., Ltd.	0702002409	Sep 13, 2007	-	Fence	Sep 12, 2017
151	33221	Jul 20, 2012	SCG Building Materials Co., Ltd.	0702002668	Oct 5, 2007	-	Roof tile	Oct 4, 2017
152	33222	Jul 20, 2012	SCG Building Materials Co., Ltd.	0702001033	Apr 10, 2007	-	Roof tile	Apr 9, 2017
153	33520	Aug 17, 2012	SCG Building Materials Co., Ltd.	0702000123	Jan 12, 2007	-	Concrete block dividing unit	Jan 11, 2017

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
154	33521	Aug 17, 2012	SCG Building Materials Co., Ltd.	0702000122	Jan 12, 2007	-	Floor tile	Jan 11, 2017
155	33522	Aug 17, 2012	SCG Building Materials Co., Ltd.	0702000121	Jan 12, 2007	-	Concrete block dividing unit	Jan 11, 2017
156	33744	Sep 11, 2012	SCG Building Materials Co., Ltd.	0802000804	Mar 12, 2008	-	Construction Material	Mar 11, 2018
157	33745	Sep 11, 2012	SCG Building Materials Co., Ltd.	0702001034	Apr 10, 2007	-	Roof tile	Apr 9, 2017
158	34903	Jan 28, 2013	SCG Building Materials Co., Ltd.	0802000825	Mar 13, 2008	-	Washbasin	Mar 12, 2018
159	34975	Feb 4, 2013	SCG Building Materials Co., Ltd.	0702002966	Nov 7, 2007	-	Ridge	Nov 6, 2017
160	35904	Jun 14, 2013	SCG Building Materials Co., Ltd.	0802000826	Mar 13, 2008	-	Roof tile	Mar 12, 2018
161	35905	Jun 14, 2013	SCG Building Materials Co., Ltd.	0702002411	Sep 13, 2007	-	Fence	Sep 12, 2017
162	35906	Jun 14, 2013	SCG Building Materials Co., Ltd.	0702002413	Sep 13, 2007	-	Fence	Sep 12, 2017
163	35907	Jun 14, 2013	SCG Building Materials Co., Ltd.	0802001448	Apr 25, 2008	-	Tile	Apr 24, 2018
164	35919	Jun 18, 2013	SCG Building Materials Co., Ltd.	0702002414	Sep 13, 2007	-	Fence	Sep 12, 2017
165	35920	Jun 18, 2013	SCG Building Materials Co., Ltd.	0802001449	Apr 25, 2008	-	Tile	Apr 24, 2018
166	35921	Jun 18, 2013	SCG Building Materials Co., Ltd.	0802001447	Apr 25, 2008	-	Growing unit	Apr 24, 2018
167	35922	Jun 18, 2013	SCG Building Materials Co., Ltd.	0802001450	Apr 25, 2008	-	Tile	Apr 24, 2018
168	35923	Jun 18, 2013	SCG Building Materials Co., Ltd.	0802001451	Apr 25, 2008	-	Tile	Apr 24, 2018
169	35966	Jun 25, 2013	SCG Building Materials Co., Ltd.	0802000805	Mar 12, 2008	-	Block	Mar 11, 2018
170	35970	Jun 25, 2013	SCG Building Materials Co., Ltd.	0802000823	Mar 13, 2008	-	Bidet	Mar 12, 2018

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171	35971	Jun 25, 2013	SCG Building Materials Co., Ltd.	0802000824	Mar 13, 2008	-	Sanitary ware	Mar 12, 2018
172	36132	Jul 15, 2013	SCG Building Materials Co., Ltd.	0902000057	Jan 16, 2009	-	Roof tile	Jan 15, 2019
173	36133	Jul 15, 2013	SCG Building Materials Co., Ltd.	0902000506	Feb 25, 2009	-	Roof tile	Feb 24, 2019
174	36134	Jul 15, 2013	SCG Building Materials Co., Ltd.	0902000507	Feb 25, 2009	-	Roof tile	Feb 24, 2019
175	36367	Jul 31, 2013	SCG Building Materials Co., Ltd.	0902000056	Jan 16, 2009	-	Roof tile	Jan 15, 2019
176	36369	Jul 31, 2013	SCG Building Materials Co., Ltd.	0902000505	Feb 25, 2009	-	Roof tile	Feb 24, 2019
177	36779	Aug 28, 2013	SCG Building Materials Co., Ltd.	0902000164	Jan 28, 2009	-	Fixing device	Jan 27, 2019
178	36780	Aug 28, 2013	SCG Building Materials Co., Ltd.	0902000165	Jan 28, 2009	-	Fixing device	Jan 27, 2019
179	38254	Nov 28, 2013	SCG Building Materials Co., Ltd.	0902000163	Jan 28, 2009	-	Fixing device	Jan 27, 2019
180	38303	Nov 29, 2013	SCG Building Materials Co., Ltd.	0802000827	Mar 13, 2008	-	Wall tile	Mar 12, 2018
181	38775	Jan 10, 2014	SCG Building Materials Co., Ltd.	1002002068	Aug 6, 2010	-	Packaging Design	Aug 5, 2020
182	41212	Aug 25, 2014	SCG Building Materials Co., Ltd.	1202001561	Jun 18, 2012	-	Markings on the packaging box	Jun 17, 2022
183	41279	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802001975	Jun 25, 2008	-	Patterned floor	Jun 24, 2018
184	41280	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003122	Oct 17, 2008	-	Patterned floor	Oct 16, 2018
185	41281	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802001979	Jun 25, 2008	-	Patterned floor	Jun 24, 2018
186	41282	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802001976	Jun 25, 2008	-	Patterned floor	Jun 24, 2018
187	41283	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003236	Oct 27, 2008	-	Patterned floor	Oct 26, 2018

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188	41284	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802001982	Jun 25, 2008	-	Patterned floor	Jun 24, 2018
189	41285	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003237	Oct 27, 2008	-	Patterned floor	Oct 26, 2018
190	41286	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802002776	Sep 15, 2008	-	Patterned floor	Sep 14, 2018
191	41287	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802001978	Jun 25, 2008	-	Patterned floor	Jun 24, 2018
192	41288	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003121	Oct 17, 2008	-	Patterned floor	Oct 16, 2018
193	41289	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003239	Oct 27, 2008	-	Patterned floor	Oct 26, 2018
194	41290	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802002927	Sep 26, 2008	-	Patterned floor	Sep 25, 2018
195	41291	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802002929	Sep 26, 2008	-	Patterned floor	Sep 25, 2018
196	41292	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802001981	Jun 25, 2008	-	Patterned floor	Jun 24, 2018
197	41293	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003621	Dec 9, 2008	-	Patterned floor	Dec 8, 2018
198	41294	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003235	Oct 27, 2008	-	Patterned floor	Oct 26, 2018
199	41295	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802002451	Aug 15, 2008	-	Patterned floor	Aug 14, 2018
200	41296	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003536	Nov 27, 2008	-	Patterned floor	Nov 26, 2018
201	41297	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003238	Oct 27, 2008	-	Patterned floor	Oct 26, 2018
202	41298	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802001977	Jun 25, 2008	-	Patterned floor	Jun 24, 2018
203	41299	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802002928	Sep 26, 2008	-	Patterned floor	Sep 25, 2018
204	41300	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802001980	Jun 25, 2008	-	Patterned floor	Jun 24, 2018
205	41301	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003622	Dec 9, 2008	-	Patterned floor	Dec 8, 2018

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
206	41302	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003124	Oct 17, 2008	-	Patterned floor	Oct 16, 2018
207	41303	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003234	Oct 27, 2008	-	Patterned floor	Oct 26, 2018
208	41304	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003123	Oct 17, 2008	-	Patterned floor	Oct 16, 2018
209	41305	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802002233	July 25, 2008	-	Patterned floor	July 24, 2018
210	41306	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802002772	Sep 15, 2008	-	Floor tile	Sep 14, 2018
211	41307	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802002053	July 1, 2008	-	Parts of the building	Jun 30, 2018
212	41308	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802003125	Oct 17, 2008	-	Patterned floor	Oct 16, 2018
213	41309	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802002773	Sep 15, 2008	-	Floor tile	Sep 14, 2018
214	41310	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802002052	July 1, 2008	-	Parts of the building	Jun 30, 2018
215	41311	Sep 1, 2014	SCG Building Materials Co., Ltd.	0802002931	Sep 26, 2008	-	Patterned floor	Sep 25, 2018
216	41313	Sep 2, 2014	SCG Building Materials Co., Ltd.	0702001171	Apr 27, 2007	-	Patterned floor	Apr 26, 2017
217	41314	Sep 2, 2014	SCG Building Materials Co., Ltd.	0702001172	Apr 27, 2007	-	Patterned floor	Apr 26, 2017
218	41315	Sep 2, 2014	SCG Building Materials Co., Ltd.	0702002860	Oct 26, 2007	-	Patterned floor	Oct 25, 2017
219	41316	Sep 2, 2014	SCG Building Materials Co., Ltd.	0702002862	Oct 26, 2007	-	Patterned floor	Oct 25, 2017
220	41317	Sep 2, 2014	SCG Building Materials Co., Ltd.	0702002863	Oct 26, 2007	-	Patterned floor	Oct 25, 2017
221	41318	Sep 2, 2014	SCG Building Materials Co., Ltd.	0702002864	Oct 26, 2007	-	Patterned floor	Oct 25, 2017
222	41319	Sep 2, 2014	SCG Building Materials Co., Ltd.	0702002865	Oct 26, 2007	-	Patterned floor	Oct 25, 2017
223	41320	Sep 2, 2014	SCG Building Materials Co., Ltd.	0702002993	Nov 14, 2007	-	Patterned floor	Nov 13, 2017

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224	41362	Sep 4, 2014	SCG Building Materials Co., Ltd.	0702003357	Dec 18, 2007	-	Patterned floor	Dec 17, 2017
225	41363	Sep 4, 2014	SCG Building Materials Co., Ltd.	0802000800	Mar 12, 2008	-	Patterned floor	Mar 11, 2018
226	41365	Sep 4, 2014	SCG Building Materials Co., Ltd.	0802000801-2	Mar 12, 2008	-	Patterned floor	Mar 11, 2018
227	41413	Sep 8, 2014	SCG Building Materials Co., Ltd.	0802000407	Feb 1, 2008	-	Patterned floor	Jan 31, 2018
228	41414	Sep 8, 2014	SCG Building Materials Co., Ltd.	0802000408	Feb 1, 2008	-	Patterned floor	Jan 31, 2018
229	41415	Sep 8, 2014	SCG Building Materials Co., Ltd.	0802000409	Feb 1, 2008	-	Patterned floor	Jan 31, 2018
230	41453	Sep 12, 2014	SCG Building Materials Co., Ltd.	0802000951	Mar 20, 2008	-	Patterned floor	Mar 19, 2018
231	41454	Sep 12, 2014	SCG Building Materials Co., Ltd.	0802000952	Mar 20, 2008	-	Patterned floor	Mar 19, 2018
232	41456	Sep 12, 2014	SCG Building Materials Co., Ltd.	0702002861	Oct 26, 2007	-	Patterned floor	Oct 25, 2017
233	41518	Sep 17, 2014	SCG Building Materials Co., Ltd.	0802000803	Mar 12, 2008	-	Patterned floor	Mar 11, 2018
234	41519	Sep 17, 2014	SCG Building Materials Co., Ltd.	0802000948	Mar 20, 2008	-	Patterned floor	Mar 19, 2018
235	41520	Sep 17, 2014	SCG Building Materials Co., Ltd.	0802000949	Mar 20, 2008	-	Patterned floor	Mar 19, 2018
236	41521	Sep 17, 2014	SCG Building Materials Co., Ltd.	0802000950	Mar 20, 2008	-	Patterned floor	Mar 19, 2018
237	41544	Sep 19, 2014	SCG Building Materials Co., Ltd.	0802000953	Mar 20, 2008	-	Patterned floor	Mar 19, 2018
238	41545	Sep 19, 2014	SCG Building Materials Co., Ltd.	0802001452	Apr 25, 2008	-	Patterned floor	Apr 24, 2018
239	41546	Sep 19, 2014	SCG Building Materials Co., Ltd.	0702003358	Dec 18, 2007	-	Patterned floor	Dec 17, 2017
240	41589	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902001707	Jun 5, 2009	-	Patterned floor	Jun 4, 2019
241	41590	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902000059	Jan 16, 2009	-	Patterned floor	Jan 15, 2019

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242	41591	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902000657	Mar 6, 2009	-	Patterned floor	Mar 5, 2019
243	41592	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902000895	Mar 19, 2009	-	Patterned floor	Mar 18, 2019
244	41593	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902001711	Jun 5, 2009	-	Patterned floor	Jun 4, 2019
245	41594	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902001710	Jun 5, 2009	-	Patterned floor	Jun 4, 2019
246	41595	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902001210	Apr 24, 2009	-	Patterned floor	Apr 23, 2019
247	41596	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902003082	Oct 14, 2009	-	Patterned floor	Oct 13, 2019
248	41597	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902000898	Mar 19, 2009	-	Patterned floor	Mar 18, 2019
249	41598	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902000896	Mar 19, 2009	-	Patterned floor	Mar 18, 2019
250	41599	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902001709	Jun 5, 2009	-	Patterned floor	Jun 4, 2019
251	41600	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902000897	Mar 19, 2009	-	Patterned floor	Mar 18, 2019
252	41601	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902003084	Oct 14, 2009	-	Patterned floor	Oct 13, 2019
253	41602	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902002939	Oct 2, 2009	-	Patterned floor	Oct 1, 2019
254	41603	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902002937	Oct 2, 2009	-	Patterned floor	Oct 1, 2019
255	41604	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902003085	Oct 14, 2009	-	Floor tile	Oct 13, 2019
256	41605	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902001213	Apr 24, 2009	-	Wall tile	Apr 23, 2019
257	41606	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902003083	Oct 14, 2009	-	Floor tile	Oct 13, 2019
258	41607	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902002938	Oct 2, 2009	-	Patterned floor	Oct 1, 2019
259	41608	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902001212	Apr 24, 2009	-	Wall tile	Apr 23, 2019

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260	41609	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902003079	Oct 14, 2009	-	Floor tile	Oct 13, 2019
261	41610	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902003077	Oct 14, 2009	-	Floor tile	Oct 13, 2019
262	41611	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902001211	Apr 24, 2009	-	Wall tile	Apr 23, 2019
263	41612	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902003081	Oct 14, 2009	-	Floor tile	Oct 13, 2019
264	41613	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902000658	Mar 6, 2009	-	Patterned floor	Mar 5, 2019
265	41614	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902000899	Mar 19, 2009	-	Patterned floor	Mar 18, 2019
266	41615	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902001708	Jun 5, 2009	-	Patterned floor	Jun 4, 2019
267	41616	Sep 24, 2014	SCG Building Materials Co., Ltd.	0902002192	July 22, 2009	-	Patterned floor	July 21, 2019
268	42796	Feb 6, 2015	SCG Building Materials Co., Ltd.	0802002774	Sep 15, 2008	-	Building material element	Sep 15, 2018
269	42797	Feb 6, 2015	SCG Building Materials Co., Ltd.	0802002775	Sep 15, 2008	-	Building material element	Sep 15, 2018
270	42904	Feb 17, 2015	SCG Building Materials Co., Ltd.	0702002669	Oct 5, 2007	-	Eaves set	Oct 5, 2017
271	43851	Apr 21, 2015	SCG Building Materials Co., Ltd.	0802001446	Apr 25, 2008	-	Plant pot	Apr 25, 2018
272	43945	Apr 28, 2015	SCG Building Materials Co., Ltd.	0702002415	Sep 13, 2007	-	Fence element	Sep 13, 2017
273	43999	Apr 30, 2015	SCG Building Materials Co., Ltd.	0902000058	Jan 16, 2009	-	Roof tile	Jan 16, 2019
274	44000	Apr 30, 2015	SCG Building Materials Co., Ltd.	1002001832	Jul 16, 2010	-	Bracked element	Jul 16, 2020
275	44001	Apr 30, 2015	SCG Building Materials Co., Ltd.	1102000953	Mar 31, 2011	-	Floor tile	Mar 31, 2021

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276	44004	Apr 30, 2015	SCG Building Materials Co., Ltd.	0902000162	Jan 28, 2009	-	Building material element	Jan 28, 2019
277	44005	Apr 30, 2015	SCG Building Materials Co., Ltd.	0902000160	Jan 28, 2009	-	Building material element	Jan 28, 2019
278	44006	Apr 30, 2015	SCG Building Materials Co., Ltd.	0902000055	Jan 16, 2009	-	Roof tile hook	Jan 16, 2019
279	44103	May 6, 2015	SCG Building Materials Co., Ltd.	1002003320	Nov 24, 2010	-	Bracked element	Nov 24, 2020
280	44449	May 29, 2015	SCG Building Materials Co., Ltd.	0902002806	Sep 14, 2009	-	Building material element	Sep 14, 2019
281	44640	Jun 12, 2015	SCG Building Materials Co., Ltd.	1002001831	Jul 16, 2010	-	Bracked element	Jul 16, 2020
282	44641	Jun 12, 2015	SCG Building Materials Co., Ltd.	1202001166	May 3, 2012	-	Bracked element	May 3, 2022
283	44678	Jun 16, 2015	SCG Building Materials Co., Ltd.	1002003319	Nov 24, 2010	-	Bracked element	Nov 24, 2020
284	44679	Jun 16, 2015	SCG Building Materials Co., Ltd.	1002003321	Nov 24, 2010	-	Bracked element	Nov 24, 2020
285	44791	Jun 25, 2015	SCG Building Materials Co., Ltd.	1102002691	Sep 6, 2011	-	Roof Bracked element	Sep 6, 2021
286	45721	Aug 31, 2015	SCG Building Materials Co., Ltd.	0902003078	Oct 14, 2009	-	Floor tile	Oct 14, 2019
287	45722	Aug 31, 2015	SCG Building Materials Co., Ltd.	1002003127	Oct 29, 2010	-	Roof tile	Oct 29, 2020
288	46635	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002002675	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
289	46636	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002002679	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020

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290	46637	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002002678	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
291	46638	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002002676	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
292	46639	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002000945	Apr 5, 2010	-	Roof tile	Apr 5, 2020
293	46640	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002000944	Apr 5, 2010	-	Solar roof tile	Apr 5, 2020
294	46641	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002000943	Apr 5, 2010	-	Concrete block	Apr 5, 2020
295	46642	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002000725	Mar 15, 2010	-	Roof tile	Mar 15, 2020
296	46644	Oct 27, 2015	SCG Building Materials Co., Ltd.	1002002069	Aug 6, 2010	-	Building material element	Aug 6, 2020
297	46880	Nov 9, 2015	SCG Building Materials Co., Ltd.	0902000060	Jan 16, 2009	-	Movement element	Jan 16, 2019
298	46881	Nov 9, 2015	SCG Building Materials Co., Ltd.	0902000061	Jan 16, 2009	-	Movement element	Jan 16, 2019
299	46882	Nov 9, 2015	SCG Building Materials Co., Ltd.	1002002672	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
300	46883	Nov 9, 2015	SCG Building Materials Co., Ltd.	1002002673	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
301	46884	Nov 9, 2015	SCG Building Materials Co., Ltd.	1002002674	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
302	46885	Nov 9, 2015	SCG Building Materials Co., Ltd.	1002002677	Sep 24, 2010	-	Cover roof tile	Sep 24, 2020
303	47525	Dec 24, 2015	SCG Building Materials Co., Ltd.	1102002425	Aug 11, 2011	-	Fence materials	Aug 10, 2021
304	47825	Jan 21, 2016	SCG Building Materials Co., Ltd.	0701002104	Apr 27, 2007	Roof tile and process making thereof	-	Apr 26, 2027
305	47772	Feb 25, 2016	SCG Building Materials Co., Ltd.	1002002070	Aug 6, 2010	-	Attaching device	Aug 5, 2020

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306	48365	Mar 1, 2016	SCG Building Materials Co., Ltd.	1102001140	Apr 12, 2011	-	Floor tile	Apr 11, 2021
307	48366	Mar 1, 2016	SCG Building Materials Co., Ltd.	1102001137	Apr 12, 2011	-	Floor tile	Apr 11, 2021
308	48367	Mar 1, 2016	SCG Building Materials Co., Ltd.	1102001138	Apr 12, 2011	-	Floor tile	Apr 11, 2021
309	48368	Mar 1, 2016	SCG Building Materials Co., Ltd.	1102001139	Apr 12, 2011	-	Floor tile	Apr 11, 2021
310	48471	Mar 7, 2016	SCG Building Materials Co., Ltd.	1202001165	May 3, 2012	-	Attaching device	May 2, 2022
311	49318	May 4, 2016	SCG Building Materials Co., Ltd.	1202001042	Apr 24, 2012	-	Patterned tile	Apr 23, 2022
312	49319	May 4, 2016	SCG Building Materials Co., Ltd.	1202001043	Apr 24, 2012	-	Patterned tile	Apr 23, 2022
313	49320	Mar 4, 2016	SCG Building Materials Co., Ltd.	1202001044	Apr 24, 2012	-	Patterned tile	Apr 23, 2022
314	49321	Mar 4, 2016	SCG Building Materials Co., Ltd.	1202000189	Jan 26, 2012	-	Wall	Jan 25, 2022
315	50449	Jul 15, 2016	SCG Building Materials Co., Ltd.	1202001046	Apr 24, 2012	-	Patterned tile	Apr 23, 2022
316	50450	Jul 15, 2016	SCG Building Materials Co., Ltd.	1202001045	Apr 24, 2012	-	Patterned tile	Apr 23, 2022
317	51074	Sep 6, 2016	SCG Building Materials Co., Ltd.	1102000098	Jan 11, 2011	-	Fastener	Jan 10, 2021
318	Petty Patent 5898	Jan 11, 2011	SCG Building Materials Co., Ltd.	1003000350	Apr 26, 2010	Ventilated cabinet	-	Apr 25, 2020
319	Petty Patent 6099	Mar 25, 2011	SCG Building Materials Co., Ltd.	0903000394	Apr 24, 2009	Connector for waste water in water closet	-	Apr 23, 2018
320	Petty Patent 6218	May 12, 2011	SCG Building Materials Co., Ltd.	1003000629	Jul 16, 2010	Isostatic punch	-	Jul 15, 2020

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321	Petty Patent 6326	Jun 24, 2011	SCG Building Materials Co., Ltd.	1103000369	Apr 12, 2011	Apparatus for roof attachment	-	Apr 11, 2017
322	Petty Patent 6471	Aug 11, 2011	SCG Building Materials Co., Ltd.	1103000368	Apr 12, 2011	Cementitious garden floor	-	Apr 11, 2017
323	Petty Patent 6618	Sep 26, 2011	SCG Building Materials Co., Ltd.	0703000485	Apr 27, 2007	Method for bathroom renovation without damage existing structure	-	Apr 25, 2017
324	Petty Patent 6888	Jan 26, 2012	SCG Building Materials Co., Ltd.	1103000083	Jan 28, 2011	ALC counter	-	Jan 27, 2017
325	Petty Patent 6889	Jan 26, 2012	SCG Building Materials Co., Ltd.	1103000303	Mar 25, 2011	Screen wall system	-	Mar 24, 2017
326	Petty Patent 7091	Apr 12, 2012	SCG Building Materials Co., Ltd.	1003001134	Nov 2, 2010	Glass mosaic	-	Nov 1, 2020
327	Petty Patent 7542	Oct 12, 2012	SCG Building Materials Co., Ltd.	1003001095	Oct 29, 2010	Vertical green panel	-	Oct 28, 2020
328	Petty Patent 7794	Jan 24, 2013	SCG Building Materials Co., Ltd.	1103001300	Dec 6, 2011	Rain filtering device	-	Dec 5, 2017

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329	Petty Patent 7821	Feb 1, 2013	SCG Building Materials Co., Ltd.	1203001319	Nov 16, 2012	Air washing foot valve	-	Nov 15, 2018
330	Petty Patent 7898	Mar 4, 2013	SCG Building Materials Co., Ltd.	1203000406	Apr 24, 2012	Foundation system	-	Apr 23, 2018
331	Petty Patent 8043	May 23, 2013	SCG Building Materials Co., Ltd.	0803001305	Oct 31, 2008	Cement for fiber cement board	-	Oct 30, 2018
332	Petty Patent 8140	Jul 15, 2013	SCG Building Materials Co., Ltd.	1103001301	Dec 6, 2011	Rain filtering device	-	Dec 5, 2017
333	Petty Patent 8297	Sep 16, 2013	SCG Building Materials Co., Ltd.	1003000717	Aug 6, 2010	Tile reverse device	-	Aug 5, 2020
334	Petty Patent 8327	Sep 24, 2013	SCG Building Materials Co., Ltd.	1303000079	Jan 24, 2013	Heat trapping device	-	Jan 23, 2019
335	Petty Patent 8328	Sep 24, 2013	SCG Building Materials Co., Ltd.	0903000393	Apr 24, 2009	Wall plate mounting systems and assemblies	-	Apr 23, 2019
336	Petty Patent 8637	Feb 12, 2014	SCG Building Materials Co., Ltd.	1303000336	Mar 27, 2013	Parts for installation frame	-	Mar 26, 2023

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337	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
338	Petty Patent 8917	Jun 9, 2014	SCG Building Materials Co., Ltd.	1303001089	Sep 16, 2013	Cropping systems help the particular weather conditions	-	Sep 15, 2023
339	Petty Patent 8940	Jun 23, 2014	SCG Building Materials Co., Ltd.	0903000195	Mar 6, 2009	Planting material	-	Mar 5, 2019
340	Petty Patent 9162	Sep 24, 2014	SCG Building Materials Co., Ltd.	1303001541	Dec 6, 2013	Set Adjustable Fan	-	Dec 5, 2023
341	Petty Patent 9215	Oct 13, 2014	SCG Building Materials Co., Ltd.	1403000092	Feb 12, 2014	System of growing plants vertically	-	Feb 11, 2024
342	Petty Patent 9217	Oct 13, 2014	SCG Building Materials Co., Ltd.	1303001325	Oct 18, 2013	Set for roof ventilation	-	Oct 17, 2023
343	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
344	Petty Patent 9306	Nov 10, 2014	SCG Building Materials Co., Ltd.	1203000444	May 3, 2012	Installation slabs	-	May 2, 2022

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345	Petty Patent 9395	Dec 19, 2014	SCG Building Materials Co., Ltd.	0903000395	Apr 24, 2009	Production of ceramic tiles decorated with fluorescent paint over a fire	-	Apr 23, 2019
346	Petty Patent 9591	Feb 27, 2015	SCG Building Materials Co., Ltd.	1403000041	Jan 10, 2014	Instanted wall panel system for reduce heat transfer	-	Jan 10, 2024
347	Petty Patent 9592	Feb 27, 2015	SCG Building Materials Co., Ltd.	1403000991	Sep 1, 2014	Instance Concrete Bathroom floor panel	-	Sep 1, 2024
348	Petty Patent 10187	Aug 7, 2015	SCG Building Materials Co., Ltd.	1403000775	Jul 17, 2014	Process of cover gable setting	-	Jul 17, 2024
349	Petty Patent 10188	Aug 7, 2015	SCG Building Materials Co., Ltd.	1503000012	Jan 6, 2015	Roof Air flow set	-	Jan 6, 2025
350	Petty Patent 10438	Sep 28, 2015	SCG Building Materials Co., Ltd.	1403000776	Jul 17, 2014	Facial setting, eaves setting tools and process of that	-	Jul 17, 2024
351	Petty Patent 10440	Sep 28, 2015	SCG Building Materials Co., Ltd.	1403001403	Oct 30, 2014	Cover roof end tools and process of that	-	Oct 30, 2024
352	Petty Patent 10441	Sep 28, 2015	SCG Building Materials Co., Ltd.	1303001502	Nov 28, 2013	Process of Fuel cell electric production for building	-	Nov 28, 2023

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353	Petty Patent 10857	Dec 4, 2015	SCG Building Materials Co., Ltd.	1403001721	Dec 19, 2014	Plant pot on water surface	-	Dec19, 2024
354	Petty Patent 11005	Jan 11, 2016	SCG Building Materials Co., Ltd.	1503000330	Mar 16, 2015	Ventilation system	-	Mar 15, 2025
355	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
356	Petty Patent 11636	Jun 17, 2016	SCG Building Materials Co., Ltd.	1403000091	Feb 12, 2014	Receptacle	-	Feb 11,2024
357	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 Thicknes	-	Sep 18, 2027
358	CN10186080B (China)	Sep 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 Thicknes	-	Sep 19, 2027

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359	RU2443551 (Russia)	Feb 27, 2012	SCG Building Materials Co., Ltd.	2007135042	Sep 20, 2007	Apparatus and Method for Forming a Pattern in Ceramic Tile or Slab with Prescribed Thickness	-	Sep 19, 2027
360	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
361	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
362	1401146 (Taiwan)	Jul 11, 2013	SCG Building Materials Co., Ltd.	96135120	Sep 20, 2007	Apparatus and Method for Forming a Pattern in a Ceramic Tile or Slab with Prescribed Thickness	-	Sep 19, 2027

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363	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
364	5435851 (Japan)	Dec 20, 2013	SCG Building Materials Co., Ltd.	2007-243497	Sep 20, 2007	Apparatus and Method for Forming a Pattern in Ceramic Tile or Slab with Prescribed Thickness	-	Sep 19, 2027
365	ES2470140 (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
366	ES2469616 (Spain)	Jun 18, 2012	SCG Building Materials Co., Ltd.	07450217.0	Apr 27, 2007	A Device for Making Continuous Veining of Desired Patterns	-	Apr 26, 2027
367	50451	Jul 15, 2016	Thai Ceramic Co., Ltd.	1302000204	Feb 1, 2013	-	Floor tile	Jan 31, 2023
368	50452	Jul 15, 2016	Thai Ceramic Co., Ltd.	1302000203	Feb 1, 2013	-	Floor tile	Jan 31, 2023
370	50453	Jul 15, 2016	Thai Ceramic Co., Ltd.	1302000202	Feb 1, 2013	-	Floor tile	Jan 31, 2023

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371	50454	Jul 15, 2016	Thai Ceramic Co., Ltd.	1302000201	Feb 1, 2013	-	Floor tile	Jan 31, 2023
372	Petty Patent 10185	Aug 7, 2015	Thai Ceramic Co., Ltd.	1403000391	Apr 25, 2014	Material sheets	-	Apr 25, 2024
373	Petty Patent 10186	Aug 7, 2015	Thai Ceramic Co., Ltd.	1503000634	Apr 30, 2015	Adjust surfact and setting Trowel	-	Apr 30, 2025
374	Petty Patent 10439	Sep 28, 2015	Thai Ceramic Co., Ltd.	1503000635	Apr 30, 2015	Setting trowel	-	Apr 30, 2025
375	Petty Patent 10859	Dec 4, 2015	Thai Ceramic Co., Ltd.	1203001320	Nov 16, 2012	Process of sodium silicate produced by biomas	-	Nov16, 2022
376	Petty Patent 11301	Mar 23, 2016	Thai Ceramic Co., Ltd.	1403000392	Apr 25, 2014	Tile	-	Apr 24, 2024
377	CN1739932 (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

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
378	DE602005013647D1 (Germany)	May 14, 2009	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
379	ES2325031T3 (Spain)	Sep 24, 2009	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
380	Petty Patent 7615	Nov 16, 2012	Cement Thai Home Service Co., Ltd.	1203000798	Jul 31, 2012	High-level display unit	-	Jul 30, 2018
381	Petty Patent 7656	Dec 4, 2012	Cement Thai Home Service Co., Ltd.	1203000799	Jul 31, 2012	Lifting device	-	Jul 30, 2018
382	40369	Jun 9, 2014	SCG Landscape Co., Ltd.	1102003513	Dec 6, 2011	-	Package	Dec 5, 2021
383	44002	Apr 30, 2015	SCG Landscape Co., Ltd.	1102003514	Dec 6, 2011	-	Floor and wall tile	Dec 6, 2021

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
384	44003	Apr 30, 2015	SCG Landscape Co.,Ltd.	1102003515	Dec 6, 2011	-	Concrete block dividing unit	Dec 6, 2021
385	46643	Oct 27, 2015	SCG Landscape Co.,Ltd.	1102003516	Dec 6, 2011	-	Seat	Dec 6, 2021
386	51465	Sep 22, 2016	The CPAC Roof Tile Co., Ltd.	0201001929	May 24, 2002	Apparatus for attaching roof element	-	May 23, 2022
387	Petty Patent 8719	Mar 14, 2014	The CPAC Roof Tile Co., Ltd.	1203001424	Jun 1, 2012	Roof Tiles	-	May 31, 2022
388	Petty Patent 9981	Jun 12, 2015	The CPAC Roof Tile Co., Ltd.	1403000688	Jun 30, 2014	Roof Tiles	-	Jun 30, 2024
389	35965	Jun 21, 2013	SCG Distribution Co., Ltd.	0802000673	Feb 27, 2008	-	Breath Alcohol Tester	Feb 26, 2018
390	Petty Patent 5135	Nov 5, 2009	SCG Distribution Co., Ltd.	0703000033	Jan 9, 2007	Warning System for Doze Off	-	Jan 8, 2017
391	Petty Patent 5155	Dec 4, 2009	SCG Distribution Co., Ltd.	0803001512	Dec 22, 2008	Canvas Tester	-	Dec 21, 2018
392	Petty Patent 6310	Jun 17, 2011	SCG Distribution Co., Ltd.	0903001006	Sep 11, 2009	Multi Wall System	-	Sep 10, 2019
393	37767	Oct 29, 2013	SCG Experience Co., Ltd.	0902001826	Jun 19, 2009	-	Packaging Design	Jun 17, 2019

No.	Patent Number	Registration Date	Assignee	Application Number	Filing Date	Patent/Petty Patent	Design Patent	Expiry Date
394	Petty Patent 9002	Jul 23, 2014	SCG Trading Co., Ltd.	1103000443	May 3, 2011	Liquid Coal Fuel	-	May 2, 2021
395	43147	Mar 9, 2015	Siam Sanitary Ware Co.,Ltd.	1202001026	Apr 23, 2012	-	Water tank	Apr 23, 2022
396	Petty Patent 10316	Aug 31, 2015	SCG Performance Co., Ltd. and Ceramic Cement Thai Co., Ltd.	1403000301	Mar 28, 2014	Blind tiles	-	Mar 28, 2024
397	Petty Patent 10860	Dec 4, 2015	SCG Performance Co., Ltd. and Ceramic Cement Thai Co., Ltd.	1403000302	Mar 28, 2014	Tiles	-	Mar 28, 2024
398	Petty Patent 9417	Jan 6, 2015	SCG Cement-Building Materials Co., Ltd.	1403000992	Sep 1, 2014	Tile support on Roof structure	-	Sep 1, 2024
399	Petty Patent 11253	Mar 7, 2016	SCG Cement-Building Materials Co., Ltd.	1503000803	May 29, 2015	Apparatus for extending pathway	-	May 28, 2025

- **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 under SCG Cement-Building Materials 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	13	RFD	3,683	1	2017
			3	RFD	897	2	2018
			15	RFD	3,012	20	2036
		Pyrophyllite	1	RFD	95	12	2028
			2	RFD	183	16	2032
	Nakorn Sawan	Gypsum	1	RFD	298	15	2031
			1	RFD	278	9	2025
SCG Cement Co., Ltd.	Lampang	Lignite, Ball clay	1	RFD	209	16	2032
The Siam Cement (Lampang) Co., Ltd.	Lampang	Limestone for cement industry	17	RFD	4,987	2	2018
		Shale for cement industry	5	RFD	1,442	2	2018
		Industrial Clay for cement industry	1	Owned by the company	51	13	2029
			1	Owned by the company	280	19	2035
The Siam Cement (Kaeng Khoi) Co., Ltd.	Saraburi	Limestone for cement industry	10	RFD	2,575	11	2027
		Shale for cement industry	3	Owned by the company	874	11	2027
	Lopburi	Industrial Clay for cement industry	1	Owned by the company	218	22	2038
	Prachinburi	Industrial Clay for cement industry	2	Owned by the company	507	21	2037



Concessionaire	Location	Type of Mineral	Number of Concession (Copies)	Type of Area	Area (Rai)	Remaining Years of Concession	Expiry Year
The Siam Cement (Ta Luang) Co., Ltd.	Saraburi	Limestone for cement industry	5	RFD	954	14	2030
		Industrial Clay for cement industry	1	Owned by the company	279	10	2026
			3	Owned by the company	840	22	2038
			1	Owned by the company	86	8	2024
			1	Owned by the company	207	25	2041
The Siam Cement (Thung Song) Co., Ltd.	Nakorn Sri Thammarat	Limestone for cement industry	19	RFD	4,973	19	2035
		Industrial Clay for cement industry	1	Owned by the company	117	25	2041
	Krabi	Industrial Clay for cement industry	2	Owned by the company	372	22	2038
	Suratthani	Gypsum	1	Owned by the company	39	10	2026
Silasanon Co., Ltd.	Saraburi	Limestone for cement industry, Limestone for white cement and Limestone for building industry	1	RFD	257	18	2034
Sirathai Sanguan (2540) Co., Ltd.	Khonkaen	Limestone for construction industry	1	Owned by the company	167	5	2020



SCG

Part 1 Business Operation / 4. Assets Used in Operation

The Siam Cement Public Company Limited

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Concessionaire	Location	Type of Mineral	Number of Concession (Copies)	Type of Area	Area (Rai)	Remaining Years of Concession	Expiry Year
Khammouane Cement Co., Ltd.	Laos	Limestone for cement industry	1	RFD	21,500 (3,440 ha)	31	2047
		Laterite for cement industry			5,300 (848 ha)	31	2047
		Clay			4,675 (748 ha)	31	2047
Kampot Cement Co.,Ltd.	Cambodia	Limestone for cement industry	1	Ministry of industry, Mines and Energy	6,133	50	2066
PT Tambang Semen Sukabumi (For PT.Semen Jawa)	Indonesia	Limestone for cement industry (Mt. Guha)	1	Ministry of forestry	3,006	22	2038
		Limestone for cement industry (Mt. Batu)	1	Owned by resident	741	23	2039
		Shale for cement industry	1	Ministry of forestry	743	22	2038
Mawlamyine Cement Limited	Myanmar	Limestone for cement industry	1	Ministry of forestry	800 (320 Acre)	20	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.



○ SCG Chemicals

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
PP 3	Nov 1, 2013	Mar, 2023
HDPE 4	Nov 1, 2013	Feb, 2023
Jetty and Terminal	Oct 2, 2003 May 19, 2004 Nov 25, 2004 Dec 12, 2007 Aug 14, 2009 Mar 5, 2010 Jun 26, 2012 Aug 4, 2014	Dec, 2016 Jul, 2017 Jan, 2018 Apr, 2023 Nov, 2023 May, 2024 Nov, 2025 Mar, 2028
Olefins (MOC)	Dec 25, 2006	Dec, 2022
PE Compound	Nov 1, 2013 Nov 1, 2013 Nov 1, 2013 Nov 1, 2013 Nov 1, 2013 Nov 1, 2013 Jan 5, 2015 Jan 5, 2015	Feb, 2017 Mar, 2018 Feb, 2020 Nov, 2019 Jul, 2020 Mar, 2021 Mar, 2026 Feb, 2028
Steam	Nov 1, 2013	Apr, 2024
Catalyst	Nov 1, 2013	8 years from the date of first revenue received
Industrial Wax	Nov 1, 2013	Nov, 2026
DPEX (LDPE)	Nov 22, 2013	8 years from the date of first revenue received
R&D (SCG CHEM) - New Process/ process improvement for Polyethylene	May 6, 2011	Oct, 2026
R&D (SCG CHEM) - New Product / New process for Petrochemicals	May 27, 2011	8 years from the date of first revenue received
R&D (SCG CHEM) - New Product / New technology in Petrochemicals	Nov 10, 2011	Dec, 2024

Project	Date Acquired	Expiry of Tax Incentives
R&D (SSC) - New Process / New product for Plastic industry	May 29, 2012	8 years from the date of first revenue received
ISOPRENE, Piperylene and DI - Cyclopentadiene (DCPD) (SCG CHEM)	May 21, 2013	8 years from the date of first revenue received
Butene-1 and Methyl Tertiary Butyl Ether (MTBE) (SCG CHEM)	May 21, 2013	8 years from the date of first revenue received
R&D (SCG CHEM) - New Coating Material / New coating process for Industrial use	Nov 22, 2013	8 years from the date of first revenue received
Non Lead PVC Stabilizer	Mar 14, 2014	8 years from the date of first revenue received
R&D (SCG CHEM) - New Technology for Petrochemicals Industry's waste treatment	May 7, 2014	8 years from the date of first revenue received
R&D (SCG CHEM) - New process for aromatic extraction in Petrochemicals industry	Jul 24, 2014	8 years from the date of first revenue received
R&D (SCG CHEM) - New Process for olefins extraction in Petrochemicals industry	Jul 24, 2014	8 years from the date of first revenue received
R&D (SCG CHEM) - New Technology for VOCs reduction	Aug 18, 2014	8 years from the date of first revenue received
R&D (SCG CHEM) - Additive / new process for polymer product improvements	Sep 4, 2014	8 years from the date of first revenue received
R&D (SCG CHEM) - New catalyst for polyethylene	Sep 23, 2014	8 years from the date of first revenue received
R&D (SCG CHEM) - Synthesis of new chemicals products for industrial use	Sep 9, 2015	8 years from the date of first revenue received
R&D (SMX)	Apr 20, 2016	8 years from the date of first revenue received
R&D (PP Pilot Plant)	Apr 21, 2016	8 years from the date of first revenue received
R&D (SCG CHEM) - Catalyst	Nov 2, 2016	8 years from the date of first revenue received

Project	Date Acquired	Expiry of Tax Incentives
Calibration	Jun 30, 2003 Nov 21, 2003 May 22, 2012 May 22, 2014	May, 2019 Jun, 2018 Nov, 2025 8 years from the date of first revenue received
Scientific Testing Services (CI BOT)	Feb 16, 2016	8 years from the date of first revenue received
Scientific Testing Services (Oval BOT)	Feb 16, 2016	8 years from the date of first revenue received
Industrial Zone	Dec 4, 1997	Mar, 2018
Waste water treatment, Plant Industrial Waste and Toxic Chemicals Management	Mar 20, 2008	Apr, 2023
Human resources development	Dec 16, 2011	Jan, 2027
PVC Resin	Aug 5, 2005	Jul, 2020
Profile , Pipe , Fitting	Dec 26, 2002 Dec 26, 2003 Apr 23, 2004 Dec 16, 2004 Dec 16, 2004 Oct 4, 2005 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, 2017 Feb, 2017 Jan, 2018 Mar, 2018 Jan, 2018 Oct, 2018 Jul, 2019 Mar, 2020 Jan, 2024 May, 2024 Mar, 2025 Jul, 2025 Oct, 2025 Sep, 2026 Oct, 2027 Feb, 2029 Sep, 2029
Mould	Nov 25, 2010	Nov, 2023
Recycling and reuse of unwanted material	Oct 16, 2015	8 years from the date of first revenue received

Project	Date Acquired	Expiry of Tax Incentives
Manufacture of biological fertilizers, organic fertilizers or soil conditioner	Apr 21, 2015	8 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 (PVC Compound)	Jun 30, 2003	8 years from the date of first revenue received
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) - Process for removing impurity of Olefins in Petrochemicals	Feb 10, 2012	8 years from the date of first revenue received
R&D (SCG CHEM) - Technology for Super Radiant Coil	Nov 3, 2015	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

The project which receives corporate tax exemption for 7 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
Pipe, Fitting	Dec 15, 2009	Feb, 2017
	May 6, 2011	Jul, 2018
	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

The project which receives corporate tax exemption for 6 years from the first date 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
Enterprise Software and Digital Content	Sep 13, 2016	Nov, 2027



The project which receives corporate tax exemption on corporate net profit in an amount equivalent or less than an investment amount of modification project for 3 years from the first date of revenue generated. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
HDPE1 (Modification)	Dec 23, 2013	Dec, 2016
PP1 (Modification)	Feb 11, 2014	Mar, 2018

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.

Project	Date Acquired	Expiry of Tax Incentives
HDPE2	Nov 1, 2013	Feb, 2019
PP1	Nov 1, 2013	Feb, 2019
LDPE	Nov 1, 2013	Feb, 2019
Terminal/ Jetty	Oct 10, 2012	Oct, 2020
PVC Resin	May 31, 2013	May, 2021
	Aug 15, 2014	Aug, 2022
	Nov 7, 2014	Nov, 2022
PVC Paste Resin	Oct 16, 2014	Oct, 2022

The project which receives 3 years of corporate tax exemption in an amount equivalent to 70% of an investment amount excluding cost of land and working capital for the investment promotion in energy for sustainable development. So that the project receives the corporate tax exemption on its revenue from existing operation.

Project	Date Acquired	Expiry of Tax Incentives
Compounded Plastics	May 31, 2013	May, 2016
Vinyl Chloride Monome (VCM)	May 31, 2013	May, 2016

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

Project	Date Acquired	Expiry of Tax Incentives
ROCD	18 Aug 2016	Aug, 2019

○ SCG Packaging

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
Corrugated Sheet and Container	Jul 24, 2007	Jan, 2022

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

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
Uncoated paper	Jan 11, 2007	May, 2016
Kraft Paper	Feb 14, 2013	Mar, 2019
	Feb 14, 2013	Sep, 2019
	Feb 14, 2013	Dec, 2020
	May 20, 2013	May, 2021
	Feb 20, 2014	Feb, 2022
Cogeneration Plant	Apr 5, 2010	Mar, 2019
	Dec 11, 2014	8 years from the date of first revenue received
Corrugated Container	Apr 1, 2013	Oct, 2019

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. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Hygienic plastic coated paper	Jul 12, 2012	Jul, 2018
	Mar 7, 2013	Jun, 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. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Printing	Aug 26, 2015	Mar, 2021

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. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Pulp	Feb 6, 2015	Feb, 2018
	Feb 10, 2016	Feb, 2019
Kraft Paper	Aug 16, 2013	Oct, 2017
	Jul 21, 2015	May, 2018
	Jun 23, 2015	Sep, 2018
Corrugated Container	Sep 27, 2013	Mar, 2017
Plastic Inserted Paper for Industry	Nov 3, 2015	3 years from the date of first revenue received
Corrugated Sheet	Jul 28, 2016	3 years from the date of first revenue received

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. Details are shown below:

Project	Date Acquired	Expiry of Tax Incentives
Corrugated Container	Apr 1, 2013	Sep, 2020
	May 14, 2013	8 years from the date of first revenue received

○ SCG Cement-Building Materials

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
Environmental Laboratory	Jun 29, 2012	Apr, 2027
Refuse Derived Fuel (RDF)	Jan 8, 2014	Jul, 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
Waste Heat Power Generator (WHG)	Nov 6, 2007 Dec 15, 2008	Dec, 2016 Jan, 2018
Solid Waste Pre-Treatment Plant	May 31, 2010	Dec, 2018
Refuse Derived Fuel (RDF)	Jun 22, 2015 Apr 5, 2016 Aug 18, 2016	Sep, 2023 Feb, 2024 8 years from the date of first revenue received
Co-generation Power Plant	Dec 2, 2014	Jan, 2024
Export Service Center	Mar 2, 2010	Mar, 2018
Shipping Company	Feb 26, 2013	8 years from the date of first revenue received
Port operations for loading vessels (Wat Ban Dai)	Aug 20, 2013	Dec, 2022

The project which receives corporate tax exemption for 7 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
Production line of ceramic roof tiles LINE 3	May 25, 2005	May, 2018
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

O Corporate & Investment

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
Solar Roof	Mar 20, 2014	8 years from the date of first revenue received

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 557 trademarks, which are registered at The Department of Intellectual Property.



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 SCG Cement-Building Materials, SCG Chemicals and SCG Packaging. And SCG Investment 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 5-13 for shareholding structure of direct and indirect ownership of company, associate, subsidiaries, and joint ventures.

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. Currently, Thailand Securities Depository Co., Ltd., the co-defendant, is in the process of filing a petition to the Supreme Court for an interpretation on the judgement. Once the interpretation procedure is final, the Company shall prepare for a civil lawsuit against all relevant persons for recourse.

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 SCG Chemicals in the Map Ta Phut Industrial Estate and vicinity of Rayong Province. On September 2, 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.co.th
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	The Crown Property Bureau Group holds approximately 32.3% 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.co.th</p> <p>Corporate Secretary Office</p> <p>Tel. 66-2586-6098</p> <p>Fax 66-2586-3007</p> <p>e-mail: corporate@scg.co.th</p> <p>Investor Relations Department</p> <p>Tel. 66-2586-3309</p> <p>Fax 66-2586-3307</p> <p>e-mail: invest@scg.co.th</p>

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Independent Directors as Minority Shareholders'

Representative

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2. Investment in subsidiaries, joint ventures, associates and other companies of which their operations are significant are disclosed in page 5-13.

3. References

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Fax	66-2009-9991
e-mail	SETContactCenter@set.or.th
Website	http://www.set.or.th/tsd
Auditors	KPMG Phoomchai Audit Ltd. Mr. Winid Silamongkol (Certificated Public Accountant Registration No. 3378) or Mr. Viroj Jindamaneepitak (Certificated Public Accountant Registration No. 3565) or Ms. Sureerat Thongarunsang (Certificated Public Accountant Registration No. 4409) or Ms. Pornthip Rimdusit (Certificated Public Accountant Registration No. 5565)
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Tel.	66-2586-5777 or 66-2586-5888
Fax	66-2586-2976
Trustee of Debenture Holders	TMB Bank Public Company Limited (Only for debenture SCC174A, SCC170A, SCC184A, SCC180A, SCC184B and SCC194A)
Address	3000 Phahonyothin Road, Chomphon, Chatuchak, Bangkok 10900
Tel.	66-2299-1111
Fax	66-2990-6010
Website	www.tmbbank.com
Trustee of Debenture Holders	CIMB Thai Bank Public Company Limited (Only for debenture SCC19NA, SCC204A and SCC20NA)
Address	Capital Financial Markets and Payments Operations Department Agency Service and Compliance Unit, 15 th Floor, 44 Langsuan Road, Lumpini, Pathum Wan, Bangkok 10330
Tel.	66-2626-7508
Fax	66-2657-3390
Website	http://www.cimbthai.com