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## INDUSTRY OVERVIEW

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This industry overview section contains some information and statistics concerning the national and some regional PRC cement and concrete industries that we have derived partly from official government and industry sources. The information in such sources may not be consistent with information compiled by other institutions within or outside China. Due to the inherent time-lag involved in collecting any industry and economic data, some or all of the data contained in this section may only represent the state of affairs at the time such data was collected. As such, you should also take into account subsequent movements in our industry and the PRC economy when you evaluate the information contained in this section.

We believe that the sources of such information are appropriate sources and have taken reasonable care in extracting and reproducing such information. We have no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. The information has not been independently verified by us, or any of our affiliates and advisors. No representation is given as to the accuracy of such information and accordingly, such information should not be unduly relied upon.

### Introduction

Cement is a basic and essential construction material. Various types of Portland Cement are produced by grinding and mixing different proportions of gypsum, blast furnace slag and other additives with clinker, a semi-finished product. The different proportions of clinker and the additives determine the ultimate performance quality of the cement.

There are two basic types of cement: non-hydraulic cement that will not harden in water and hydraulic cement that is stable in water, and can harden and set in wet environments. Portland Cement is the most commonly used type of hydraulic cement for construction.

In China, Portland Cement is graded on the basis of its compressive strength as measured in mpa. Different grades of cement are used in different applications. For example, large buildings and structures that carry a heavy weight load require cement of higher compressive strength.

Cement, when mixed with water and aggregate (gravel and sand), forms concrete. The portion of cement added to the mixture determines the overall strength and setting time of the concrete.

### Uses and Types of Cement and Concrete

Cement is commonly used in the production of concrete, mortar and precast. Cement can be manufactured into concrete and formed on-site for large-scale projects such as buildings, bridges, dams and roadways. In addition, cement can also be used for mortar, acting as a bonding agent for brick walls and indoor tiling work. Alternatively, cement can be made into precast concrete products such as bricks, panels and highway dividers.

The main types of cement are Portland Cement, Ordinary Portland Cement and Composite Portland Cement.

Portland Cement has a high compressive strength and contains approximately 95% clinker which makes it relatively more expensive than other types of cement. As a result, Portland Cement is used for a large variety of construction projects that require higher strength materials such as high-rise buildings, airport runways and bridges.

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Ordinary Portland Cement is characterized by its quick hardening ability. It develops a relatively strong initial compressive strength. As a result, it is suitable for buildings that must complete construction in a short period of time. In addition, its resistance to abrasion makes it suitable for those structures which have extended exposure to vehicles and weather, such as roads and bridges.

Composite Portland Cement has similar characteristics to Ordinary Portland Cement except that it has a lower compressive strength than Ordinary Portland Cement. Composite Portland Cement contains less clinker which makes it less expensive than Ordinary Portland Cement and Portland Cement. Composite Portland Cement is used mainly for construction projects which require low quality concrete, such as small buildings and farm houses.

Concrete is produced in four basic forms: ready mixed concrete, precast concrete, concrete masonry and soil-cement and roller-compacted concrete.

Ready mixed concrete, the most common form of concrete, is formed and batched at local plants. This concrete is then delivered in trucks with revolving containers that constantly mix the concrete to prevent it from setting. Precast concrete is pre-mixed and formed into custom made pieces (such as bricks and panels) and delivered as a finished product to the consumer. Precast concrete products benefit from tight quality control achievable at a production plant.

Concrete masonry, another type of manufactured concrete, may be best known for its conventional brick-shaped block. Concrete masonry units can be molded into many shapes, configurations, colors, and textures to serve a wide variety of building applications and architectural needs. Traditional materials in this category include mortar and grout. Soil-cement and roller-compacted concrete are used for pavements and dams. Other products in this category include flowable fill and cement-treated bases.

### **Cement Production**

Raw materials such as limestone, clay, blast furnace slag (or slate), silica sand and iron ore are fed through primary and secondary crushers or hammer mills. The next step can be either a wet or dry process. In the wet process, raw materials in controlled proportions are ground with water to form slurry, and are transferred into a kiln. In the dry process, the raw materials are ground and mixed without water, before being transferred into a kiln.

A kiln is a large, cylindrical steel tube which acts as an oven and heats the above mixtures at temperatures of up to 1,450°C. Rotary kilns are placed horizontally at a slight angle. Slurry or dry raw materials are fed into the higher end of the rotary kiln, and as they approach the lower end, a blast flame heats and chemically alters them. The blast flame is produced by burning either coal, oil or gas. Kilns can also use waste materials such as tires, rubber, paper, sewage sludge or plastic as fuel. As the raw materials move through the kiln, they release certain elements in gas form, while the remaining material solidifies into small, marble-sized pieces called clinker.

Clinker, possessing new physical and chemical properties, is crushed into fine powder. Gypsum and other materials such as volcanic ash and fly ash are added to the ground clinker, resulting in a powder that is Portland Cement. Gypsum is a key addition which adjusts the setting time of the cement when cement is eventually used in the production of concrete. The production process of cement contains a series of chemical and physical tests and specification analyses to ensure the quality of the cement.

Two main types of kilns are used in the cement production process: vertical kilns and rotary kilns. Vertical kilns employ less advanced technology, yield lower quality clinker and are less energy efficient. Vertical kilns can only use the semi-dry process of cement production. In contrast, rotary kilns employ more advanced

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technology (including NSP technology) that allows for enhanced monitoring of the clinker's quality. Rotary kilns are able to use the wet, dry or semi-dry process of cement production. Dry process rotary kilns employ more advanced NSP technology compared to wet and semi-dry process rotary kilns and are more fuel-efficient and produce less pollution. In addition, some more advanced dry process rotary kilns are equipped with NSP technology.

|                         | <u>Technology</u> | <u>Production Efficiency</u> | <u>Product Quality</u> | <u>Pollution</u> |
|-------------------------|-------------------|------------------------------|------------------------|------------------|
| <b>Vertical Kilns:</b>  |                   |                              |                        |                  |
| Semi-dry process .....  | old               | low                          | low                    | high             |
| <b>Rotary Kilns:</b>    |                   |                              |                        |                  |
| Semi-dry process .....  | new               | high                         | high                   | low              |
| Wet process .....       | old               | high                         | high                   | low              |
| Dry process (NSP) ..... | latest            | highest                      | highest                | lowest           |

According to China Coal Transport and Distribution Association (中國煤炭運銷協會)<sup>(1)</sup>, the price per ton of coal in China has experienced a general increase from December 2007 to December 2008, and a rapid decline from January 2009 to June 2009. In 2007, coal prices per ton ranged from RMB520 to RMB530. In 2008, this range increased to RMB590 to RMB600 in March, to RMB870 to RMB900 in June, to RMB860 to RMB920 in September and subsequently decreased to RMB590 to RMB610 in December. In 2009, the range was RMB550 to RMB565 in March and RMB560 to RMB570 in June. The range in price reflects different quality levels and burning efficiencies of the coal purchased. We cannot predict whether this general increase or fluctuation in coal prices will continue in the future.

Provincial governments in China regulate electricity prices for industrial enterprises. According to Guangxi Power, the price per kilowatt hour of electricity in Guangxi, where we produce a majority of our cement, ranged from RMB0.44 to RMB0.57 in 2006, to RMB0.43 to RMB0.56 in 2007, to RMB0.47 to RMB0.59 in 2008 and the price remained effectively unchanged for the first half of 2009. The range in price reflects the lower rate during the wet season and higher rate during the dry season. We cannot predict whether this fluctuation in electricity prices will continue in the future. According to Guangdong Power, the price per kilowatt hour of electricity in Guangdong was approximately RMB0.66 in 2008 and the price remained unchanged for the first half of 2009. In particular, the price per kilowatt hour of electricity in Shenzhen ranged from RMB0.29 to RMB1.01 from August 1, 2006 onwards and increased to RMB0.32 to RMB1.03 from July 1, 2008 onwards. The price per kilowatt hour of electricity in Shenzhen was RMB0.66 for the first half of 2009. The range between 2006 to 2008 reflects discount and peak rates charged at different times of the day.

### Concrete Production

Concrete is a mixture of paste and aggregates. The paste, composed of Portland Cement and water, coats the surface of the fine and coarse aggregates. Through a chemical reaction called hydration, the paste hardens and gains strength to form concrete. The key to achieving strong and durable concrete is the careful proportioning and mixing of the ingredients. A concrete mixture that does not have enough paste to fill all the voids between the aggregates will be difficult to distribute evenly and will produce rough, honeycombed surfaces and porous concrete. A mixture with an excess of cement paste will be easy to distribute evenly and will produce a smooth surface. However, the resulting concrete is likely to shrink more and be uneconomical.

A properly designed concrete mixture will possess the desired workability for the fresh concrete and the required durability and strength for the hardened concrete. Typically, a mixture is about 10 to 15 percent cement, 60 to 75 percent aggregate and 15 to 20 percent water. Entrained air in many concrete mixes may also take up

<sup>(1)</sup> [www.cctd.com](http://www.cctd.com) (中國煤炭市場網) is organized by the China Coal Transport and Distribution Association (中國煤炭運銷協會) and provides web-based information on the price, transportation, supply and demand of coal in China.

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another 5 to 8 percent. Soon after the aggregates, water and the cement are combined, the mixture starts to harden. During this hydration process, a node forms on the surface of each cement particle. The node grows and expands until it links up with nodes from other cement particles or adheres to adjacent aggregates.

During placement, the concrete is consolidated to compact it within the forms and to eliminate potential flaws, such as honeycombs and air pockets. For slabs, concrete is left to stand until the surface moisture film disappears. After the film disappears from the surface, a wood or metal handfloat is used to smooth off the concrete. Additional floating and subsequent steel troweling procedures may be required to ensure a smooth, hard and dense surface.

### **The PRC Cement Market**

China's economy has grown rapidly in recent years. From 2006 to 2008, China's GDP increased from approximately RMB21,192.4 billion to approximately RMB30,067.0 billion. Such growth represented a CAGR of approximately 19.1%, making China one of the fastest growing economies in the world. For the first six months of 2009, China's GDP reached approximately RMB13,986.2 billion, an increase of 7.1% over the same period of 2008. This economic growth has led to a significant rise in construction activity across China, increasing the demand for building materials such as cement.

The construction industry in China has experienced notable expansion in recent years. According to Digital Cement<sup>(1)</sup>, China is the largest cement producing country in the world. China's cement production accounts for over 50% of the world's total cement production, with a total production volume amounting to approximately 1,400 million tons in 2008, a CAGR of 6.39% from 2006 to 2008. For the period between January to June 2009, China produced approximately 735 million tons of cement which represented 14.9% increase in production compared to the same period in 2008.

### **Effects of financial turmoil**

As a result of the international financial turmoil in the latter half of 2008 and in 2009, to stabilize the domestic economy, the PRC Government sought to encourage domestic consumption with the aim of maintaining domestic economic growth by introducing a major project investment plan worth an aggregate of RMB4 trillion and a national railway construction plan worth an aggregate of RMB2 trillion. In view of the increase in investments by the PRC Government, many provincial governments pushed forward their investment plans and have begun constructing a number of major infrastructure projects in 2008 and early 2009, ahead of their initial plans. Such projects include the Southern Guangdong Express Railway (南廣高速鐵路), Guiguang Express Railway (貴廣高速鐵路), Western Guangdong Express Railway (廣東省西部沿海鐵路), Yunnan-Guizhou Express Railway (雲貴高速鐵路) and Guangxi Railway (廣西沿海鐵路).

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<sup>(1)</sup> Digital Cement is organized by the China Cement Association, which has been appointed by the PRC Government and helps to formulate industry development strategies, legal policies, and industry standards and guidelines. Digital Cement publishes a monthly publication and also provides web-based information services and industry consulting services. Its website is <http://www.dcement.com/Index.html> (this website address and its contents do not form part of this document).

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The table below sets forth the amounts and growth rates of GDP, FAI, cement consumption and cement production in China for the periods indicated.

|                              | Year ended December 31, |          |          | CAGR<br>(%) | Six<br>months<br>ended<br>June 30, |
|------------------------------|-------------------------|----------|----------|-------------|------------------------------------|
|                              | 2006                    | 2007     | 2008     | 2006-2008   | 2009 <sup>(1)</sup>                |
| <b>GDP:</b>                  |                         |          |          |             |                                    |
| RMB (in billions) . . . . .  | 21,192.4                | 24,953.0 | 30,067.0 | 19.1        | 13,986.2                           |
| Growth rate (%) . . . . .    | 11.6                    | 13.0     | 9.0      |             | 7.1                                |
| <b>FAI:</b>                  |                         |          |          |             |                                    |
| RMB (in billions) . . . . .  | 10,999.8                | 13,732.4 | 17,229.1 | 25.2        | 5,352.0                            |
| Growth rate (%) . . . . .    | 23.9                    | 24.8     | 25.5     |             | 32.9                               |
| <b>Cement Production:</b>    |                         |          |          |             |                                    |
| Tons (in millions) . . . . . | 1,236.8                 | 1,360.0  | 1,400.0  | 6.4         | 734.6                              |
| Growth rate (%) . . . . .    | 15.7                    | 9.9      | 2.9      |             | 14.9                               |
| <b>Cement Consumption:</b>   |                         |          |          |             |                                    |
| Tons (in millions) . . . . . | 1,200.0                 | 1,330.0  | 1,370.0  | 6.9         |                                    |
| Growth rate (%) . . . . .    | 14.3                    | 10.8     | 3.5      |             |                                    |

Source: *China Statistical Yearbook 2008, National Development and Reform Commission and National Bureau of Statistics of China (Cement Consumption data only).*

(1) Compared to the same figure as at June 30, 2008.

The production and sale of cement is regional. Cement's raw materials and finished products possess a low value-to-weight ratio. Transportation distances for raw materials and finished products influence logistics costs considerably. To minimize necessary transportation costs, cement plants are generally situated near raw material reserves or target markets. As a result, cement products are generally sold within a radius of about 300 kilometers from the relevant plants. These cost and transportation constraints prevent nationwide monopolies, create regional competition, and practically eliminate any cement imports. However, competition in the PRC cement market has intensified after China's entry into the WTO, with international cement companies either moving their production base into China or acquiring local cement manufacturers.

The PRC Government has recently raised quality standards and in turn raised barriers of entry into the cement industry. For example, all newly constructed clinker production lines must now have sufficient limestone resources to support operations for at least 30 years, and all newly established cement grinding plants should now have a minimum annual production capacity of six million tons. In addition, the State Electricity Regulatory Commission and the NDRC discourage the operation of vertical kilns, and have implemented a new electricity pricing scheme that favors rotary kilns. Moreover, some government authorities have promulgated an increasing number of environmental regulations that force small scale cement producers to adopt more environmentally friendly technologies. The increased coal consumption in the use of vertical kilns and the costs of adopting environmentally friendly technologies present serious challenges to small scale cement producers.

The PRC cement industry is also governed by various other laws and regulations promulgated by relevant PRC authorities in connection with cement production, mineral resources, environment protection and safety and labor protection.

### Key Industry Trends in China

#### *NSP Technology Application*

China's NSP technology has developed since the 1980s. The key component of NSP technology is the cyclone. A cyclone is a cone-shaped vessel and was originally used to clean the dust-laden gases exiting the dry

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process kilns. The entire feed of dry raw materials is fed through the cyclone, resulting in an efficient heat exchange, which in turn results in less heat emission to the atmosphere. The efficiency of the NSP system is further enhanced if a number of cyclones are connected.

The table below presents a breakdown of cement production in China by NSP and non-NSP technology during the periods indicated.

| <u>Technology</u> | <u>Year ended December 31,</u> |               |               |
|-------------------|--------------------------------|---------------|---------------|
|                   | <u>2006</u>                    | <u>2007</u>   | <u>2008</u>   |
| Non-NSP .....     | 50.0%                          | 45.0%         | 37.1%         |
| NSP .....         | 50.0%                          | 55.0%         | 62.9%         |
| Total .....       | <u>100.0%</u>                  | <u>100.0%</u> | <u>100.0%</u> |

Source: *China Cement*<sup>(1)</sup>

### *Vertical Kiln Phase-out*

The majority of the world’s industrialized nations began phasing out vertical kilns in the 1970s. China has only recently begun such vertical kiln elimination. In China, vertical kilns are still used in small-scale rural plants situated far away from main transport routes. According to the China Cement Association, approximately 37.1% of PRC cement producers still use vertical kilns in 2008.

The production of cement involves large amounts of coal and power, and in turn results in high energy costs. Vertical kilns consume significantly more coal than rotary kilns, imposing a significant cost disadvantage to the producer over rotary kilns given recent increases in coal and electricity prices. Vertical kilns also discharge more pollutants than rotary kilns. Vertical kiln plants constantly risk shutdown due to their greater exposure to power shortages and the price volatility of coal and electricity.

The PRC Government has issued a series of regulations intended to phase out vertical kilns. On October 17, 2006, the NDRC issued the “Policy on Cement Industry Development” (水泥工業產業發展政策), which outlaws the establishment of new production centers using vertical kilns and less advanced technologies. This policy further stated that by the end of 2008, kilns that use obsolete technologies should be replaced, and that the production quota of vertical kilns should be further reduced. The policy explicitly stated that regions with capacity should shut down all vertical kilns by the end of 2008, although the policy did not specifically name any regions. On February 18, 2007, the NDRC issued the “Notice Regarding Replacement of Obsolete Cement Production Capability” (關於做好淘汰落後水泥生產能力有關工作的通知), which restated the NDRC’s October 17, 2006 Policy.

Further curbing the use of vertical kilns, various new regulations require higher quality cement for large scale infrastructure and high-rise buildings, which generally rotary kilns can produce. Addressing environmental concerns, the PRC Government offers tax rebates to cement producers that demonstrate a 30% recycling rate for raw materials. Such tax rebates favor rotary kilns, as vertical kilns have difficulties attaining such rates of raw material recycling.

### *Consolidation in a fragmented market*

China’s cement industry is highly fragmented. According to the China Cement Association, the aggregate annual production capacity of the 10 largest PRC cement producers accounted for approximately 20.1% of the

<sup>(1)</sup> Established in 1997, *China Cement* is an electronic marketplace and information center for PRC cement enterprises. *China Cement* offers informational resources, industry reports and selling, marketing and advertising opportunities for its members.

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total capacity in China at the end of 2008 and the average annual cement production capacity in China was 0.35 million tons per producer in 2008, much less than the global average outside China.

Major PRC cement producers have recently accelerated consolidation and increased their market share. The PRC Government's policies have supported larger and more efficient cement producers, and will likely target smaller-scale cement companies for further consolidation and acquisitions.

The PRC Government has assisted the consolidation trend with the issuance of several recent regulations. The NDRC issued the Specialized Plan for Developing the Cement Industry (水泥工業發展專項規劃) on October 17, 2006, and openly favored consolidation, mergers and acquisitions for efficient enterprises, and encouraged larger enterprises to acquire their smaller competitors and called for the closing of small and excessively polluting factories. The NDRC's goal, noted in the Policy on Cement Industry Development, also issued on October 17, 2006, is to reduce the number of cement producers to 2,000 by 2020. On December 31, 2006, the NDRC, the Ministry of Land and Resources and the PBOC jointly issued a notice listing 12 national and 48 local cement companies, including our Group, that would receive priority project approvals, land use right grants and credit approvals when seeking project investments or mergers and acquisitions.

### *Increased Focus on Environmental Protection*

The PRC Government has implemented new environmental regulations to reduce emissions and noise pollution in the production of cement. These efforts have resulted in the increased use of rotary kilns and NSP technology and the decrease in energy consumption, production costs and environmental pollution. Recent improvements in related technologies have increased energy savings and environmentally friendly production processes, reducing energy consumption in the cement clinker production process across the industry. According to China Building Materials News<sup>(1)</sup>, energy consumption per kilogram of clinker (kJ/kg) produced was 3,810 kJ/kg and 3,703 kJ/kg for 2006 and 2007, respectively. Dry process kilns with capacities of over 4,000 tons per day used significantly lower energy, consuming 3,356 kJ/kg and 3,305 kJ/kg for 2006 and 2007, respectively. There are no similar statistics available for 2008. According to the China Cement Association, China had 922 NSP production lines in operation at the end of 2008, of which 101 NSP production lines are situated in Southern China.

According to the April 13, 2006 Notice Regarding Several Opinions for Accelerating Adjustments of Cement Industrial Structure (關於加快水泥工業結構調整的若干意見的通知) issued by the PRC Government, by the end of 2010, the heat consumption for producing clinker with NSP should be reduced from 130 kg/ton to 110 kg/ton of coal equivalent, the percentage of production lines with residual heat power generation should reach 40% and utilization rate of limestone reserves should be increased from 60% to 80%.

In recent years, China's cement research institutions have developed key technologies for decreasing or eliminating toxins from substances that have previously been considered hazardous so that they may be recycled and reused in kilns. This increases emphasis on a cement producer's ability to recycle what was formerly treated as a waste by-product into reusable raw materials or fuel. These technologies have been implemented with satisfactory results, and have encouraged further development of recycling techniques in the cement industry.

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<sup>(1)</sup> China Building Materials News, a daily newspaper, was established in April 1986 and is operated under the guidance of the China Building Materials Industry Association. China Building Materials News is operated by the Economic Daily Press Group, with the approval of the CCP Publicity Department and the General Administration of Press and Publication of China. China Building Materials News showcases China's building materials industry and provides an insight into China's building trends, recent events and industry outlook.

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### Cement and Concrete Markets in Guangdong, Guangxi and Fujian

Due to the bulky product nature and high transportation costs, the market for cement products is regionalized. Production facilities are generally located near customers and suppliers to keep transportation costs low. Prices of cement products are predominantly influenced by local supply and demand conditions. The profitability of cement producers in China varies significantly by region. The table below ranks China's key provinces, municipalities and autonomous regions in terms of cement and ready mixed concrete production volume in 2008. Information regarding regional cement and ready mixed concrete consumption in China is not readily available.

| No.   | Location  | Cement                                     |   | No.   | Location  | Ready Mixed Concrete                                  |   |
|-------|-----------|--|---|-------|-----------|---|---|
|       |           | Production Volume<br>(in millions of tons) | Percentage of Total<br>Production Volume<br>(%) |       |           | Production Volume<br>(in millions of m <sup>3</sup> ) | Percentage of Total<br>Production Volume<br>(%) |
| 1.    | Shandong  | 138.9                                      | 10.0  | 1.    | Jiangsu   | 120.1   | 17.4  |
| 2.    | Jiangsu   | 126.8                                      | 9.1   | 2.    | Zhejiang  | 78.2  | 11.3  |
| 3.    | Henan     | 102.7                                      | 7.4   | 3.    | Guangdong | 75.0  | 10.9  |
| 4.    | Zhejiang  | 102.1                                      | 7.4   | 4.    | Shanghai  | 55.3  | 8.0   |
| 5.    | Guangdong | 94.8                                       | 6.8   | 5.    | Shandong  | 47.7  | 6.9   |
| 6.    | Hebei     | 89.5                                       | 6.4   | 6.    | Liaoning  | 37.1  | 5.4   |
| 7.    | Hubei     | 61.7                                       | 4.4   | 7.    | Beijing   | 36.7  | 5.3   |
| 8.    | Sichuan   | 60.7                                       | 4.4   | 8.    | Fujian    | 22.8  | 3.3   |
| 9.    | Hunan     | 60.4                                       | 4.4   | 9.    | Chongqing | 21.1  | 3.0   |
| 10.   | Anhui     | 59.2                                       | 4.3   | 10.   | Henan     | 20.6  | 3.0   |
| 11.   | Jiangxi   | 52.7                                       | 3.8   | 11.   | Anhui     | 19.8  | 2.9   |
| 12.   | Guangxi   | 51.9                                       | 3.7   | 12.   | Shanxi    | 17.6  | 2.5   |
| 13.   | Fujian    | 45.3                                       | 3.2   | 13.   | Tianjin   | 17.5  | 2.5   |
| 14.   | Liaoning  | 40.7                                       | 2.9   | 14.   | Sichuan   | 14.8  | 2.1   |
| 15.   | Yunnan    | 38.6                                       | 2.8   | 15.   | Shaanxi   | 13.4  | 1.9   |
| Total |           | 1,126.0                                    | 81.0  | Total |           | 597.7   | 86.6  |

Source: China Cement Association<sup>(1)</sup>

In 2008, production volume of cement in Guangdong, Guangxi and Fujian, accounted for approximately 13.8% of national cement production. Production volume of ready mixed concrete in Guangdong, Guangxi and Fujian, accounted for approximately 15.7% of national ready mixed concrete production. Total production volumes of cement were 94.8 million tons, 51.9 million tons and 45.3 million tons for Guangdong, Guangxi and Fujian, respectively. Total production volumes of ready mixed concrete were 75.0 million cubic meters, 10.8 million cubic meters and 22.8 million cubic meters for Guangdong, Guangxi and Fujian, respectively.

<sup>(1)</sup> The China Cement Association was established on February 25, 1987. The China Cement Association represents the cement industry, which includes 4,000 cement enterprises with 1.2 billion tons of cement production. Upon the PRC Government's appointment, the China Cement Association assists in the formulation of strategic planning for industry development, industry policies and industry standard specifications, and organizes the implementation and promotion thereof. The China Cement Association also handles procedures for various enterprises' production and operation permits and relevant examination work, and plays a role as the bridge and link between the PRC Government and cement and building enterprises in China.



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The table below sets forth the GDP growth rate, the FAI growth rate and the cement production volume in Guangxi, Guangdong, Fujian and China for the periods indicated.

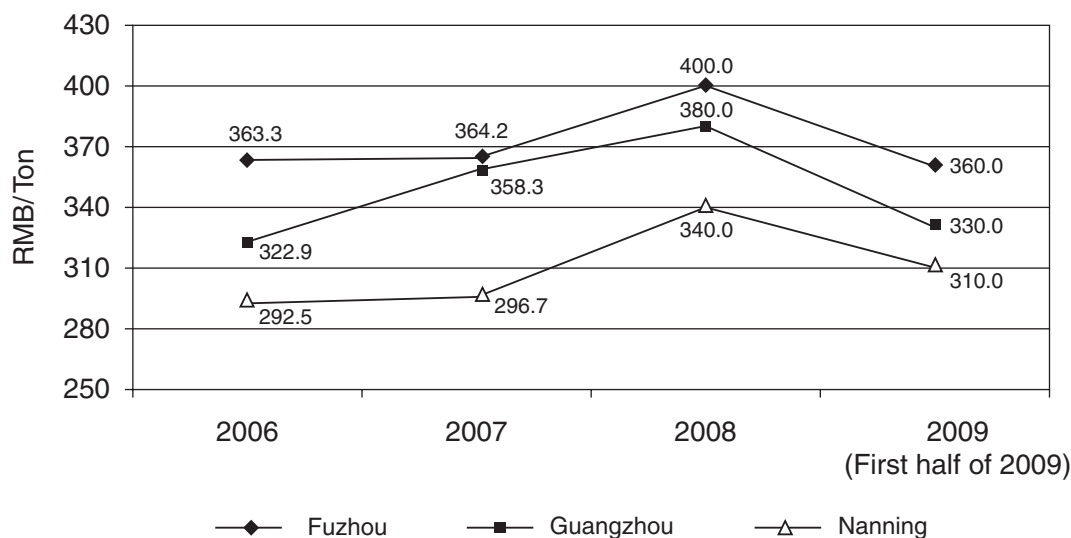
|  | Year ended December 31, |         |         | CAGR      | Six months ended             |
|--|-------------------------|---------|---------|-----------|------------------------------|
|  | 2006                    | 2007    | 2008    | 2006-2008 | June 30, 2009 <sup>(1)</sup> |
| <b>GDP growth rate (%):</b>                            |                         |         |         |           |                              |
| Guangxi .....  | 13.6                    | 15.1    | 12.8    | 21.9      | 13.0                         |
| Guangdong .....  | 13.8                    | 14.7    | 10.1    | 17.2      | 7.1                          |
| Fujian .....   | 14.8                    | 15.1    | 13.0    | 20.1      | 8.5                          |
| China .....  | 11.6                    | 13.0    | 9.0     | 19.1      | 7.1                          |
| <b>FAI growth rate (%):</b>                            |                         |         |         |           |                              |
| Guangxi .....  | 27.0                    | 32.2    | 27.2    | 29.7      | 57.7                         |
| Guangdong .....  | 16.7                    | 18.0    | 16.5    | 17.4      | 15.5                         |
| Fujian .....   | 38.0                    | 38.7    | 22.3    | 30.3      | 19.8                         |
| China .....  | 23.9                    | 24.8    | 25.5    | 25.2      | 33.5                         |
| <b>Cement production volume (in millions of tons):</b> |                         |         |         |           |                              |
| Guangxi .....  | 36.6                    | 43.5    | 51.9    | 19.1      | 22.2                         |
| Guangdong .....  | 88.5                    | 97.8    | 94.8    | 3.5       | 44.3                         |
| Fujian .....   | 33.4                    | 44.2    | 45.3    | 16.5      | 24.6                         |
| China .....  | 1,236.8                 | 1,360.0 | 1,388.4 | 2.9       | 734.6                        |

Source: China Statistical Yearbook 2008, National Bureau of Statistics of China, Statistical Bureaus of Guangxi, Guangdong and Fujian, China Concrete Consulting, China Cement Association and China Building Material Industry Association.

(1) Percentages listed represent comparisons against the same period of the previous year, unless otherwise indicated.

The table below shows the average price in recent years of Ordinary Portland Cement in the cities of Fuzhou (Fujian), Guangzhou (Guangdong) and Nanning (Guangxi). We feature the average price of Ordinary Portland Cement since it is the source of the majority of our cement turnover and in turn highly indicative of our business. Fuzhou, Guangzhou and Nanning are the capital cities and major business centers of their respective provinces. We believe that prices of Ordinary Portland Cement from these capital cities represent accurate average prices for their respective provinces. The PRC concrete market is relatively new and highly fragmented. As a result, it is difficult to present accurate regional concrete prices.

Average Prices of Ordinary Portland Cement (PO42.5)



Source: China Cement Association

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## INDUSTRY OVERVIEW

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In Fuzhou, the price per ton of Ordinary Portland Cement increased from RMB363.3 in 2006, to RMB364.2 in 2007 and to RMB400.0 in 2008. This increase in 2006, 2007 and 2008 was due to the increased demand for cement associated with increased FAI in Fujian. For the first half of 2009, price per ton of Ordinary Portland Cement experienced a sharp drop to RMB360.0 as a result of a sharp decrease in real estate investments in Fujian for the first half of 2009. For the first six months of 2009, real estate investments in Fujian fell 19.3%. In Guangdong, the price per ton of Ordinary Portland Cement increased from RMB322.9 in 2006, to RMB358.3 in 2007 and to RMB380.0 in 2008. The steady increase in 2006 and 2007 was the result of stabilization in clinker production capacity during this period. Price per ton of Ordinary Portland Cement in Guangzhou surged in 2008 as a result of a general reduction in production volume of cement in Guangdong in 2008 in light of less anticipated demand due to the completion of a number of projects. Price per ton of Ordinary Portland Cement in Guangzhou also experienced a sharp fall to RMB330.0 in the first half of 2009, primarily as a result of a sharp reduction of 15.4% in real estate investments in Guangdong for the first six months of 2009. In Nanning, the price per ton of Ordinary Portland Cement remained steady at RMB292.5 in 2006 with only a slight increase to RMB296.7 in 2007 due to the steady increase of FAI in Guangxi in 2006 and 2007. Prices sharply increased in 2008 to RMB340.0 per ton of Ordinary Portland Cement as a result of increased export of cement from Guangxi to Guangdong. Similar to Fuzhou and Guangzhou, the price per ton of Ordinary Portland Cement in Nanning decreased sharply to RMB310.0 for the first half of 2009. This decrease was primarily attributable to the macroeconomic adjustments in the first half of 2008, and the financial crisis in the second half of 2008, which led to a decline in real estate investments. Guangzhou's increase in price per ton of Ordinary Portland Cement did not increase as rapidly as those prices of Fuzhou and Nanning since Guangdong's FAI increased at a lesser rate than the FAI of Fujian and Guangxi. Prior to and at the commencement of the Track Record Period, from 2004 to 2006, conditions in the building materials sectors in China changed significantly due principally to measures taken by the PRC Government to curb excessive fixed assets investment and the substantial increase in production and distribution costs due principally to sharply increased coal and oil prices. This resulted in pressure on the prices of our products in 2006.

### GUANGXI

Guangxi has experienced significant growth during the years ended December 31, 2006, 2007 and 2008. During this period, both the GDP and FAI of Guangxi experienced growth rates that were consistently above the national averages, which in turn contributed to the cement industry's growth in the region. Guangxi's GDP increased from approximately RMB482.9 billion in 2006, to approximately RMB595.6 billion in 2007 and to approximately RMB717.2 billion in 2008. For the first six months of 2009, Guangxi's GDP was RMB330 billion, an increase of 13.0% over the same period of 2008. Guangxi's FAI increased from approximately RMB224.7 billion in 2006 to approximately RMB292.7 billion in 2007 and to approximately RMB377.8 billion in 2008. For the first six months of 2009, Guangxi's FAI increased 57.7% against the same period of 2008. Guangxi's cement production volume increased from 36.6 million tons in 2006 to 43.5 million tons in 2007 and to 51.9 million tons in 2008. For the first six months of 2009, Guangxi's cement industry produced 22.2 million tons of cement, an increase of 30.0% against the same period of 2008. At the end of 2008, Guangxi had a population of 47.68 million permanent residents and had 232 cement companies, among which were Anhui Conch Cement Company Limited, Guangxi Yufeng Group Limited, Taini Cement (Guigang) Company Limited and our Group.

### GUANGDONG

The Guangdong economy has experienced significant growth during the years ended December 31, 2006, 2007 and 2008. Guangdong's GDP increased from approximately RMB2.6 trillion in 2006 to approximately RMB3.1 trillion in 2007 and to approximately RMB3.6 trillion in 2008. For the first six months of 2009, Guangdong's GDP was RMB1.65 trillion, an increase of 7.1% over the same period of 2008. FAI in Guangdong increased from RMB811.7 billion in 2006 to RMB959.7 billion in 2007 and to RMB1,118.1 billion in 2008. For the first six months of 2009, Guangdong's FAI increased 15.5% against the same period of 2008. Such growth in

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## INDUSTRY OVERVIEW

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the economy and foreign investment has contributed to the expansion of the cement market in recent years. During the same period, Guangdong's cement industry produced 88.5 million tons in 2006, 97.8 million tons in 2007 and 94.8 million tons in 2008. This decrease between 2007 and 2008 was primarily the result of increased imports of cement into Guangdong from Guangxi. For the first six months of 2009, Guangdong's cement industry produced 44.3 million tons of cement, a slight increase of 4.7% from the same period of 2008. At the end of 2008, Guangdong had a population of 95.4 million, ranking first in China, and had 431 cement companies, among which were Yingde Conch Cement Co., Ltd., Guangdong Tapai Group Co., Ltd. and our Group.

In accordance with the Eleventh Five-Year Plan for 2006 to 2010, the Guangdong provincial government announced plans to invest RMB432 billion in transportation projects, including more than 2,000 kilometers of new highways and more than 1,100 kilometers of new railroads. In addition, over 500 kilometers of light rail is expected to be constructed. Guangdong's new Baiyun International Airport is expected to begin a second phase of construction, the Shenzhen International Airport is expected to be expanded and a new airport, the Chao-Shan Civil Airport, is expected to be built. RMB38 billion is expected to be invested in large-scale waterworks projects, and approximately 14,142 kilometers of electric grid will be constructed. All of these projects will create further growth opportunities for cement suppliers in Guangdong.

### FUJIAN

The GDP of Fujian increased from RMB750.2 billion in 2006 to RMB916.0 billion in 2007 and to RMB1,082.3 billion in 2008. For the first six months of 2009, Fujian's GDP was RMB473.9 billion, an increase of 8.5% over the same period of 2008. During the same period, FAI in Fujian increased steadily from RMB311.5 billion in 2006 to RMB432.2 billion in 2007 and to RMB528.7 billion in 2008. For the first six months of 2009, Fujian's FAI increased 19.8% against the same period of the previous year. Fujian's cement industry produced 33.4 million tons in 2006, 44.5 million tons in 2007 and 45.3 million tons in 2008. For the first six months of 2009, Fujian's cement industry produced 24.6 million tons of cement, a 8.7% increase against the same period of 2008. At the end of 2008, Fujian had a population of 35.1 million and had 245 cement companies, among which were Fujian Cement Inc., Fujian Jinniu Cement Co., Ltd. and our Group.

In accordance with the Eleventh Five-Year Plan for 2006 to 2010, the Fujian provincial government plans to add two 100 million ton capacity ports in Fuzhou and Xiamen. The Fujian provincial government aims to have port capacity for 20 million passengers as well as more than 6 inter-province rail lines (with over 2,500 km of rail lines) by 2010. In addition, Fujian intends to add more than 20 inter-province highways, including more than 2,000 km of freeways. Fujian's plans for expansion in transportation and urban construction are expected to significantly increase demand for cement and concrete. Moreover, the Fujian provincial government plans to expand its capacity for power generation. We expect that this increased capacity will assist cement and concrete suppliers to meet the increased demand for construction resulting from the Eleventh Five-Year Plan.

### The Hong Kong Concrete Market

The demand for concrete is closely related to the level of building and construction activity in Hong Kong. In 2008, the gross value of construction work performed by main contractors was approximately HK\$98,884 million, an increase of 6.5% compared to the same period in 2007 and representing approximately 5.9% of Hong Kong's GDP for that year, of which HK\$32,899 million related to private sector sites and HK\$15,295 million related to public sector sites. Private sector work involves residential, commercial and industrial buildings, together with some privately financed infrastructure facilities. Public sector work involves, among others, infrastructure projects, government buildings and public housing. Public sector building and construction contracts in Hong Kong are generally subject to open tender to a list of approved contractors. The government generally awards these contracts based on tender prices and other relevant factors, including the proven abilities of the bidders to meet the government's financial criteria and other requirements with respect to quality and completion dates.

## INDUSTRY OVERVIEW

The table below sets out the gross value of construction work performed by main contractors in the private and public sectors in Hong Kong in the years indicated.

| <u>Year</u> | <u>Quarter</u> | <u>Private sector</u> <sup>(note 1)</sup> | <u>Public sector</u> <sup>(note 2)</sup> |
|-------------|----------------|---|--|
|             |                | (HK\$ Million)                            |  |
| 2005        |                | 30,043                                    | 24,154                                   |
| 2006        |                | 28,107                                    | 18,249                                   |
| 2007        |                | 31,581                                    | 15,340                                   |
| 2008        |                | 32,899                                    | 15,295                                   |
| 2009        | Q1             | 7,448                                     | 3,715                                    |

Source: Hong Kong Census and Statistic Department

Notes:

- (1) Includes projects commissioned by private developers. Projects under the private sector participation scheme are also included.
- (2) Included projects commissioned by the Government of the Hong Kong Special Administrative Region, MTR Corporation Limited and Airport Authority. Projects under home ownership scheme, which are commissioned by the Housing Authority, are also included. The above table excludes the figures for a category which the Hong Kong and Statistics Department labeled as “others.”

The gross value of construction work performed by main contractors in Hong Kong ranged from HK\$54,197 million to HK\$48,194 million between 2006 and 2008. Due to the recent decline in the value of private residential buildings in Hong Kong as a result of the decline in the global economy, our Directors expect that the performance of our Group’s concrete business in Hong Kong, will be more dependent on the public sector, in particular, contracts for infrastructure projects in Hong Kong.

The future growth of the building and construction industry in Hong Kong depends primarily on the continued availability of major construction projects. However, these projects are in turn dependent on various factors such as, and in particular, the government’s infrastructure planning and the general outlook of Hong Kong’s economy. The Hong Kong Government recently cited infrastructure development as a driving force for Hong Kong’s development and the Hong Kong Government is committed to invest in infrastructure projects. The Hong Kong Government has announced that it will implement ten major infrastructure projects, including among others, the Hong Kong section of the Guangzhou-Shenzhen Hong Kong Express Rail Link transport infrastructure project, the West Kowloon Cultural District strategic project and Hong Kong-Zhuhai-Macao Bridge in October 2007.

Our Directors believe that there are nine major concrete producer competitors in Hong Kong. An industry organization called The Concrete Producers Association of Hong Kong Limited (“CPA”) was formed in 1993 and its main functions are to provide technical support to local suppliers and promote the concrete business. It also provides a forum for the members of the association to discuss industry-related issues. Currently, there are nine members in the CPA including Redland Concrete. Redland Concrete’s sales and price of concrete in 2008 in Hong Kong were approximately 490,545 cubic meters and HK\$644.6 per cubic meter, respectively.