The cement industry in China

Present structure
Restructuring programme
Opportunities

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Cement Distribution Consultants
Thistle Tower Hotel, London
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Contents of presentation

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- Present structure of the Chinese Cement Industry
- Restructuring process
- Opportunities
Modern China
Provincial China
## Figures on China (1)

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population in</td>
<td>1273 million</td>
<td>1418 million (expected)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population of Shanghai</td>
<td>14 million</td>
<td></td>
</tr>
<tr>
<td>Population of Beijing</td>
<td>12 million</td>
<td></td>
</tr>
<tr>
<td>Population of Tianjin</td>
<td>10 million</td>
<td></td>
</tr>
<tr>
<td>Average growth in population per year</td>
<td>1.01%</td>
<td></td>
</tr>
<tr>
<td>Population under 15</td>
<td>26.5%</td>
<td></td>
</tr>
<tr>
<td>Population over 65</td>
<td>6.1%</td>
<td></td>
</tr>
<tr>
<td>Average life expectancy</td>
<td>69.6 years</td>
<td></td>
</tr>
<tr>
<td>Adult Literacy</td>
<td>82%</td>
<td></td>
</tr>
<tr>
<td>Urban population</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Urban population to increase to 60% in next 10 years</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figures on China (2)

GDP (2002) US$ 1.064 billion (7th largest)
GDP per head 2002 US$ 890

Fastest economic growth in the world
1992 – 2002 8,9% Average per year

Structure of employment % of GDP
Agriculture 47 % 18,7
Industry 20 % 49,2
Services 33 % 33,1
Map of China
Map China geographical (provinces)
Present state of Chinese cement industry

According to the Chinese Cement Association, the accumulated cement output of the Chinese cement industry in 2002 reached 705 million tons, a growth of 13.7% over the 2001 output.

This is over one third of world cement production.

However, only 12% of this quantity is produced by modern pre-calcining kilns over 70% is still produced by small vertical shaft kiln plants and is of low quantity.
New pre-calcining kiln lines commissioned in 2002

Smaller than 1500 tpd 41
1500 tpd up to 3000 tpd 16
3000 tpd and larger 6

Total 63

Total new clinker production cap. 31 million tpy

On top of this figure many new vertical shaft kilns have been commissioned.

About 60 new pre calcining kilns are expected to be commissioned in 2003. Amongst new lines on order are several of 8,000 tpd and 10,000 tpd
Total number of Chinese cement companies 4626

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>Number</th>
<th>Total output million tons</th>
<th>% Of total Chinese output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small sized companies</td>
<td></td>
<td>3657</td>
<td>371,68</td>
<td>52.7</td>
</tr>
<tr>
<td>Medium sized companies</td>
<td></td>
<td>835</td>
<td>183,66</td>
<td>26.1</td>
</tr>
<tr>
<td>Large size companies</td>
<td></td>
<td>134</td>
<td>149,37</td>
<td>21.2</td>
</tr>
</tbody>
</table>
2002
Ownership structure (by number of companies)

- Other domestically-funded enterprises: 30%
- Other kinds of foreign-funded enterprises: 4%
- State-owned enterprises: 17%
- Private enterprises: 23%
- Collective enterprises: 26%
Ownership structure (by number of companies) (Reworked)

<table>
<thead>
<tr>
<th>2002</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>State owned</td>
<td>792</td>
<td>17</td>
</tr>
<tr>
<td>Collective</td>
<td>1184</td>
<td>26</td>
</tr>
<tr>
<td>Other domestically funded</td>
<td>1387</td>
<td>30</td>
</tr>
<tr>
<td>Total government owned</td>
<td>3363</td>
<td>73</td>
</tr>
<tr>
<td>(state, province, town)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private funded</td>
<td>1098</td>
<td>23</td>
</tr>
<tr>
<td>Foreign funded</td>
<td>165</td>
<td>4</td>
</tr>
<tr>
<td>Total privatised companies</td>
<td>1263</td>
<td>27</td>
</tr>
</tbody>
</table>
Key players in China cement industry

- Government institutions.
- Large Chinese cement groups
- Design institutes
- Contracting companies
Key government institutions for the cement industry

- China Building Materials Industry Association
  (Responsible for developing industry policies)

- State Economic and Trade Commission
  (Policies on foreign ownerships)
# Largest Chinese Cement Groups

<table>
<thead>
<tr>
<th>Name</th>
<th>Production capacity (2002) Million tpy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhui Conch Cement Group</td>
<td>26,9</td>
</tr>
<tr>
<td>Bohai Cement Holding Group</td>
<td>10</td>
</tr>
<tr>
<td>Xingjiang Tianshan Cement Co.</td>
<td>8</td>
</tr>
<tr>
<td>Huaxin Cement Co.</td>
<td>6,5</td>
</tr>
<tr>
<td>Jinan Shangshui group</td>
<td>6,4</td>
</tr>
<tr>
<td>Sanshi Cement Group</td>
<td>5</td>
</tr>
<tr>
<td>Yatai Cement Co.</td>
<td>3,6</td>
</tr>
</tbody>
</table>
The vertical kiln cement plant (1)

Annual Chinese cement output has increased from 250 million tons in 1991 to 705 million in 2002, an increase of 455 million tons per year (Average annual growth 9.88%). This increased output was mainly from small enterprises which operate largely uncontrolled and provide a huge risk to the Chinese cement industry in respect to economic performance and sustainable development.
The vertical shaft kiln cement plant (2)

- Typical production capacity 50,000 – 200,000 ton per year
- Output: 100% in bags, paid cash at exit gate
- Distribution to local market only
- Extremely polluting
  - Inefficient combustion systems
  - No dustcollection
- Poor and fluctuating cement quality
- Employs 400-600 people in the production process and the same number indirectly
- Usually owned by local government
- Usually funded by government owned bank
The vertical shaft kiln cement plant (3)

The small cement companies with vertical shaft kiln plants are a structural weakness in the Chinese cement industry

- Unrealistic economic basis (government funded and operated)
- Price has little or no relation to real production cost (unfair competition, unstable market price)
- Unsecured debt
- Huge social liability (housing, schools, pensions, etc., etc.)
- Poor and unstable cement quality
- Very high pollution
The Chinese cement industry cannot continue to grow in such an uncontrolled method.

Even with the huge growth benefit of the past years the Chinese cement industries overall profitability is still quite poor.

Continuation of present practices is not sustainable.
The Chinese government has started in 1990 a restructuring programme, which has only recently gained such a momentum that a transformation of the industry is possible.

This transformation of the industry also makes foreign participation on a large scale possible.
Restructuring of Chinese cement industry

- Modernisation
- Privatisation
Goal of the restructuring process is to close the outdated small cement plants and replace them with larger scale advanced production lines that have a solid economic foundation.
Methods of restructuring process

- Enforcing higher quality standards
- Enforcing environmental standards
- Actively promoting newest technologies
- Actively supporting sustainability principles

- PRIVATISATION of the industry!

- Use of large privatised groups as a lever to enforce closing of small plants
Problems facing the restructuring process

- Sheer size of the industry
- Protection of small plants by local government (which often are the owners)
- Unfair price competition towards privatised companies
- Closing of small plants causes
  - Substantial unemployment (social unrest)
  - Reveals unsecured debts
  - Reveals unsecured pension liabilities
- Development of management skills does not keep up with speed of modernisation
The use of large cement groups in the restructuring process

- Achieve low production cost and competitiveness by use of modern techniques, management skills, etc and economy of scale
- Are allowed to get large market share to stabilise markets
- Have the capability to attract fresh capital for expansion and modernisation
### Forecasted growth of Chinese largest cement groups

<table>
<thead>
<tr>
<th>Name</th>
<th>Prod. cap. 2002</th>
<th>Prod. cap. 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhui Conch Cement Group</td>
<td>26,9</td>
<td>50</td>
</tr>
<tr>
<td>Bohai Cement Holding Group</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td>Xingjiang Tianshan Cement Co.</td>
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<td>25</td>
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<td>10</td>
</tr>
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</table>
Symposium of key cement groups in China
August 27-28, 2002
Urumqi, Xingjang Province

Topics
- Discuss progress of restructuring and required acceleration of process
- Exchange of experiences
- Analysis of market requirements
- Risk limitation of rapid growth
- Effect of foreign investment and globalisation on Chinese cement industry

INTERCEM was the only foreign company invited to participate in this meeting
Left to right
Mrs. Zeng Xuemin V.P. and Sec. General China Cement Association (half visible)
Mrs. Zhang Litong, CEO Xingjina Tianshan Cement co.
Mr. Yu Jiuzhou, V.P. Bohai Cement Holding Group
Mr. Guo Wensan, CEO Anhui Conch Group
Mr. Lei Qianzhi V.P. Huaxin Cement Group and President China Cement Association
Mr. Niu Jinaguo, President State Economic and Trade Commission, Economy Operation Bureau
Mr. Wang Wanpin, Director, State Economic and Trade Commission, Building Materials Department
Mr. Chen Xiaohang, President, State Council Development Research Center, Enterprise Department
Opportunities for foreign investors (1)

- China is the largest and fastest growing cement market in the world
- The restructuring process has a stabilising effect on markets and improves profitability of the industry
- China’s entry to the WTO provides improved access to the Chinese markets and better protection for foreign companies
Opportunities for foreign investors (2)

- The required capital for the modernisation of the industry is so large that it cannot be funded by domestic privatisation only. Additional foreign investment is needed and is welcomed.

- The Chinese cement industry is not considered to be a strategic industry by the Chinese government and so 100% foreign ownership is allowed.
Opportunities for foreign investors (3)

- Not only foreign capital but also technology, management skills and environmental awareness are needed for the restructuring process.

- Chinese companies have started to realise the benefits of international network and distribution capabilities.
Some words of caution

- The structure of the Chinese cement industry is still very complex with many organisations and institutions, rules, regulations, etc.

- The transition of a plan economy to a market economy has only started and probably will take more than a decade to be completed with local, provincial and state governments involved having different interests.
Some words of caution (2)

- The large Chinese groups operate in their own areas and are set up to dominate these markets

- Competition is a relatively new phenomenon

- The top of the Chinese cement industry is a very close knit group almost entirely educated at the University of Building Materials in Beijing
Some words of caution (3)

Foreign investment is welcomed in China but there also is a hesitancy towards it. This is to a certain extend caused by the role of foreigners in Chinese history but also, for the cement industry in particular, by the events of the Asian economical crisis and the corresponding change of ownership of the national cement companies to the large multination groups.
Beijing is the perfect venue for the Eighth International Conference on cement markets, trade, distribution and industry developments in Asia and the Pacific Rim. China’s massive cement production capacity in combination with its entry to the WTO will have a significant influence on the world cement industry in the coming years. INTERCEM Asia will provide a unique opportunity for the Chinese and world cement industry to meet.

For further information: www.intercem.com

- First major international cement conference approved by ministry of foreign affairs
- Supported by the key government institutions, industry associations, major cement groups, design institutes and contractors
- Over 200 Chinese delegates attending plus over 250 foreign delegates
Information providers on the Chinese cement industry

Inside Industry knowledge on:
- Chinese cement markets
- Industry structure
- Government institutions
- Laws, rules and regulations
- Restructuring process
- New cement plant and distribution projects
- Privatisation projects
Thank you!