CMP’s great leap forward

From a small portside mineral processor to a $50m. enterprise active in a range of mineral activities, CMP has emerged as a major player in China’s mineral export and domestic markets.

CHINA MINERAL PROCESSING Ltd (CMP) is a wholly foreign owned enterprise (WFOE) operating in China since the early 1990s. The company was set up initially to take advantage of the low costs of processing minerals in China, mainly for export to the world market.

In 1993, CMP built its first processing plant – CMP Tianjin Co. Ltd (CMP Tianjin) – in Tanggu, adjacent to the port area of Xingang, Tianjin, the country’s leading port for mineral exports.

In line with the growing trend and aims at the time to add value to China’s exports of crude mineral ore, CMP pioneered the export of presized minerals from China, focused mainly for the world refractories industry.

Since 1993 CMP has grown from a small processing plant with an initial capital of only $200,000 to a Group worth over $50m. today. This has been achieved entirely by organic growth through reinvestment of profits and cash flow.

**CMP today**

The CMP Group encompasses the following main businesses:

- CMP Tianjin Processing Plant, Tanggu (range of refractory & other minerals)
- CMP Tangshan Madison Building Materials, Tangshan (kaolin)
- CMP Lunamos Foundry Sand Plant (casting sands)
- Shaowu Fujian Minerals Haisheng Plant (fluorspar)
- CSS China Specialist Surfacing (antiskid)
- SDI Shanxi Aluxite (sintered mullite)
- Jiexue Bauxite Calcination Plant, Shanxi (calcined bauxite)

Growing year on year organically throughout the last 15 years, CMP has taken full advantage of the changes in the economy in China and particularly in the Tianjin-Tangshan area.

CMP was fortunate enough to be one of the first WFOE’s to be established in both Tanggu and Tangshan, and as such was able to purchase substantial production sites (approximately 300,000m²) on very competitive terms. Such land options, according to CMP, are no longer available, giving CMP a strategic and cost advantage over its competitors.

These sites, operated by CMP Tianjin and CMP Tangshan, have become all the more valuable since the present Chinese
administration has poured considerable development resources into the Tangshan-Tianjin-Beijing triangle. This mammoth, development programme has seen the establishment of many world class industries including Airbus, Toyota and Motorola, and will ultimately change the industrial landscape of the area with ramifications for the local mineral processing industry (see “Tianjin aims big” IM February ’08, p.76; and “Mineral processing in Asia”, IM March ’08, p.77).

Processing foundation
CMP Tianjin is CMP’s flagship processing and manufacturing plant employing 280 people. The business has traditionally concentrated on hard mineral processing (ie. crushing, grinding, sizing, packing, etc.) such as bauxite, calcined flint clay and kaolin, brown fused alumina, silicon carbide, and magnesite.

The original plant was established in 1993 but moved to its present site in 2004, coming into full operation in 2005. Since inception, CMP has grown rapidly to become a dominant force in the supply of processed minerals and pre-mixes to the world market.

CMP established its first batch pre-mixing line in 1998 and was the first to provide custom mixing production of refractory pre-mixes for export to overseas refractory manufacturers.

In 2001, CMP constructed a state-of-the-art mixing plant and started to provide original equipment manufacturers (OEM) finished products for a number of internationally renowned refractory manufacturers.

CMP considers the investment cost at the CMP

At CMP Tangshan, raw material used is the so called “hard raw kaolin” from central China, which is processed by fine grinding and calcination. Courtesy CMP.

The Tangshan plant (50,000 tpa capacity) produces calcined ultra white calcined kaolins in ultra fine sizes for the paint and paper markets.Courtesy CMP.
Adding value
Since 2005, CMP has embarked on a strategy to enhance value added production while keeping its mineral processing base intact. This has resulted in the construction of a new very flexible batch mixing plant which came on stream in early 2008.

With this, CMP can offer to clients the possibility of manufacturing either pre-mixes or castables on a contract basis on behalf of the customer (and to the client’s specific formulation). Contract manufacturing may prove attractive for many clients:

1. as a way to enter the Chinese market without substantial investment
2. to avoid ever increasing raw material export taxes
3. to provide extra production capacity to existing operations
4. to circumvent current and future restrictions on export volumes of raw materials

Contract mixing and pre-mixes have already taken off to Europe and Japan and presently interest in this concept is such that CMP expects to reach 50,000 tpa in during 2008.

CMP Tianjin’s production in 2007 amounted to 324,800 tonnes of processed minerals (capacity is nominally 300,000 tpa), and production of castables was 21,300 tonnes (capacity 40,000 tpa).

New capacity expansions in 2008 will add 40,000 tpa to both product lines.
as bauxite and BFA, CMP considers the economic and technical merits as looking very promising.

**CMP Tangshan**
The Tangshan plant (50,000 tpa capacity) produces calcined ultra white calcined kaolins in ultra fine sizes for the paint and paper markets both inside China and for export, material is currently being supplied extensively to Europe and Japan.

The site is over 100,000m² employing 200 people with over $12m. invested so far. The raw material used is so called “hard raw kaolin” from central China which is processed by fine grinding and calcination.

**CMP Lunamos**
Lunamos is a mullite based synthetic foundry sand which has the advantages of being recyclable over and over again without degradation. It has extremely good thermal expansion and shock characteristics and has been developed in conjunction with a major Japanese foundry resin supplier to supply principally the Japanese domestic market.

Lunamos is produced and sold in very accurately defined size ranges and is targeted at the foundries in the automotive and aerospace sector where castings with miniscule tolerances and no faults are required.

The product on a micro level is completely spherical which enhances its packing ability and adds to core strength. The Lunamos plant first stage, which is currently operating below its capacity of 8,000 tpa, had an investment of around $5m. and the plant has been designed such that it can scale up to a much higher level of production as the product is accepted in the market place.

**Shaowu Fujian Minerals**
Shaowu produces acid grade fluorspar in south-east China mainly for the domestic market manufacturers of HF (hydrofluoric acid), and has a production capacity of 50,000 tpa. CMP made a significant investment in the plant and mine and bought a substantial stake in the late 1990s.

**CSS China Specialist Surfacing**
CSS is a contracting and management company in the business of specialist road surfacing in the Chinese domestic market. CSS has developed its own range of coloured and antiskid surface coatings.

Such coatings are applied to traffic management schemes in large urban areas including bus lanes, cycle tracks, antiskid areas, and school zones.

The business was started in 2005 and has shown significant organic growth since then. CSS uses many products, particularly aggregates produced by CMP Tianjin.

CMP and CSS see this area of business as having significant growth prospects and as such a large development budget has been assigned for expanding the portfolio of products offered including joint and crack repair products and epoxy coatings.

CSS was the first company in China to apply coloured road surfacing in Shanghai as a green bus lane and this project was featured on Chinese state TV in 2006.