Zinc Metal Production ~ The China Story

Zinc Smelting Capacity

World smelting capacity increased 3.3% during the period 1993 to 2002, capacity primarily due to smelter expansions in China and Korea. These increases are a direct response to increasing zinc consumption in the Asia/Pacific region. World smelting capacity is expected to increase to 10.9Mt in 2006 and increase 9.7% in 2007 and thereafter at about 2% per year (Brook Hunt 2006). Smelting capacity in Asia provided for 58% of global capacity in 2005, and planned expansions are almost entirely in Asia. China is the dominant zinc refiner in the world.

China Dominates New Refined Zinc Production

Current distribution of zinc smelting capacity generally matches geographic distribution of metal consumption. China has expanded its zinc smelter capacity 38% in 3 years from 2.3Mt annually in 2003 to a forecast 3.2Mt in 2006 in zinc smelter capacity, in balance with forecast demand. China now comprises 30% of global smelting capacity. Smelters in China have recently experienced temporary shutdowns (Lanping140,000 tpa in Nov 2006-April 2008) due to power and supply shortages, resulting in shortfalls relative to smelting capacity. Nonetheless, China increased production by 13.7% (209,000 tonnes) in the first 7 months of 2006.

China continues as a net importer of both zinc metal and concentrates, with the latter increasing 47% YOY to 419,000 tonnes in 2006: however, due to Q4 large increase in export of refined metal it became a net exporter of 7 tonnes in 2006 compared to a net importer of 271,000 t in 2005. The shift is in part due to decreased zinc usage growth as Chinese government slows down industrial development; but largely due to destocking to take advantage of high zinc prices and premia in US and Europe, and end of VAT tax rebate in Q4.

Supply Demand Outlook

Brook Hunt forecasts supply balance beginning 2008. This forecast is highly dependent on new mine production, that sees 2,458,000 tonnes of new mine production in 2007 and 2008; actually earlier to achieve full benefit of production impact on 2008 production. The list of new mine and restarts total close to 1.1million tonnes; however, after that there is a paucity of projects to fill the supply gap. After 2008 the pipeline of new projects is minor and timelines for development uncertain.

Given the experience in project delays for other metal mines it is unlikely that all of the mines in the earlier table will start on time, and it is probable mine and/or smelter disruptions will further hinder mine/metal supply and create market pressures and increase premia.
Outlook: Chinese Consumption Re-balancing the Zinc Market

From 1990 through 2000, China accounted for 63% of metal supply growth, resulting in massive exports that undermined the price of zinc.

Zinc metal exports from China declined to 465,900 tonnes in 2003 and 223,900 tonnes in 2004. With these declines, China became a significant net importer of zinc. Concentrate imports were 419,000 tonnes in 2006 compared to 284,000 tonnes in 2005. Increasing smelter capacity will ensure that China remains a net importer of concentrates for several years to come. The tightness of concentrate supply has however benefited from the resumption of many small zinc mines in 2006 that added approximately 250,000 tonnes of new concentrate supply.

With rapid increase in zinc consumption, China became a net importer in 2004 and 2005 was expected to continue in 2006. However, in response to high prices and removal of VAT tax rebate, China dumped inventories in Q4 and ended the year as a net exporter of refined metal; but remained a net importer of zinc.

In 2006, zinc demand in China was forecast to exceed mine production by 540,000 tonnes annually; however, destocking led to an actual deficit of 320,000 tonnes.

Not withstanding the Q4 2006 destocking of zinc, the net importing of zinc by China is expected to continue as mine production increases are not keeping up with annual increase in demand in China of approximately 300,000t per annum.