

Nexant/ChemSystems' Commentary on Asian Energy and Chemicals April 2009

China's Growth At Record Lows in Q1 ...

China has recorded a slow annual economic expansion of 6.1% in the first quarter based on data from the National Bureau of Statistics. This represented a fourth consecutive quarter of slowing growth following tumbling exports as the global recession continued to hit demand from end-consumer markets. Total shipments of goods out of China declined 17.1% year-on-year in March following a 25.7% plunge in the previous month.

MITSUI Predicts Record Full – Year Loss of \$970 M...

Japan's Mitsui Chemicals expects to incur a record net loss of \$970m for the year ending in March due to a decline in operating income and the reversal of deferred tax assets. The chemical producer revised a January 30 prediction of a net loss of Y13bn citing the decline of the global economy.

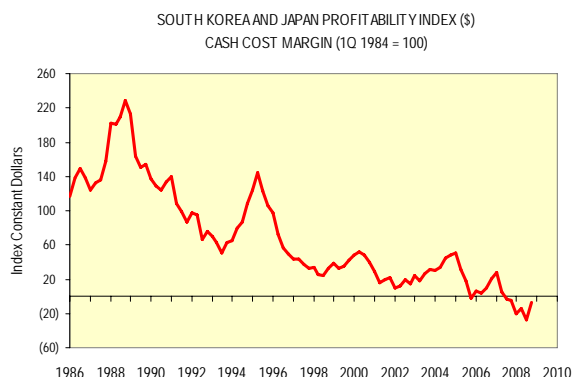
South Korea PETCHEMS Face Restructuring ...

South Korea intends to weed out weak companies in its petrochemical industry through a proposed sector-wide restructuring, making a number of players apprehensive. The Ministry of Knowledge Economy initiated discussions on the plan in January in view of the difficult operating environment since late last year. No concrete plan on the timing of the implementation has yet emerged. "The redevelopment process will mainly involve the three major petrochemical complexes located in Ulsan, Daesan, and Yeosu," said a source from the Korea Petrochemical Industry Association.

Nexant/ChemSystems' Analysis of the Asian Industry for the 4th Quarter of 2008

Asian profitability remained weak this quarter as demand fell, followed by the rapid downfall of prices. Weak downstream demand has forced the petrochemical industry producers to cut operating rates or turnaround their plants. The Asian Petrochemical Profitability Index (Japanese and Korean margins tracked by Nexant) continued to decline, showing that

South Korean producers were unable to improve profitability for some products.



Market Segment Recap for 4th Quarter 2008

- **Crude Oil**

Crude oil prices fell 70% from almost \$150 per barrel at the beginning of July to about \$40 per barrel at the start of December. The deteriorating global economy has weakened the demand for crude oil and OECD demand is forecast to show an average decline of 1.3 million barrel per day in 1Q2009. **Naphtha** traded at a very unusual discount to crude, averaging \$110 per ton.

- **Olefins and Intermediates**

Asian olefins demand remained subdued in 4Q2008, with polyolefin plants closing due to lack of downstream demand. With conserving consumers, producers had little or no choice but to run crackers at reduced operating rates. South-East Asia **propylene** prices decreased to \$597 dollars per ton as weak demand decreased feedstock costs. The weakness in the derivatives markets influenced the rapid decrease in the South-East Asia **ethylene** prices lower production rates. Japanese margins fell to record low levels with naphtha cracker margins dropping significantly below breakeven.

SEA **VCM** market collapsed in 4Q2008, producers were forced to cut operating rates due to the weakening PVC market. SEA VCM decreased drastically averaging \$499 per ton, a 45 percent decrease from 3Q2008.

CFR SEA **benzene** prices decreased to an average of \$435 per ton, a 62 percent decrease from 3Q2008. Japanese margins slumped as a result of toluene price negotiations which lagged behind the markets. South Korean producers saw improvement in margins for TDP and THDA due to the favoring of benzene over toluene.

- **Polymers**

Asian **LDPE** demand remained weak as consumers were reluctant to make significant purchases in an unstable economy with falling crude and naphtha prices. LDPE prices, declined drastically averaging \$500 per ton, hit by poor demand, ample supply, and declining feedstock prices. South-Korean margins gained strength and increased by \$330 per ton as naphtha prices declined ahead of LDPE price falls. Meanwhile, Japan margins failed to break even. **LLDPE** demand was very poor, as a result of the dampening economy and financial hardships around the world. LLDPE prices across the region dropped drastically by \$740 per ton due to poor demand, ample supply, and falling feedstock prices. **HDPE** demand was weak as prices fell by over \$760 per ton on average. Despite this record price drop margins have improved for the limited volumes of material sold.

Polypropylene demand has been very poor as a consequence of consumers waiting for prices to lower before re-entering the market. Additionally, supply has been plentiful causing prices to fall by over \$840 per ton in SEA. SEA propylene price fell on average approximately \$930 per ton. Amidst a struggling market, PP margins have improved. South Korean leader variable and cash margins improved by over \$190 per ton taking cash margins levels to positive figures.

The economic crisis and the plunge of crude oil prices have added pressure to the ongoing sluggish feeling of the Asian **PVC** market. The SEA PVC market continued to slow down causing spot prices to slip. Japanese domestic prices rose, supported by increased costs for integrated PVC production. South Korean domestic prices fell, although margins improved for both integrated and non-integrated producers as VCM costs reduced.

Poor consumer activity in the U.S and Western Europe has reduced the demand for **styrene** in Asia. The slow automotive industry brought more gloom to styrene markets from downstream consumers, particularly SBR for tire manufacture. Producers were forced to respond by cutting operating rates. **Polystyrene** demand collapsed as end users held back, anticipating additional price falls. Producers responded by cutting operating rates to balance the inventory. Japanese contract prices increased to \$1678 per ton while cash cost decreased by \$300 per ton. Variable cash cost margins for non-integrated Japanese producers recovered to above breakeven. South Korean Leader non-integrated producers have also experienced increased cash cost margins but remain below breakeven.

- **Other Chemicals**

MEG profitability slumped in 4Q2008, forcing producers to cut back production. Chinese MEG demand failed to recover after the Olympic Games. The market was oversupplied as a result of downstream cutbacks. **Para-xylene** (PX) prices declined, settling at an average of \$600 per ton. Downstream markets remained oversupplied which forced production cutbacks. **Acrylonitrile** spots prices declined as demand slumped and feedstock costs plummeted in 4Q2008.

Note: (1) Ton herein is a metric ton (tonne). (2) More detail on the various conclusions above can be obtained from Nexant/ChemSystems' multi-client reports and single-client services. (Please see contact information below.) (3) This newsletter was last updated in April 2009.

- **1st Quarter 2009 Asian Summary Review**

Crude oil prices increased slightly to \$50 per barrel towards the end of the quarter. Significant decline in crude oil demand was seen due to the ongoing global economic crisis and efforts from OPEC to cutback supply to maintain a balanced market. The Asian petrochemical market was calm after a hard hit from 4Q2008. The Asian olefins market experienced improved demands driven by consumption in China. Falling but volatile products prices for olefins and polyolefins resulted in the collapsing of cracker margins. VCM demand in SEA improved due to high volumes sought by Chinese PVC producers.