CHEMSYSTEMS

PPE PROGRAM

Report Abstract

Quarterly Business Analysis

Quarter 4, 2010

Petrochemical Cost Price and Margin for Olefins, Polyolefins, Vinyls, Aromatics, Styrenics, Polyester Intermediates and Propylene Derivatives. Analysis for the United States, Western Europe, Middle East and Asia

December 2010

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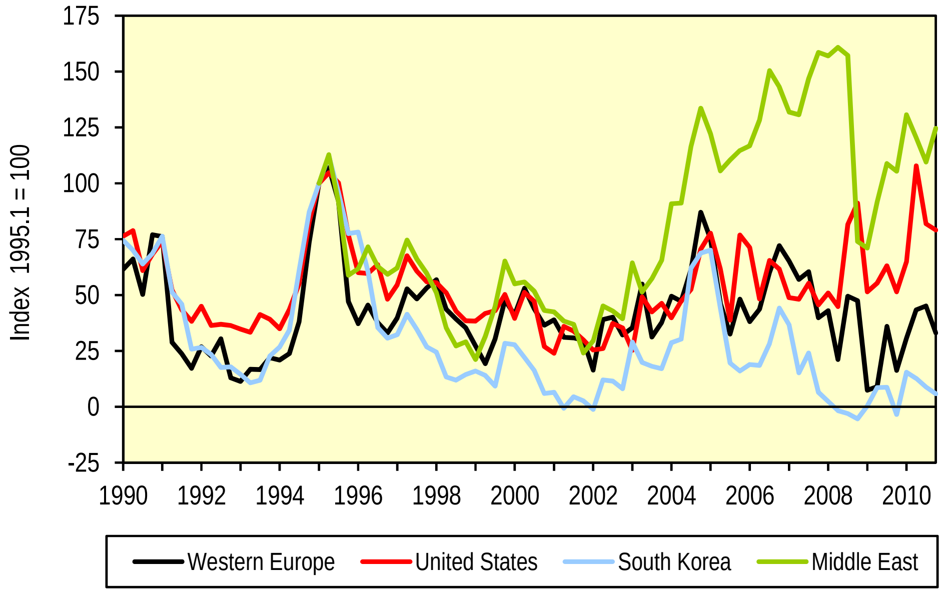
Nexant's Quarterly Business Analysis reports assess the current production economics for commodity petrochemicals, putting them into context with developments in the underlying market dynamics. A review of production economics in the Middle East has recently been added to the long running analysis of economics in Western Europe, United States and Asia. The reports are published as part of ChemSystems / Petroleum and Petrochemical Economics Programme (PPE). Subscriptions to the programme are available from www.chemsystems.com. For further details or to request a sample copy, please email chemsystems@nexant.com.

ESCALATING CRUDE OIL PRICES SQUEEZE PETROCHEMICAL MARGINS AT END OF 2010

The closing quarter of 2010 was a disappointing end to the year for many petrochemical producers. Brent crude oil prices escalated to their highest for more than two years, threatening to climb above $100 per barrel. Renewed pressure on feedstock costs depressed profitability of petrochemicals in many markets, eroding strong gains in margins achieved in the first half of the year. Although margins of many producers end 2010 on a downwards trend, overall profitability remains considerably above that achieved a year earlier in the deep trough of 2009.

Most petrochemical producers experienced renewed cost pressure in quarter four. Brent crude oil prices climbed ten percent from the third quarter to average US$85 per barrel through October and November. Naphtha prices rallied to a 26 month high as maintenance at refineries in the Middle East, and a switch to diesel production in China compounded short supplies. Naphtha prices strengthened considerably relative to crude oil. Meanwhile, a prolonged spell of harsh winter weather in many regions contributed to a sharp rise in LPG prices, with propane and butane opening a considerable price premium over naphtha. Ethane prices in the United States increased almost thirty percent, however production costs remained very competitive compared to naphtha based producers in Europe and Asia.

Regional Petrochemical Industry Profitability
(Cash Margin Index Q1 1995=100)



European petrochemical markets generally tightened towards the end of the year, with firmer than expected demand and shortages in the supply side. Tighter markets failed to prevent firming feedstock costs from depressing average margins of the West European petrochemical industry almost 25 percent from its third quarter peak, returning margins below the average of the last decade. Demand remained firm into December, with little sign of seasonal stock reductions that often stall demand at the end of the year. Rather, many consumers were seeking to maximise off take and build stocks in anticipation of higher prices in the New Year. Meanwhile, weakness of the dollar against the Euro and the high cost of naphtha impaired competitiveness of European producers in export markets. Supplies of most petrochemicals shortened as production rates at petrochemical plants across Europe were reduced as supplies of feedstock from refineries were restricted. Average operating rates across the industry dropped back to 81 percent.

Tightening petrochemicals markets in the United States helped support margins against firming pressure from feedstock costs. Production growth in the manufacturing sector was noted in October after a slowdown in the third quarter. October and November auto sales showed increases of 13 and 14 percent, respectively, over the same periods a year ago. Consumption in the dominant polyethylene sector firmed particularly. Meanwhile, numerous outages at crackers restricted availability of feedstock, limiting production rates downstream. Average margins across the industry eased just five percent. However the advantage of access to low value ethane feedstock maintained margins well above their long term average.

Asian demand for petrochemicals was relatively strong at the start of quarter four, with particularly strong purchasing activity from Chinese buyers in October as they returned from National holidays. However demand slowed towards the end of the year as the peak manufacturing season drew to a close and some feared a slowdown in exports of finished goods. Polyester markets were particularly buoyant as tight cotton supplies increased demand for synthetic fibres.

Average profitability of petrochemical production in the Middle East rose in quarter four, with prices in export markets pushed up by renewed pressure from rising crude oil prices. Average netbacks on exports to Asia increased as demand from China firmed and availability tightened for several derivatives. Meanwhile netbacks on exports to Western Europe increased modestly as production was hampered by industrial action and short supplies squeezed European markets tight. European ethylene contract prices commanded a premium of $300 per ton over South East Asian spot prices. Tight markets in Europe drew material westwards, however ongoing production issues in the Middle East, and logistical constraints restricted the volume of imports. Nexant’s Middle East petrochemicals cash margin Index rose by 14 percent to settle at 125 (Q1 1995=100), preserving the index above its average for the last decade.

European olefin markets were squeezed tight through quarter four as supplies shortened against strong demand. Propylene supplies in Western Europe shortened particularly as strike action severely restricted production at refineries and supplies from crackers across Europe were ultimately disrupted on reduced availability of feedstocks. Firming feedstock costs were compounded by a reduction in co-product revenue and average margins of naphtha crackers slumped almost €160 per ton. Ethylene markets in the United States strengthened with a shortening supply side as there were many unplanned outages as well as planned maintenance. Six major crackers were halted simultaneously in November. Spot prices surged in November, lifting contract prices over ten cents per pound. Ethane continued to offer a considerable cost advantage over heavier feedstocks.

Profitability of the European polymer sector remained broadly steady in the closing quarter of 2010, with polymer prices closely tracking movements in monomer price. As most of the margin in the value chain is typically taken upstream, integrated producers suffered large losses in margins, due to a sharp downturn in cracker profitability. Polystyrene producers were alone in achieving peak margins, as a lengthy shutdown of Europe's largest unit tightened previously oversupplied markets. Quarter four started off with strong demand for polyolefins across Asia with busy activity at converters. As the quarter progressed, fears of slowdown in key export markets depressed demand. Polyolefin supply was limited due to several production outages across Asia and some LDPE producers switched production to EVA which yielded higher margins.

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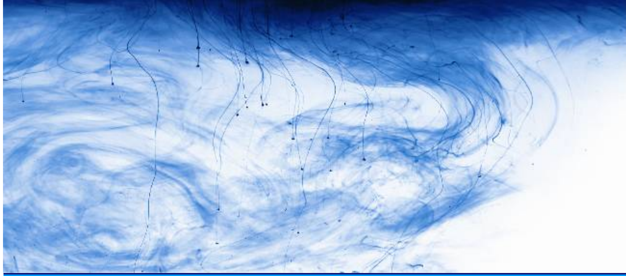

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