UAE's total polyolefin capacity to rise to 4.5 mln tpa by end-2013
(5-1-2010)
Abu Dhabi Polymers Company (Borouge) is pressing ahead with its plans of a third phase of development that should boost the emirate’s total polyolefin production capacity to 4.5 mln tpa by end-2013, making it one of the world’s top 10 polyolefins producers. By then, the report by BMI anticipates that the Asian market will have recovered enough to absorb the massive increase in capacity. The UAE has a strong and growing petrochemicals sector, which utilises methane, ethane and gas liquid feedstock in its petrochemicals units. In 2009, the UAE had ethylene capacity of 600,000 tpa feeding downstream units that included 600,000 tpa linear low-density polyethylene (LLDPE). By 2015, ethylene capacity should be boosted to 2 mln tpa ethylene, 800,000 tpa propylene, 2.57 mln tpa PE and 1.7 mln tpa PP.
UAE benefits from low-cost, accessible oil and gas reserves, although its feedstock availability is less than some of its neighbours in the region. Feedstock is available at reduced rates under a government measure designed to promote the non-oil sector, providing producers with a cost advantage for export markets. On the downside, this has caused problems with trade partners citing subsidised feedstock supplies as giving an unfair advantage. Abu Dhabi is keen to develop a petrochemicals sector and wants to encourage investment in special economic zones.
The focus of petrochemicals investment is the Borouge complex, which is being developed in three phases. Borouge 1, a US$1.2 bln complex with a 600,000 tpa cracker and a 450,000 tpa PE unit, was brought onstream in December 2001 at Ruwais, Abu Dhabi. It is a 60:40 JV between Austria’s Borealis and Adnoc. The multi-billion dollar Borouge 2 project is due for completion in 2010. It will raise polyolefin production capacity to 2 mln tpa, including one 540,000 tpa Borstar technology enhanced PE unit and two 400,000 tpa Borstar PP units. This will be followed in 2013 by a third stage, Borouge 3, which will have capacities of 1.43 mln tpa PE and 900,000 tpa PP. Abu Dhabi is also preparing to develop Chemaweyaat, which it hopes will be the world’s largest petrochemical complex, located in Khalifa Industrial Zone at Taweelah. It will include an olefins plant, an aromatics complex, and a range of downstream polymer and chemical units and is due to start production in 2015. The naphtha cracker will have capacity of 1.5 mln tpa, but the exact details of the capacities of downstream units are unclear.
At the same time as Borouge’s cracker is due to come online in 2010, growth in Asian markets is expected to be far weaker than before the financial crisis of September 2008, despite an expected recovery due to set in by 2010. Trends in UAE petrochemical production will remain closely tied to its key export markets, notably Asia’s economic powerhouse, China. There are concerns about the sustainability of the recovery in the Chinese market, which is the key market for UAE petrochemicals exports, at a time when Chinese capacities are rising and imports diminish. It is believed China will remain an exporter of plastic products beyond the global economic crisis, and capacity additions will not be large enough to cope with domestic demand. We forecast that the country will be dependent on imports of PE and PP over the next five years, with the UAE becoming a key supplier. China is also set to remain a net ethylene importer over the next five years, despite an additional 11.95 mln tpa of new production capacity coming online, but imports will decline throughout the rest of the forecast period as the rate of capacity expansion outstrips the rate of demand, with the deficit falling to 8.89 mln tons by 2013. By then, China’s cracker capacity should have reached 22.11 mln tpa.
Bright future for composite materials in European automotive industry market

(12-1-2010)

Composites are becoming the material of choice for replacing traditional materials such as steel, aluminum and engineering plastics in European automotive industry. Compared to traditional materials, composites have higher strength-to-weight ratios, chemical and heat impact resistance, offer greater design flexibility. The future of the composite materials in European automotive industry market compared to competing materials looks good. Also, Europe has come up as leading region using advanced high performance carbon-epoxy composites in racing and luxury cars, though at a nascent stage. However, demand for composites that dropped significantly during 2008, is expected to drop further in 2009 in line with overall automotive market. According to researchandmarkets.com, composites materials market is expected to reach US$1824.9 mln by 2014. Composites consumption in automotive applications such as air intake manifolds, front end carriers, interior headliners, pickup box, switches are expected to grow above 4% CAGR during the next 5 years. Producers, focusing on innovations and cost leadership will win most of the volume growth. Automotive OEMs are looking for new ways to reduce vehicle weight, further increasing fuel economy and thus increasing environmental performance. By developing new materials to meet the demanding application requirements with a focus on weight and cost reduction, composites materials suppliers will gain more market share during the next six years.

Despite economic slowdown significant opportunities exist for composites in the European automotive market and the market is expected to reach US$1824.9 mln by 2014. The European automotive industry output will expand significantly from 2009 to 2014. Following the rapid growth in auto production, composite materials demand in European market is forecast to increase by 6.87% pa and reach US$1824.9 by 2014. As per the study composites are being increasingly used as they can reduce weight up to 35%, which improves fuel economy. Composites also reduce tooling and assembly costs as composites have lower tooling and equipment costs; they are competitive compared to steel at lower production volumes in certain automotive applications. The use of composite materials, which initially was driven from exterior applications, has now spread to all areas of the vehicle's interior and under-the-hood applications. Under-the-hood and interior applications represent good growth potential. As the overall penetration was only 3% in automotive materials in 2008 there is much more potential for composites. Polypropylene based composites will drive the future growth of the European Automotive composites market. The critical success factor for composites material producers will increasingly be not only developing new products at low cost; in addition, the author believes the most successful companies will be those that can develop application-specific, customer-focused solutions and have the ability to help their customers achieve long-term business objectives, such as increasing performance or lowering costs.
New armor system using aramid (Kevlar®) fibers
(29-1-2010)

Naxcer Composites Group, specializing in new manufacturing technologies for composite materials has announced development of its new armor system. A novel manufacturing process has been developed using aramid (Kevlar®) fibers. This process significantly reduces the cost of the armor system and ballistic products while achieving the same or better performance than Ultra high molecular weight polyethylene (UHMWPE), commercially known as Dyneema® or Spectra®.

This armor system is the result of significant product development efforts by Naxcer Composites Group and its partners. “Our goal was to define an armor system that allows Naxcer to present a solution for a large array of threat profiles for a large array of industry applications,” said Peter Madsen, COO of Naxcer Composites Group. “Naxcer Armor Systems have been developed for a large array of ballistic solutions. We have technologies to mitigate threats from basic hand guns to very large caliber military threats.” “The expected applications for this armor system design were very focused on lightweight designs for use in aerospace applications, like Helicopter and Fixed Wing applications, Marine Environments and Land Applications for Personal Vehicles and Military Transport,” commented Andrew Chumney CEO of Naxcer Composites Group.

Naxcer Composites Group has conducted significant testing on E-Glass and S-Glass materials for hybridized ballistic solutions resulting in lower than industry area weights for comparable ballistic performance. Additionally, the company has tested many of the known ceramic based solutions in combination with its aramid (Kevlar®) based solutions achieving a high performance ballistic solution. Finally, the company has conducted research on steel and alumina strike face armor designs with aramid spall liners to be used in vehicle armor applications.
IRPC’s future plans on hold
(27-1-2010)

As per Thai petrochemical giant IRPC’s plans, construction on 16 of 19 projects was to commence in 2010 at an investment outlay of US$1.2 bln spread over 5 years. However, the construction of these projects seems likely to be delayed, as petrochem players await a solution to the Map Ta Phut mess. Construction of future projects depends on the establishment of an independent agency to comment on projects identified as having a severe effect on their surrounding communities. The process will have to comply with the Article 67 (2) of the Constitution. If they are found to have a severe impact on the environment, a health-impact assessment (HIA) will have to be conducted to comply with the Constitution. Interestingly, Thailand does not have guidelines for the HIA process, making the future of most projects in Map Ta Phut bleak.

The Central Administrative Court has recently refused approval to 30 suspended projects that sought a relaxation of the court’s ban on construction on grounds that this will have no impact on the environment. Since 16 of IRPC’s 19 planned projects have been passed an environmental-impact assessment (EIA) they await the establishment of the independent agency to go ahead with construction. The 16 projects include a project to increase propylene production capacity from 200,000 tpa to 300,000 tpa, expansion of styrene capacity from 200,000 tpa to 260,000 tpa.
10% sales growth anticipated by SCG this year
(25-1-2010)

As raw material prices rise and the economy shows signs of improvement, Thailand’s largest industrial conglomerate - Siam Cement Group, expects its sales to grow by 10% in 2010. Prices of HDPE has increase by over 55% since Q1-09, paper prices have also increased and local cement consumption is expected to grow by 5-10% this year as the economy has shown clear signs of recovery in the past 10 months.

18 of SCG’s industrial projects in Map Ta Phut are still suspended by the Administrative Court, since last September when the court suspended operations at 76 industrial projects in the area for failing to satisfy constitutional environment and health requirements. SCG is seeking court permission to resume operations on five projects, and expects the court to revoke suspension of these projects.
Mexican Govt. to dedicate 5 bln Pesos for petrochemicals in 2010
(22-1-2010)

The Mexican government plans to dedicate 5 bln pesos (US$392 mln) for petrochemicals in 2010. The amount will be utilised to maintain and modernize the petrochemical plants of state-owned oil company Petroleos Mexicanos (Pemex). The country’s President has invited the national petrochemical sector to suggest the legal changes required to boost the national petrochemical sector that will be submitted as a bill to Congress.
Petrobras restructures Petrochemical Segment

27 Jan 2010 - Petróleo Brasileiro S.A – Petrobras and its wholly-owned subsidiary Petrobras Química S.A. – Petroquisa (jointly, Petrobras), together with Odebrecht S.A and Braskem S.A announced the Investment Agreement executed by the companies which set the conditions pursuant to which Petrobras will consolidate its investment in the petrochemical segment.

The Investment Agreement resulted from the opportunity that was identified to implement a new structure for Petrobras’ and Odebrecht’s participation in the petrochemical sector which will result from the following stages: (i) the incorporation of a holding company, BRK Investimentos Petroquímicos S.A. (BRK), which will hold 100% of Braskem common stock which are currently held by Petrobras and Odebrecht; (ii) capital contribution in BRK, to be paid in cash by Petrobras and Odebrecht in the amount of R$ 2.5 billion and R$ 1.0 billion, respectively; (iii) capital increase at Braskem through a private subscription by its shareholders in the amount between R$ 4.5 billion and R$ 5.0 billion, considering that BRK will subscribe up to R$ 3.5 billion; (iv) the acquisition by Braskem of the stock in Quattor held by Unipar; (v) the acquisition by Braskem of 100% of the stock in Unipar Comercial e Distribuidora S.A and 33% of the stock in Polibuteno S.A. Indústrias Químicas; (vi) the merger by Braskem of Petrobras stake at Quattor; and (vii) the stock tender offer for the indirect sale of the controlling interest in Quattor Petroquímica S.A.

The asset and cash contribution will lead to an increase in Petrobras’ participation in Braskem, which will become the biggest petrochemical company in the Americas in terms of thermoplastic resin production capacity, with 26 petrochemical plants in its assets. As such, Petrobras will concentrate its petrochemical investments, including its stakes in Quattor, on a company that will have greater competitive advantages to perform on the global economy.

According to the Shareholder’s Agreement, Petrobras and Odebrecht will share Braskem’s decisions, with Odebrecht holding 50.1% of Braskem’s voting capital. In the total capital, the difference between Petrobras and Odebrecht direct and indirect holdings will be 2.33%. The Shareholders Agreement will reflect the commitment of Braskem’s controller shareholders to the corporate governance best practices and the creation of value to all shareholders basis.

Petrobras will nominate four members to the Braskem’s Board of Directors, which will also have six members nominated by Odebrecht and one member representing the minority shareholders.

Braskem’s Fiscal Council will have five members, with Petrobras and Odebrecht each nominating two members. The Executive Board will consist of 7 statutory members. Odebrecht will nominate the Chief Executive Officer and the Chief Financial Officer, while Petrobras will nominate the Chief Investments and Portfolio Officer. The other Executive Officers will be selected by the Chief Executive Officer and submitted to the Board of Directors for approval.

Petrobras, Odebrecht and Braskem also entered into a partnership agreement ("Partnership Agreement") to regulate their commercial and corporate relationship with the Petrochemical Complex of the State of Rio de Janeiro ("COMPETRJ") and with the Suape Petrochemical Complex ("Suape Complex"). Under the Partnership Agreement, Braskem will take on the companies operating COMPETRJ’s petrochemical first and second generation, as well as, gradually acquire equity interests in companies operating in the Suape Complex, in accordance with the terms and conditions agreed in the Association Agreement.

The transaction is in line with Petrobras’ 2009-2013 Business Plan, which foresees investments in the order of $5.6 billion to the petrochemical segment aiming to operate in the industry in an integrated manner and adding value to the crude oil produced. However, it considers a new model of investments in this segment but in line with the Company’s objectives to approve long-term sustainable investments that offer high returns to its shareholders.
Wacker Posts Sales of EUR 3.7 Billion for 2009

28 Jan 2010 - As expected, Wacker Chemie AG generated lower sales and earnings in 2009 compared to 2008, according to preliminary figures. The upturn in demand experienced since April 2009 continued through the fourth quarter, but did not offset the drop in sales caused by the global economic crisis. The Munich-based company posted consolidated sales of €3.7 billion in 2009, almost 14 percent below the previous year (2008: €4.3bn).

Preliminary earnings before interest, taxes, depreciation and amortization (EBITDA) reached about €600 million, down €455 million or 43 percent from the previous year (2008: €1.055bn). Earnings were chiefly impacted by the extremely difficult business situation in the semiconductor division, where EBITDA fell about €520 million against 2008. Additionally, non-recurring charges reduced 2009’s EBITDA by a total of some €160 million. These charges were mainly due to exiting the WACKER SCHOTT Solar joint venture, to extraordinary pension-provision additions, to provisions for phased early-retirement schemes and working-life accounts, and to provisions for personnel measures at WACKER SILICONES and Sitronics.

On a preliminary basis, earnings before interest and taxes (EBIT) are estimated at around €20 million for 2009 (2008: €647.9m). In addition to the non-recurring charges already mentioned, EBIT includes impairments on fixed assets of almost €180 million at Sitronics and WACKER SILICONES. Totaling about €340 million, the special items will result in negative net income of some €80 million for the full year (2008: €438.3m).

According to WACKER’s preliminary figures, capital expenditures amounted to about €740 million in 2009 (2008: €916.3m). Spending focused on the Group’s strategic growth projects, especially the ongoing production-capacity expansion for hyperpure polysilicon at Burghausen and Nünchritz. WACKER funded these investments almost entirely through cash flow from operating activities despite the economic crisis. WACKER’s net financial debt totaled about €80 million at year-end 2009.

"Although the global economic crisis has left its mark on our business figures, I think WACKER is on a sound course," says CEO Rudolf Staudigel. "Our far-sighted accounting policy shown during the last year is an important building block to equip ourselves for the future. Despite posting a loss, we were able to finance our considerable investments in growth projects almost entirely from cash flow thanks to rigorous cash management. Our 2009 investment ratio reached 20 percent. For me, that’s clear proof of WACKER’s financial strength. If the present economic recovery continues, this will give WACKER a good chance of significantly increasing both consolidated sales and net income again in fiscal 2010."
Heat-resistant adhesive for building work

06 Jan 2010 - The "Parasols" in Seville feature components that are designed to be glued instead of bolted together. To prevent the adhesive from melting, it needs to withstand temperatures of up to 60 degrees. Researchers have optimized the adhesive's resistance to high temperatures.

The Metropol Parasols will be the new centerpiece of Plaza de la Encarnación in Seville. As well as being an eye-catching work of art, the mushroom-like structures are also playing host to some pioneering construction techniques, with even the load-bearing structural components consisting of finely-wrought laminated veneer lumber beams. With mechanical joining methods ruled out for structural reasons, the beams are instead joined together by means of glued-in threaded rods. However, the high temperatures and relentless sunshine of a typical Seville summer could pose a significant challenge to the adhesive, in the worst-case it loses its ability to hold the components together.

The type of adhesive used in Seville is designed to withstand temperatures of up to 60 degrees, so researchers from the Fraunhofer Institute for Wood Research WKI have been working on behalf of the building inspection authorities to determine how close the thermal load is likely to come to this limit. "We ascertained the temperatures that might occur at the site and used simulations to determine the temperature this would trigger within the construction materials," explains Dirk Kruse, head of department at WKI. "Our results revealed that the temperatures in the adhesive could potentially reach almost 60 degrees, which is obviously too close to the limit for comfort." Subsequent tests carried out on three specimen components in a climate chamber confirmed their findings, giving rise to a stark choice: either the adhesive would have to be improved, or the building inspection authorities would be forced to bring building work to a halt. Fortunately, there is a method of improving the adhesive's resistance to high temperatures, namely by "tempering" the structural components: "Once the components have been glued in place, they are heated up again," Kruse continues. "This causes post-curing reactions to occur." And the result? The adhesive is less likely to take on a liquid form and maintains its stability up to a temperature of 70 degrees. This gives a safety margin over and above the thermal stress that is actually expected to occur, which means that the building work can now be continued as planned and Seville will soon be featuring a brand new landmark.

"These are the kinds of solutions that will help to firmly anchor adhesive technology within the building industry," Kruse states. While adhesive bonding is widely used in the aircraft industry, the use of adhesion for structural applications in the building industry is still in its infancy. Yet the method opens up a whole new wealth of possibilities for architects.
LANXESS builds new plant in Germany

EUR 30 million invested in new chemical production facility in Saxony-Anhalt

25 Jan 2010 - LANXESS AG is building a new chemical plant at its site in Bitterfeld, Germany. This marks the specialty chemicals group’s move into a new segment of the water treatment business. The company is investing a total of around EUR 30 million in this pioneering project. LANXESS plans to develop and produce membrane filtration technology in Bitterfeld. The State of Saxony-Anhalt is sponsoring this project by up to EUR 6 million. In the long term, this project will create 200 new jobs at the Bitterfeld site.

The new plant is scheduled to be taken into operation for a pilot and development phase towards the end of this year. As things stand today, the first products should be launched on the market in 2011. An area totaling some 4,000 square meters has been set aside for the creation of high-tech laboratories, logistics areas, offices and a new, state-of-the-art production facility.

The membrane technology is used to filter out unwanted substances from water. The membrane’s chemical composition and structure make it possible to filter out substances such as nitrates, pesticides, herbicides, viruses, bacteria and the smallest particles. As the water passes through the filter, this filter extracts suspended particles and other unwanted substances. In other words, membranes form a selective barrier. By moving into this new field of technology, the Group is opening up further areas of application in water treatment. The volume of the global membrane market alone is currently estimated at around EUR 1 billion, and this figure is set to rise further.

“Usable water supplies are dwindling worldwide, thus becoming an increasingly valuable resource. Thanks to LANXESS’ pioneering investment in Bitterfeld, we are now able to offer additional products for water treatment and thus further strengthen our strong market position,” explained Axel C. Heitmann, Chairman of the Board of Management of LANXESS AG, at a groundbreaking ceremony held on Thursday in Bitterfeld. “Our high-tech products, such as the powerful Lewatit ion exchange resins, are already helping to ease global water problems today.”

The LANXESS site in Bitterfeld is already equipped with state-of-the-art facilities and a first-rate infrastructure. “It was these excellent conditions and the planned partnerships with universities and colleges in the local area that gave Bitterfeld the edge over other sites, such as the ones in Spain and Singapore,” added Heitmann. The construction of the new plant goes hand in hand with an extensive research and development program that LANXESS is setting up at the site and in the local region.

The new project in Bitterfeld is designed to further expand LANXESS strategic water treatment business. The global market for water treatment is estimated at between EUR 315 and 330 billion. The private Swiss bank Sarasin forecasts annual growth of 10 percent in this field.
DSM inaugurates new resins plant in Germany
25 Jan 2010 - Royal DSM N.V. announced that a new plant for the production of wet polyesters and other specialty resins in Meppen (Germany) has been opened. Total investment costs amounted to EUR 15 million.

The new plant was built at the existing site of DSM NeoResins+ in Meppen. The plant allows for further expansions in the future. With the new plant DSM NeoResins+ reinforces its strong position in the fast growing and important markets such as metal packaging (can), pre-painted metal (coil), specialty decorative markets, specialty adhesives, graphic arts and industrial wood.

Nico Gerardu, member of DSM’s Managing Board and responsible for the Performance Materials cluster, gave the following comment: “DSM NeoResins+ is the global leader in specialty resins and this new plant enables us to expand our offering of polyester-based resins. This expansion underlines our commitment to grow this business further, by focusing on innovative products which support sustainability while enhancing performance.”
Breakable ampoules made from plastic instead of glass

ISPA - Jan 19, 2010

The French plastic converter Seriplast has designed and patented an innovative plastic breakable ampoule technology to replace conventional glass-based ampoules that are opened by snapping away the neck. The innovative Seriplast ampoule is made from a special polypropylene (PP) grade and features a round molded-in notch in the neck between the tip and the shoulders. Then Seriplast uses a selectively applied beta irradiation process to embrittle the PP material. As a result the ampoule neck can be broken and eliminates the risk of injuries with sharp glass splinters. The new PP breakable ampoules are available in size from 1.5 to 11 ml. Typical applications include medical, cosmetic and personal care products.