

Chemical Information Resources for East Europe and CIS

# CIREC

## MONTHLY NEWS

Chemical Industry News for Central Europe, South East Europe and Eurasia

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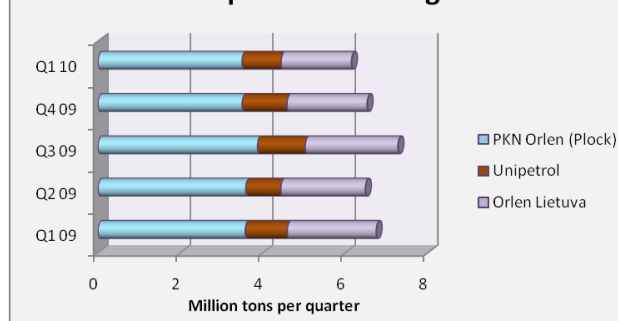
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## CENTRAL & SOUTH EAST EUROPE

### Petrochemicals

**Orlen Group Crude Refining Volumes**



#### PKN Orlen-reduced refining levels

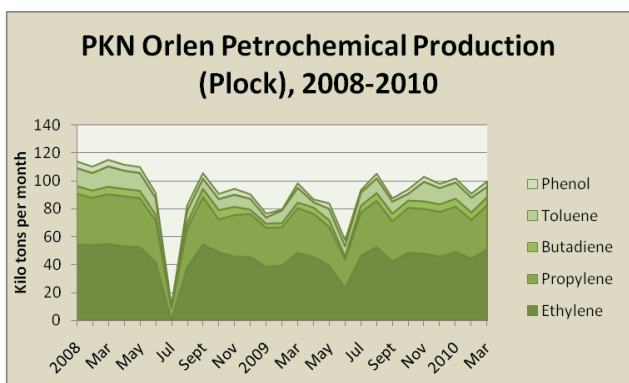
PKN Orlen has managed to cope with lower refining margins in the first quarter largely by running its refining facilities at reduced utilisation. This has been especially evident in Lithuania, where the high costs of fuel logistics and lower demand for motor fuels have weighed on profit levels. A two-week outage was undertaken in the first quarter at the Mazeikiu refinery where oil throughput ran at 68% of capacity, which was down from 78% in the previous three months. Unipetrol saw oil throughput at 69% of capacity at its Czech refineries, down from 79% in the previous quarter.

**Unipetrol's Petrochemical Sales (unit-kilo tons)**

Product	Q1 10	Q1 09
Ethylene	39	23
Propylene	8	8
Benzene	53	45
Urea	49	48
Ammonia	43	51
Oxo Alcohols	-	11
HDPE	66	70
PP	65	53

In contrast to PKN Orlen, Unipetrol's margins in refining almost tripled in the first quarter, whilst petrochemical sales' volumes were not too dissimilar by volume against last year. Oxo alcohol production at Litvinov stopped in 2009, although this did not affect overall sales significantly. Crude oil throughput for the Unipetrol group fell 13% on a quarterly basis, and was down 7% against the same quarter in 2009. The main factors that influenced the petrochemical division in the first quarter of 2010 were slightly better demand conditions, coupled with improved margins for both polyolefins and olefins by 2% and 16% respectively. Strengthening margins are expected to allow Unipetrol to post an operating profit in the first three months of 2010 after mostly reporting losses over the past eighteen months.

Petrochemical production at Plock is yet to achieve the production levels seen in the first half of 2008 prior to the economic downturn. This is particularly the case for ethylene where monthly output has been on average about 10% down against normal levels, although production in March



#### Surgutneftegaz-MOL

Following the purchase of a 21% stake in MOL last year and fears of a hostile takeover, Surgutneftegaz has been recognised by the Hungarian market regulator PSzÁF as a legitimate buyer. MOL earlier announced that it regards Surgutneftegaz's purchase of the 21% stake from OMV as an unfriendly investor. MOL has thus far stated that there is no strategic or business partnership with Surgutneftegaz, and can thus play no part in determining policies. Surgutneftegaz is the first Russian company to be overtly active in Hungary for several years, but there is local opposition to the possibility that it may be attempting to establish an investment base within the EU. As MOL is viewed as a key company in the Hungarian economy, the government sees it as necessary to defend its shareholding structure against outside interests.

#### Dina-Petrochemicals agrees loans for expansion and construction

Dina-Petrochemical has agreed investment loans worth €34 million with the European Investment Bank and the Croatian Bank for Reconstruction and Development (HBOR). The funds will be used for the upgrading

of the VCM facilities at Omisalj on the island of Krk and the construction of a new PVC plant. The loans will help towards completing the investment cycle worth around €100 million, which will revive the vinyl chain in Croatia. The establishment of VCM and PVC facilities at the same location will provide Dina with a strong regional position in these product areas. Most of the output is intended for export. Production of VCM at Omisalj is expected to start in the next few weeks, whilst the project to build a PVC plant is in progress.

## Chemicals & plastics

### PKN Orlen-ZA Pulawy

PKN Orlen has given ZA Pulawy (ZAP) the exclusive rights to negotiate the purchase of Anwil. PKN Orlen hopes to sell an 85% stake in Anwil mainly to reduce its debt and has given ZAP until the end of June to complete negotiations to buy Anwil. During the exclusivity period, it will be allowed to work out a negotiated agreement between the parties. Arrangements will include the final price and matters of cooperation between Anwil and PKN Orlen in the future, including ethylene supplies from Wloclawek to Plock. Achema in Lithuania has also been interested in Anwil, but will not be able to renegotiate at least until July. This will only be possible then if ZAP fails to reach agreement.

The issue of price maybe a stumbling block in that the value of Anwil is estimated at around zł 1.7 billion, but PKN Orlen may be forced to accept a lower price. One school of thought suggests that if ZAP is to be one of centres of chemical industry consolidation in Poland, it is important to buy Anwil. The problem is that too high a price for Anwil may force ZAP to have to borrow substantially, which may burden the company for many years. On the other hand, the combination with Anwil would increase the product range of ZAP and would also help to create future revenue potential. Aside the synergy of fertilisers, the Anwil Group is the largest PVC producer in Central Europe. In 2009, the Group generated around zł 2.5 billion in revenue and achieved a net profit of zł 66 million.

#### Polish Chemical Production (unit-kilo tons)

Product	Q1 10	Q1 09
Caustic Soda Liquid	78.5	75.1
Caustic Soda Solid	17.6	17.8
Soda Ash	241.9	247.0
Ethylene	143.6	126.0
Propylene	93.2	88.1
Butadiene	17.0	10.3
Toluene	29.3	23.7
Phenol	9.2	6.3
Caprolactam	41.7	30.8
Polyethylene	94.7	83.4
Polystyrene	31.9	27.7
PVC	62.5	62.6
Polypropylene	61.7	66.3
Synthetic Rubber	40.4	27.4
Pesticides	7.9	8.0

### Polish chemical industry Q1 2010

The results of companies in the Polish chemical industry improved slightly in the first quarter of 2010 against the fourth quarter in 2009, but revenue growth was mainly at the expense of a further deterioration of the profitability. In terms of performance, Poland's chemical industry faces a problem of cheaper imports in fertilisers and other products but notwithstanding challenges ahead trends in the first quarter and April have been relatively good. Companies that have performed well this year include ZA Tarnow, ZA Pulawy and Anwil, but still the results are far from those achieved in 2008. ZAK's results look good, but according to the Treasury the company has a problem with financing investments. ZAK is in talks with banks about obtaining credits to complete the installation of the new sulphuric acid plant which are to meet the requirements of environmental protection.

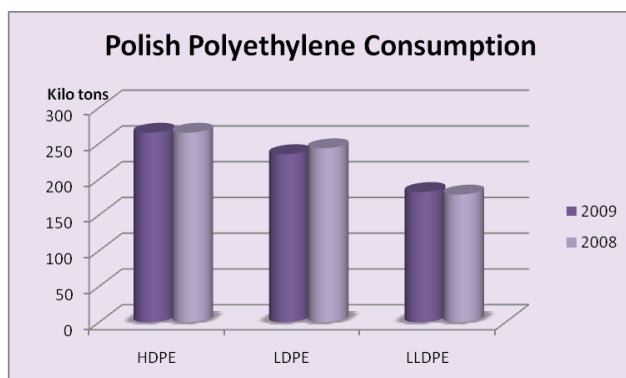
Aside the questions over privatisation, the most important issue facing the Polish Treasury is the future operation of ZCh Police which is currently producing at normal levels but incurring losses at the same time. Losses are being caused by a combination of strong competition, high gas prices and overstaffing. In addition, the company is suffering from decisions taken in the past over long-term raw material agreements and mistakes made on currencies.

ZA Pulawy (ZAP) has decided to embark on investments into a new fertiliser unit to be located in the nearby Special Economic Zone Starachowice. This project is being constructed on the results of market research undertaken by ZAP in Central Europe on the effects of fertilisation of winter crops. ZAP and the Swedish group Vattenfall have signed an agreement to cooperate on the construction of a new power generator at Pulawy. The Polish power grid operator has already granted permission to connect the new plant to the national network.

The project involves construction of a high-capacity power plant, although no final decision has been made as to the choice of technology and type of fuel to be used. The project's underlying assumptions will be refined throughout 2010 with the aim of completing the construction in the 2016–2018 timeframe.

### Polish polyethylene consumption

Despite the downturn in economic activity last year, the polyethylene market in Poland performed relatively well. Polish consumption of LDPE in 2009 is estimated to have dropped by 3.5% against 2008 down to 235,000 tons. The HDPE market, on the other hand, remained similar to 2008 at 265,000 tons. The best results were achieved by LLDPE, which is currently not produced in Poland. Consumption of LLDPE rose 2% in 2009 to 182,000 tons.



Germany and Belgium, whilst for LLDPE Saudi Arabia occupies first position on the list of suppliers with more than 65,000 tons. Imports of all types of polyethylene are expected to rise this year against 2009, and for the foreseeable future. BOP at Plock produced a total of 335,300 tons of polyethylene in 2009, part of which was sold domestically and the remainder exported.

### PET market in Poland

SK Eurochem anticipates more competition this year in the PET market, particularly after the start-up of the new 240,000 tpa plant at Kaliningrad which is close to the Polish border. SK Eurochem has in recent years maintained high running rates at its 120,000 tpa plant, and accounted for around half of the Polish market where the largest PET processors include Alpla, Hanex and WIP. The second largest position is occupied by Lithuanian sourced supplies and the remainder from the Far East or the Middle East. Polish consumption of PET totalled around 144,000 tons in 2009, which was similar to 2008. SK Eurochem expects stronger competition in the year ahead, possibly resulting in lower prices. Conversely, it may see costs for PTA drop slightly after the start-up of the new plant this year at Wloclawek which in part will replace imports of PTA from Germany and the Far East.

### Pegas Nonwovens

Pegas Nonwovens is to install a new production line in a €50 million investment at its factory at Znojmo-Prímětice in the Czech Republic. New two-component applications and other special materials are expected to be available in the period 2012-2014. The new equipment, supplied by Reifenhäuser Reicofil, will start operations in the second half of 2010, and will increase the plant's production capacity by 20,000 tpa or more than 25%. The Czech division of Pegas Nonwovens produces non-woven textiles (using polyethylene and polypropylene), supplying the health care, construction, agriculture and other industries.

### Central European plastics

Polish PVC profile manufacturer Dobroplast is expanding production with plans for a new plant in the industrial zone in Lublin. The company, which already runs two plants in Poland and another in Lvov, western Ukraine intends to invest more than €2 million to establish a facility with a production hall, warehousing, etc.

Samyang from South Korea plans to invest €11 million to develop engineering plastics production near Jászberény in Hungary. The new plant is being designed to produce 10,000 tpa of engineering plastics, employing 70 workers. The target is to launch trial production in December, with mass production starting in January 2011. The project is supported by the Hungarian trade promotion agency ITDH, whereby Samyang has agreed to lease a production hall from the local plastics processor Jász-Plasztik and install its own equipment. The processing capacity of 10,000 tpa will include polycarbonate and PBT resin, for use in electronics or automotive parts and in special heat or abrasion-resistant products.

A large part of the plant's output will be sold to Jász-Plasztik, which will process it into back covers for monitors and LCD TVs, assembled by Samsung in nearby Jászfényszaru. Initially, around 70% of output will be sold to electronics suppliers in Hungary and Slovakia, and later Samyang intends to also produce materials for the auto industry.

South Korean company Hanil E-Hwa intends to expand its presence in Central Europe by extending Hanil E-Hwa Automotive Slovakia in Dubnica and Vahom. The company, whose major clients include Hyundai and Kia Motors, supplies mainly door trim and seating for cars, vans, sports utilities and heavy construction



equipment. Products from the Dubnica line include pillar and door trim and headliners. Hanil E-Hwa is among the largest automotive part producers in the country, with a research and development facility in Slovakia.

### Bulgarian plastics

Bulgaria's leading film manufacturer Plastchim-T at Aksakovo has started its second joint BOPP film project, based on equipment supplied by Bruckner. The 6.6m wide, over 400m/min fast production line has a capacity of 18,000 tpa and is equipped with state-of-the art technology. Due to the overall energy optimised layout and design, and the TDO Heat Recovery System (providing an annual energy saving of another 20%); the new line is considered by Bruckner to be one of the most energy efficient in Europe.

Pipelife will open a new pipe facility at Botevgrad, near Sofia, in May with an initial capacity of 12,000 tpa. The plant will produce pipes for water supply and sewerage systems, water transport, gas and electricity systems. The total investment has amounted to €32.4 million.

### Doljchim-Interagro

Romanian fertiliser group Interagro wants to buy Doljchim from Petrom, which may help to keep the plant alive. Petrom has previously stated plans to close Doljchim before the end of 2010, which would be a heavy blow not only to company employees but also for the local agricultural sector which depends on the plant for chemical fertilisers. Funds have been allocated by Petrom for the plant demolition and decontamination of land in the area, but Interagro is now in negotiations to buy the chemical plant which includes methanol facilities in addition to fertilisers. Doljchim sold a total of 316,000 tons of fertilisers in 2009, which was 37% less than in 2008. The methanol plant has been idle mostly in recent times. If successful, Interagro wants to invest in Doljchim and to integrate it into the group. Doljchim was established in November 1990 based on Doljchim Craiova, which was founded originally in 1961.

## RUSSIA

**Russian Chemical Exports to China  
(unit-kilo tons)**

Product	Q1 10	Q1 09
HDPE	12.438	17.216
LDPE	57.463	51.558
n-butanol	26.712	17.876
iso-butanols	19.639	23.35
PVC	0.039	1.079
Ph Anhydride	8.559	6.219
2-EH	4.729	3.687
PP	11.106	7.664
Acrylonitrile	3.811	4.193
DOP	2.945	0
Caprolactam	42.864	24.95
Styrene	4.863	1.973
Orthoxylene	1.978	19.922
Paraxylene	5.248	2.1
Trichloroethylene	0	0.806
Perchloroethylene	0	0.24
MEG	0	5.3
Phenol	0	0.628
Acetone	5.404	0
Epichlorohydrin	4.774	1.42
Bisphenol A	18.067	10.141
Polyamide	7.399	12.372
Polystyrene	0.055	1.1
Total	238.093	213.794

### Russian chemical production Q1 2010

Russian chemical production showed noticeable increases in the first quarter this year against 2009, with virtually all products recording higher volumes. The economy continues to recover gradually helping to promote domestic demand, but exports nonetheless remain a key part in sales for most products. Exports to China were higher overall in the first quarter this year against the same period last year, although some products saw declines. Butanols, polyolefins and caprolactam all recorded strong export activity to China. Anti-dumping duties have been installed by the Chinese government against polyamide-6 imports from a number of countries, which may be followed by caprolactam which has now come under examination. As of yet, Russian producers remain immune from these duties but could be affected at a later stage.

Ethylene production in Russia increased over by over a hundred thousand tons in the first quarter this year, due largely to higher volumes produced at the crackers owned by Nizhnekamskneftekhim and Kazanorgsintez. Nizhnekamskneftekhim has decided, after a review, to delay investment plans into a one million tpa new ethylene cracker by around two years. Instead it intends to focus on expanding its synthetic rubber division to meet the demand from the tyre industry. Kazanorgsintez aims to complete its expansion of ethylene capacity from 430,000 tpa to 640,000 tpa this year, which represents a key part of its second phase investment programme. However, it

is not expected to consider the third phase of its programme for at least two years. TAIF is planning major investments in the petrochemical sector in Tatarstan in the next few years, where finance may be required

through an IPO. The new programme includes investments into ethylene and benzene at Kazanorgsintez, but these projects are not expected to come onstream prior to 2015-2016.

### Feedstocks/petrochemicals

#### Nizhnekamskneftekhim-ethylene to Kazanorgsintez

Nizhnekamskneftekhim has mapped out expectations of shipping a similar amount of ethylene by pipeline to Kazanorgsintez in 2010 as achieved last year (194,000 tons). Depending on cracker performance at Nizhnekamsk, the figure from 2009 may be exceeded, but not by a significant degree. Polyethylene production at Kazanorgsintez could be restricted from reaching full capacity this year. In addition to

ethylene, Nizhnekamskneftekhim supplies around a thousand tons per month of ethylene oxide to Kazanorgsintez.



Nizhnekamskneftekhim aims to achieve a net profit of around 3 billion roubles this year against 424.3 million roubles in 2009. The company achieved its highest monthly income on record in March 2010, reaching 7.5 billion roubles and the first quarter turnover totalling 20 billion roubles. The capitalisation of Nizhnekamskneftekhim has risen over the past year by 2.4 times to 23.3 billion roubles.

#### Nizhnekamskneftekhim's one million tpa ethylene cracker unlikely to start construction pre-2013

Nizhnekamskneftekhim has decided that the proposed one million cracker should not play a part in the short term investment plans in the 2010-2012 timeframe. Instead the company intends to reduce the size its investment to concentrate on the expansion of synthetic rubber capacity. The project to construct the ethylene complex is estimated in current prices to require around 84 billion roubles. However, Nizhnekamskneftekhim is now reducing its investment expenditure to around 22 billion roubles. By 2014, the company aims to produce 700-800,000 tpa of synthetic rubber which would exceed the current production levels of the three plants in the SIBUR group.

Delaying the ethylene cracker by up to two years has been effectively forced by the difficulties in attracting finance coupled with lower demand projections for ethylene and derivatives. By delaying the cracker plans, the company hopes that there may be more feedstock options than available at present. The owners of Nizhnekamskneftekhim, TAIF, are heavily focused on the completion of the Taneko refinery complex at Nizhnekamsk, which ultimately will produce 14 million tpa. Finding another \$1-1.5 billion for a new ethylene cracker at Nizhnekamskneftekhim is not realistically possible in the current climate.

Regarding the concentration on synthetic rubber, Nizhnekamskneftekhim is aiming to increase sales to the domestic tyre industry where foreign players are investing in new production facilities. As part of the programme to support the expansion in synthetic rubber production, Nizhnekamskneftekhim plans to increase the capacity of its central gas processing installation up to 2 million tpa of NGL and technical butane.

#### Nizhnekamskneftekhim-butane contract with Novatek

Nizhnekamskneftekhim and independent gas producer Novatek have signed a long-term contract to supply technical butane produced at Purovsky Gas Condensate Plant in West Siberia. The contract provides for a delivery of at least 85,000 tpa of butane at market prices for the period 2010-2012. In 2009, the company bought 65,000 tons. The contract with Novatek will provide Nizhnekamskneftekhim with a guaranteed supply of raw materials, and will guarantee Novatek steady sales of technical butane. Cooperation between Nizhnekamskneftekhim and Novatek could create conditions for further development in the processing of hydrocarbons.

#### Kazanorgsintez-financial outlook

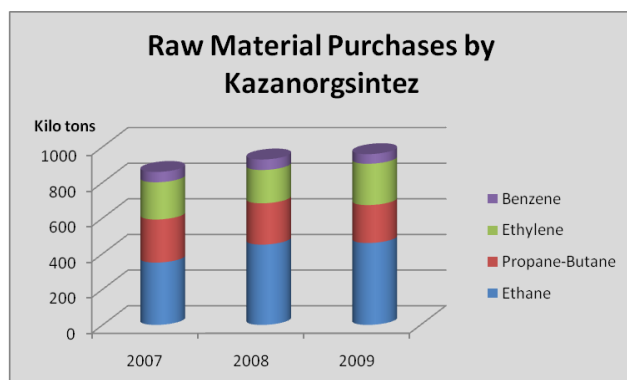
Kazanorgsintez has targeted an increase in revenue of 1.5 times over 2009 this year to reach around 34.5 billion roubles. Estimating the net profit, however, is a much harder task in view of the fluctuations in raw material and energy costs. The company recorded a net loss of 2.1 billion roubles in 2009 following a net loss of 2.8 billion roubles in 2008 and for both years no dividends have been paid. Kazanorgsintez has

managed to solve its main problems with a re-structuring of its debts of \$1 billion, and credits being granted for five years. These financial arrangements have helped to push up the capital value of Kazanorgsintez three-fold to around \$300 million. Early indications from the first quarter in 2010 indicate a sizeable recovery against last year, but the main problem facing Kazanorgsintez is that interest payments on loans will amount to around 3.5 billion roubles this year. Due to the financial problems accrued by the company during the economic crisis, Kazanorgsintez had to be bailed out by the government banks in order to avoid bankruptcy. Consequently, the state bank Sberbank controls an important share of the company's share portfolio.

#### Kazanorgsintez-investment programme

Kazanorgsintez reduced the financing of the investment programme in 2009 from 4 billion roubles to 1.6 billion roubles due to its difficult financial situation. For 2010, the same level of investment will be carried out as last year with financial restrictions still in place. According to Kazanorgsintez, it spent 1.3 billion roubles in 2009 with the main focus on the increase in ethylene capacity from 430,000 tpa to 640,000 tpa which is

now expected to be completed in 2010. Kazanorgsintez has stated that the company will not be able to attend to the third phase of its strategic investment programme, involving around \$3 billion, for at least two years.



#### Kazanorgsintez-raw material expenditures

Raw material expenditures for Kazanorgsintez totalled 10.876 billion roubles in 2009, 11.8% down in 2008 due to lower oil prices particularly in the first half of the year. Ethane purchases, from Gazprom and Tatneft, totalled 460,000 tons which was 2% up on 2008. Propane-butane purchases, sourced

mainly from SIBUR, totalled 213,000 tons in 2009 and was 8% down on the previous year. The continued shortfall in ethylene production at Kazan led to an increase in ethylene purchases from Nizhnekamskneftekhim, and other producers, totalling 232,000 tons. Benzene is sourced from a variety of sources and totalled 54,000 tons in 2009 which was 5,000 tons less than in 2008.

#### Russian Ethylene Production (unit-kilo tons)

Producer	Q1 10	Q1 09
Angarsk Polymer Plant	51.714	38.297
Kazanorgsintez	111.401	105.5
LUKoil-Neftekhim	85.578	56.365
Nizhnekamskneftekhim	158.067	150
Renova-Orgsintez	13.87	6.5
Salavatnefteorgsintez	58.499	34.913
SIBUR-Neftekhim	62.371	53.831
SIBUR-Khimprom	8.013	7.936
Tomskneftekhim	66.271	68.017
Ufaorgsintez	23.362	12.039
Total	639.146	533.398

#### Russian olefin production Q1 2010

For the first quarter of 2010, Russia increased ethylene production by 20% against 2009 with all producers except Ufaorgsintez recording rises. Stavrolen saw the largest increase of 52%, which was due to maintenance being undertaken in the same period last year. High growth rates were also noted at Salavatnefteorgsintez, where production in the first quarter increased by 40% due mostly to the commissioning of a new pyrolysis furnace using ethane.

Russia could produce around 2.7 million tons of ethylene in 2010, based on first quarter results, which would be the highest figure recorded for the country. Increases can be expected to continue in the next couple of years, firstly as a consequence of the completed expansion at Kazanorgsintez and secondly due to the start-up of the Novy Urengoy ethylene plant which is scheduled for 2012.

Russia produced 324,600 tons of propylene in the first quarter in 2010, 17% higher than in the same period last year. Increased production of propylene in Russia was due mainly to higher volumes at Stavrolen which has needed more monomer for polypropylene production. Nearly all propylene derivatives have seen higher demand this year. Production of propylene in March totalled 114,000 tons, which was 13% more than in February.

For the first quarter, a total of 62,400 tons of propylene was sold on the open market which was 10% up on 2009. Saratovorgsintez has increased acrylonitrile production, despite a decline in March, and this has increased shipments of merchant propylene. Traditionally, Saratovorgsintez has sourced propylene from Budyennovsk but with Stavrolen using most of its product for polymer production there has been little surplus available. Another factor tightening market availability is that Salavatnefteorgsintez has substantially increased butanols production this year, whilst its own propylene production fell by 4% resulting in the need to buy monomer on the merchant market.

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**Bulk polymers**


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**Tomskneftekhim-polypropylene improvements based on new catalyst**

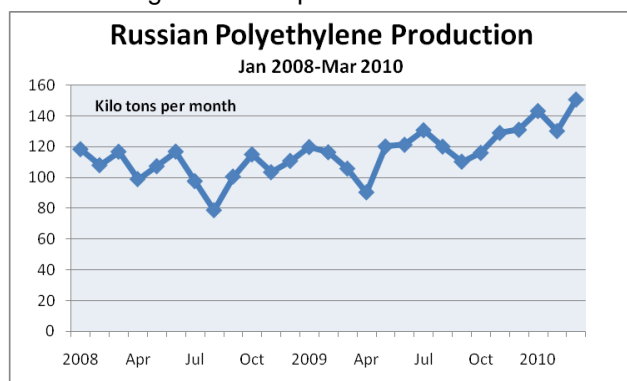
Tomskneftekhim expects to start seeing the benefits this year of the conversion to titanium-magnesium catalyst (TMC) in the production of polypropylene by the middle of this year. The company hopes for a 20% increase in production from the 130,000 tpa plant compared against the usage of the conventional catalyst. With the transition to TMC, Tomskneftekhim has also opened possibilities for the production of special materials for the automotive industry, the construction sector, and public utilities. It reduces energy consumption per unit of output, whilst increasing industrial and environmental safety. In 2009, the plant produced 116,000 tons of polypropylene which was 3% up on 2008. Polyethylene production at Tomsk increased by 7.6% to 241,890 tons. Production of ethylene and propylene exceeded the level of 2008 at an average of 7% to 250,000 tons and 119,000 tons respectively.

Tomskneftekhim renewed funding last year for the modernisation of burner and furnace at the monomer pyrolysis plant. Replacing the burner is designed to reduce the consumption of natural gas in olefin production by redirecting the fuel network methane-hydrogen fraction. The end of the project is planned for December 2011. Also in 2009, as a result of new measures to improve logistics the company reduced the cost of shipping polymers on average by 30% per ton.

**Novy Urengoy Petrochemical Complex-energy unit**

The Institute of Heat & Electricity in Moscow has completed design documents for the construction of an energy unit for the Novy Urengoy Gas Chemical Complex. Design capacity of the Novy Urengoy gas-chemical complex for production of ethylene and high pressure polyethylene is scheduled to reach 400,000 tpa. The structure of the gas-chemical complex includes a gas turbine power plant with total capacity of 120 MW. The gas turbine plant is intended to cover the electrical and thermal loads of the petrochemical

complex, as well as the supply of electricity for the local network. The Institute of Heat & Electricity has developed a unique solution for the construction of energy plants in areas of permafrost.

**Russian polyethylene trends**

Polyethylene production in Russia has continued to rise in the early part of this year, with most plants running at full capacity. The introduction of the new plant at Salavatnefteorgsintez will help to increase production volumes further in the second half of the year. Nizhnekamskneftekhim launched the production of new grades of polyethylene in April,

including enough medium-density polyethylene for products using rotational moulding. The company also released the first batch of polyethylene for insulation of metal pipes. Previously, Nizhnekamskneftekhim produced moulding grade PE 4050Q, then PE 4052R and has now upgraded to PE 6050R. The aim is to produce volumes of every type of polyethylene which can be sold via the trading distribution company Evroplastik.

**Russian polypropylene market Q1 2010**

Russia produced 165,300 tons of polypropylene in the first quarter, which represents an 18% increase over the same period last year. In February 2010, Russia imported 4,500 tons of polypropylene, which is 18% more than in January, and a 77% increase over the same period of 2009. In total, 8,320 tons was imported in the first two months which was up 32%. The large difference in production levels in the first three months for 2010 and 2009 was due primarily to the extended outage at Stavrolen in the early part of last year. Maintenance shutdowns started in April and May at Ufaorgsintez and Neftekhimya at Moscow, which will help to tighten the market balance. However, this may not affect imports notably as Russia tends to only import those brands of polypropylene which are not produced domestically. Production facilities in Russia are now capable of meeting most of the demand, and at the same time can export reasonable volumes. Neftekhimya at Moscow, which is managed by SIBUR, will close for maintenance at the start of May for a period of 42 days. Polypropylene produced by Neftekhimya is shipped largely to Biakspen for the production of BOPP, but accordingly Biakspen will not need to purchase from other sources.

**SIBUR-Khimprom grants licence for expandable polystyrene technology**

The Austrian company Sunpor has won the tender by SIBUR to license technology for the expandable polystyrene plant at SIBUR-Khimprom at Perm. The capacity of the plant is being designed to produce



50,000 tpa. Russia imports about 70-80% of expandable polystyrene from South Korea, China and other countries. Annual consumption is estimated currently in the range of 100,000 tons. The introduction of the new technology will allow, on the one hand, to reduce dependence on imports, and on the other hand, to guarantee Russian processors quality raw materials that meet stringent European standards for fire resistance, density and other characteristics.

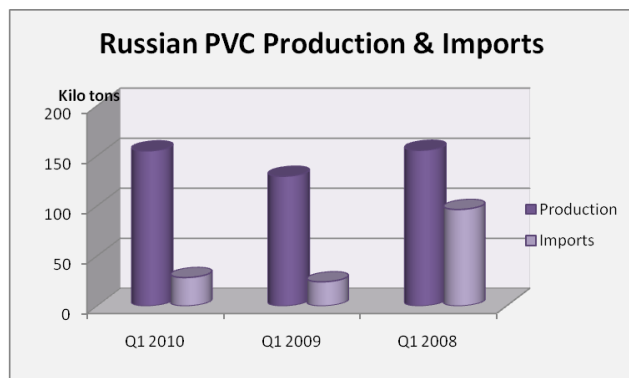
<b>Product</b>	<b>Q1 10</b>	<b>Q1 09</b>	<b>Q1 08</b>
Ethylene	639.1	533.4	616.5
Benzene	205.1	234.6	323.5
Styrene	125.1	120.8	162.6
Phenol	56.9	35.5	65.4
Polyethylene	424.3	342.0	343.2
Polypropylene	165.3	138.2	155.2
PVC	154.9	129.6	155.5
Polystyrene	67.9	59.9	67.5
Butanols	78.3	66.0	73.9
Methanol	811.4	495.9	934.5
Synthetic Rubber	273.0	174.2	325.0
Caustic Soda	267.9	261.0	337.8
Soda Ash	600.3	485.5	752.9
Ammonia	2922.6	3268.9	3398.0
Ph Anhydride	25.4	35.1	33.9
Acetic Acid	43.8	34.7	39.0
C Black	143.5	89.6	169.5

#### Russian ABS & polystyrene market

Russia's sole ABS plastics producer Plastik at Uzlovaya increased production by 11% in March against February to 1,560 tons. This was 20% higher than in March 2009. For the first quarter, Plastik produced 4,660 tons of ABS which is 62% more than in the same period last year.

Total imports of polystyrene in January and February this year amounted to 12,790 tons, which is 69% more than the same period in 2009. The main sources of import include Belgium (17%), China (14%) and South Korea (14%). At the same time, Russian producers of polystyrene exported 3,980 tons of products, it is 37% less than in January and 9% yields the value inscribed in February 2009.

The decline in exports due to the growing demand in Russia, so Russian manufacturers have begun to increase the supply of products for the domestic market. Total exports in January and February amounted to 10,250 tons of polystyrene is 36% less than the same period in 2009. The main exporter of Russian polystyrene remains Nizhnekamskneftekhim (87% of total exports).



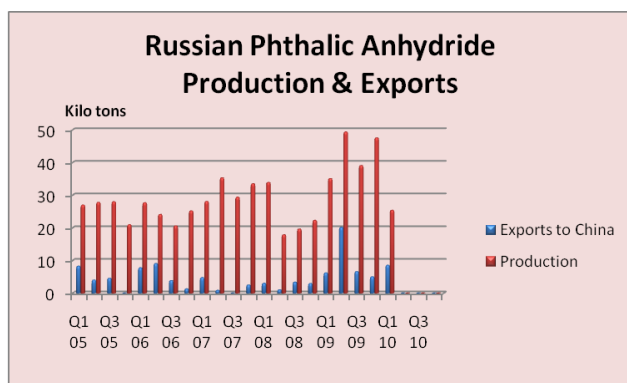
PVC imports declined by 21% in the first two months of 2010 against last year due to reduced demand for tubular products used in agriculture.

Imports of PVC pipes rose however by 57% in March against February, bringing the total for the first quarter this year to 848.3 tons. This represented a fall of 18% on the first quarter last year due on the one hand to reduced demand for tubular products used in agriculture and also the growth of Russian PVC pipe production. Whilst imports have been in decline, exports rose in the first quarter by 59% against Q1 2009. PVC pipe exports are likely to drop in the next few months as producers sell more product on the domestic market.

### Aromatics & derivatives

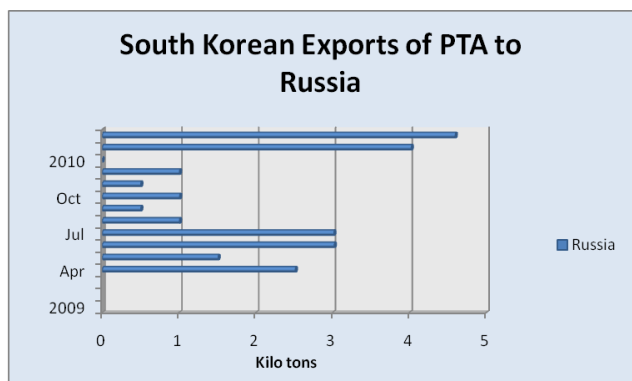
#### Russian orthoxylene & phthalic markets

A total of 35,500 tons of orthoxylene was sold in the Russian domestic market in the first quarter of 2010, almost twice the level in the same period last year. Whilst phthalic producers made increases in the purchase of raw materials, there were also increases in purchases from the organo-solvent sector. The Omsk refinery, owned by Gazprom-Neft, accounted for 51% of orthoxylene sales in the first quarter, with Ufaneftekhim and Kirishinefteorgsintez occupying 26% and 23% respectively. Domestic orthoxylene sales rose 40% in March against February to 13,700 tons.



only other significant producer Salavatnefteorgsintez. In February 2009, the West Siberian Metallurgical Combine was forced to halt production of phthalic anhydride grade B due to a lack of demand in both domestic and external markets.

Despite improved domestic demand in 2010, Kamteks-Khimprom has found it more profitable to sell product to China. As a result, the domestic market has been tight for supply which has been compounded by reduced imports from Lakokraska in Belarus. In 2009, Ukraine and Belarus were the only importers of phthalic anhydride to Russia, but both are not supplying at present. Domestic consumers are hoping for a restart of the Ukrainian producer Lizinvest, and a resumption of exports to Russia.



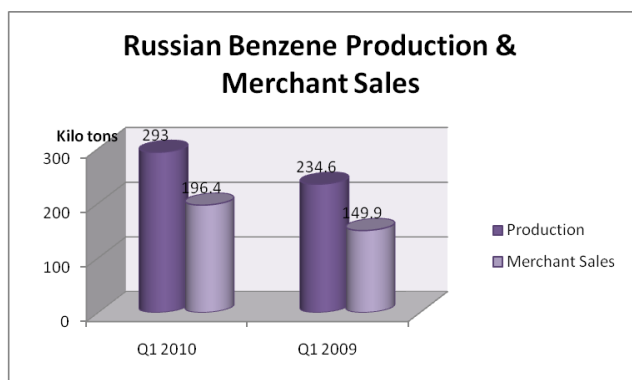
#### Polief-PTA production Q1 2010

Polief increased PTA production by 21% in March against February, producing 22,000 tons. In total, the company produced 60,500 tons in the first quarter which was 1% more than in the same period last year. PTA imports from South Korea totalled 8,600 tons in the first quarter of 2010 against zero imports last year.

#### Russian benzene market Q1 2010

Russia produced 98,700 tons of benzene in March which was 2% more than in February. The increase in production was possible due to increased demand, particularly for caprolactam and phenol. The biggest increase in production was seen at TNK-BP's Ryazan refinery, which was 38% higher than in February. Only the Novolipetsk Metallurgical Combine and the Omsk refinery recorded declines in March. For the first quarter a total of 293,500 tons of benzene was produced which was 28% more than in the same period last year.

Benzene consumption fell 7% in 2009 against 2008 to 1.132 tons due mainly to the decline in styrene output. By contrast, consumption increased 27% in the first quarter this year, amounting to 310,000 tons. The shortfall in benzene production measured against consumption is compensated by imports from Ukraine.



#### Russian merchant benzene supply Q1 2010

Caprolactam producers increased benzene purchases by 40% in the first quarter to 88,600 tons, after the low operating rates recorded in the same period in 2009. Phenol producers increased purchases by 42% due to strong demand. Styrene continues to recover slowly, with benzene purchases up by 4% against the same period last year. Styrene production is expected to be boosted when SIBUR-Khimprom completes the modernisation and expansion of its ethylbenzene plant.

Merchant benzene shipments in the Russian domestic market increased 17% in March to 68,600 tons which was 31% higher than in March 2009. Consumption of benzene sales for caprolactam and phenol production rose in relation to February by 23%

and 35% respectively. Conversely, sales of benzene for styrene and nitrobenzene production fell by 17% and 5%. For the first quarter, Russia sold 196,400 tons of benzene on the merchant market which is 31% more than in 2009. The reason for lower merchant sales for styrene was due to Nizhnekamskneftekhim not requiring purchases of additional monomer to supplement its own benzene production. The main suppliers of commercial benzene in the domestic market of Russia include Gazprom-Neft at the Omsk refinery, Stavrolen, West-Siberian Metallurgical Combine, SIBUR-Neftekhim and Yaroslavlnefteorgsintez.

<b>Russian Phenol Production (unit-kilo tons)</b>		
<b>Producer</b>	<b>Q1 10</b>	<b>Q1 09</b>
Ufaorgsintez	18.451	10.841
Kazanorgsintez	17.015	11.617
LUKoil-Neftekhim	0	0
Samaraorgsintez	9.924	4.686
Omsk Kaucuk	11.5451	8.362
Total	56.9351	35.506

#### **Russian phenol market & Samaraorgsintez**

Shortages of phenol were seen in the latter part of 2009 due largely to the halt in production at Saratovorgsintez, which accounted for about 10% of total Russian production in 2008. The shortages have intensified in the first quarter of 2010 with consumption around 40% higher than in the corresponding quarter last year. The four active plants in Russia have been running at full capacity, but due to increases in captive consumption there is less product available in the free merchant market. The construction of a new plant is largely out of the question due to environmental reasons and as a result, expansion

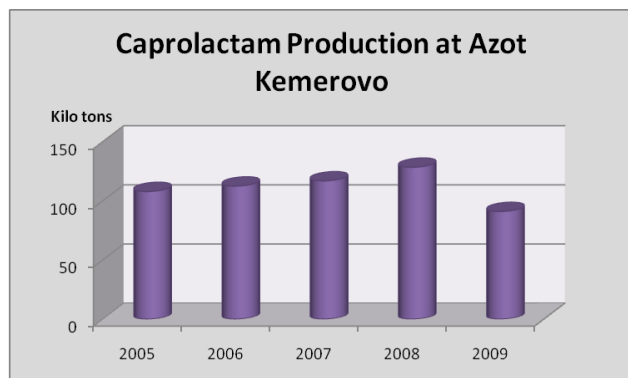
and modernisation of the existing facilities are the only options.

In early 2010, Saratovorgsintez announced the intention to expand and modernise existing facilities for the production of phenol although no details are available. In March Baltic Leasing and Samaraorgsintez concluded six lease agreements for a period of 3 years, totalling 49.420 million roubles. The leasing arrangements will allow Samaraorgsintez to procure equipment for carrying out activities on the reconstruction of production capacities and introduce new technologies that will increase sales in the phenol market. However, it is not clear when these expansions will take place and thus until then the Russian market is expected to see continued shortages which may lead to increases in imports.

#### **Azot Kemerovo-modernisation and investment**

Azot at Kemerovo was able to survive the economic downturn last year due to strong investment and support of SIBUR-Mineral fertilisers. Azot implemented 22 major investment projects in 2009, amounting to more than one billion roubles. The main investment projects in 2009 at Azot included the reconstruction of caprolactam and urea plants and commissioning of a new air separation plant. In addition, Azot built a bulk terminal for the shipment of coal in the Kuzbass region, and the transport of ammonium nitrate. Key projects in 2009 include upgrading the steam turbine in the Ammonia-2 shop, the modernisation of the gas turbine GTT-12 in the weak nitric acid shop and a re-loading point for ammonium sulphate. SIBUR-Mineral fertilisers will provide around 500 million roubles towards these projects.

Last year, Azot recorded its highest ever volume of urea production at 564,000 tons. This followed the introduction of a new DCS which facilitated control of the production process allowing quick adjustments in the operation of the unit. The company completed the reconstruction of the air separation plant, which began in 2006, and this could substantially reduce the production cost of nitrogen and oxygen. At the same time, the introduction of a new air separation plant will reduce the cost and other products for Azot.



Azot completed the reconstruction of the caprolactam plant in August 2009, which reduced energy consumption and operating costs of production. The project, which started in 2007, also included the construction of two new distillation columns, whilst existing columns were re-equipped. It is expected that the main economic effect of the investment will be through the reduction of steam consumption which could save the company around 17 million roubles a month. Due to the revamp and lower demand in the first half of the year caprolactam production dropped in 2009, but is expected to be higher this year.

#### **Polyamide-6 anti-dumping duties**

The Ministry of Commerce of China has decided to increase import duties on polyamide-6 following the completion of anti-dumping investigation on product from the USA, EU, Russia and Taiwan. The duty has been imposed for a period of five years, and differs depending on the company providing the imports. For

example, Kuibyshevazot has been set a favourable duty of 5.9% whilst DOMO Caproleuna has been set with 8.2% and Zakłady Azotowe Tarnow 9.7%. Kuibyshevazot is believed to have been set a lower rate than other producers due to the presence of its engineering plastics JV at Shanghai, to where most of the polyamide is delivered. The company exported 54,740 tons in 2009 against 43,660 tons in 2008. Increases in export activity are planned after the completed expansions of polyamide-6 capacity at the Kuibyshevazot plant.

#### Kuibyshevazot-new polyamide unit

Kuibyshevazot is in the process of completing the final stages of commissioning prior to the start-up of the fourth unit for polyamide-6. The new line is designed to produce PA-6 textile quality with a capacity of 50,000 tpa. The cost of the project was 1.42 billion roubles with equipment provided by Uhde Inventa-Fischer. After commissioning full-scale production, Kuibyshevazot will be capable of offering consumers the whole range of PA-6. This will increase total capacity for polyamide production from the company's four units to 150,000 tpa.

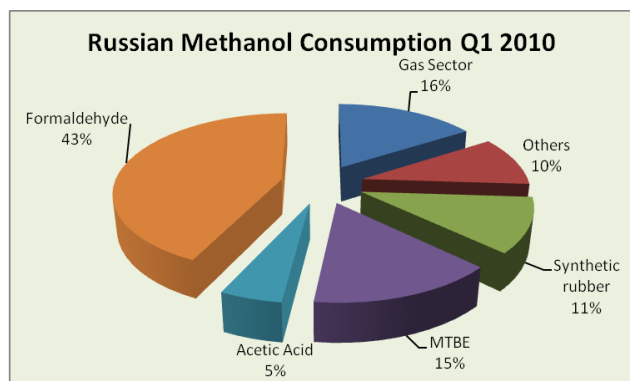
### Methanol & gas chemicals

#### Russian methanol & formaldehyde market

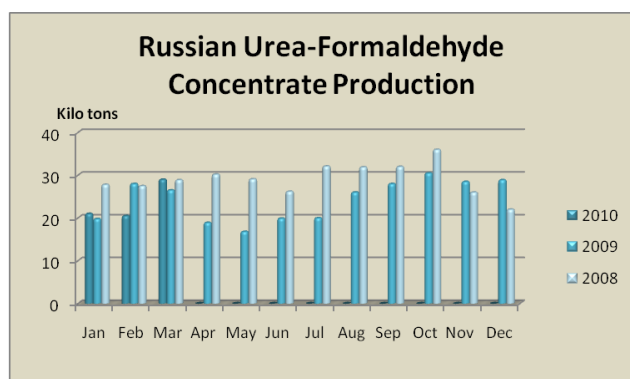
Methanol production in Russia revived in the first quarter against the same period last year to reach 789,400 tons, but this figure still remains lower than the first quarter in 2008 when production totalled 934,490 tons. Methanol demand in Russia started to see improvements during March and April following a fairly quiet start to 2010 whilst at the same time export opportunities increased. The main outlet for methanol produced in Russia remains formaldehyde and its derivatives, which saw an upturn in March and accounted for nearly half of methanol consumption.

Producer	Q1 10	Q1 09
Shchekinoazot	96.7	42.7
Sibmetakhim	175.6	93.1
Metafrax	267.5	172
NSZP	0	19.357
Akron	20.0	15.63
Azot Novomoskovsk	84.7	48.3
Angarsk PC	11.2	11.7
Azot Nevinomyssk	29.7	18.7
Togliattiazot	104.02	74.4
Total	789.4	495.9

Overall, methanol consumption in Russia rose 50% in the first quarter against the same period last year, although consumption still was lower than in 2008. Consumption is forecast to recover its 2008 levels during the rest of this year, although the position on export prices remains uncertain. Demand for methanol in Asia rose in March and April, which is absorbing large volumes of Russian methanol exports after initial delivery to Finland. Around 75% of Russian exports in the first quarter were delivered to Finland, with the leading exporters remaining Metafrax, Sibmetakhim and Azot at Novomoskovsk.



Consumption of merchant formaldehyde in the Russian domestic market dropped 35% in 2009 in Russia, but started to show increases in the first quarter in 2010 recording a 20% jump against the respective quarter last year. Demand for both urea-formaldehyde and phenol-formaldehyde resins are expected to recover strongly this year, impacting on formaldehyde consumption. The spring and summer months are traditionally the main season for these products which are used predominantly in the construction industry.



MetaDynea is increasing its share of sales of urea-formaldehyde resins in the domestic market, accounting for 48% of the market in the first quarter. The main consumer of urea-formaldehyde resins is Kronostar, which is one of the market leaders in wood-based panels and plywood in Russia.

Seasonal increases in the domestic market have



helped push the demand for urea-formaldehyde resins, which consequently has driven up the demand for urea-formaldehyde concentrate. For the first quarter, the production of urea-formaldehyde concentrate totalled 74,000 tons which was 2% down on last year. The decline was attributed to reduced operations at Metafrax of around 20%, which was the leading producer of urea-formaldehyde concentrate in 2009. Conversely, other producers increased production, i.e., Togliattiazot by 15% and Shchekinoazot by 21%. Demand for urea-formaldehyde concentrate in Ukraine and Belarus continue to remain high.

#### **Shchekinoazot-transition to new methanol plant**

Shchekinoazot has is slowing down production at its methanol plant to prepare the site for the start-up of the new 450,000 tpa plant. After stopping methanol production completely and decommissioning the equipment, the new plant will be integrated into the complex. Work is underway on the installation of foundations for compressors and natural gas, and combined with other developments means that the plant should be ready in June or July this year.

#### **Russian urea expansions**

A number of projects for urea production in Russia are under various stages of planning and investment which will expand production over the next two years. The largest project is located at Salavat, where Toyo Engineering has provided a project outline for Salavatnefteorgsintez for a new urea plant with a capacity of 1,400 tons per day. The licence was signed in 2009 and construction is expected to begin later this year. The total construction cost of the installation granulation of urea will be an estimated 1.1 billion roubles. Construction of the urea plant will enable Salavatnefteorgsintez to receive a higher quality of urea, to improve the safe operation of equipment to reduce emissions of pollutants into the atmosphere, to introduce new energy saving technologies, to vary the type of products obtained in accordance with market needs.

In other projects, Kuibyshevazot is to upgrade its urea facilities and increase capacity to 1,000 tons per day from 800 tons at present. Azot at Novomoskovsk has completed the expansion of the urea capacity to 1,150 tons per day, developed by the Russian engineering company NIIK with equipment supplied by NAK Nitrogen in Serbia. The modernisation is directed not only to increase production and reduce energy consumption, but also to meet stricter environmental standards. Completion of construction is planned for the second quarter of 2010.

NIIK has also developed a project for Akron at Novgorod for a new urea plant, with a capacity of 1,000 tons per day. Equipment for the project is being supplied from Italy. NIIK has begun to develop a computer simulator technology (LHP) for urea production at FosAgro at Cherepovets as part of a new plant to produce 1,500 tons per day. The installation of the LHP will be completed by the end of 2010, with commissioning will be conducted in January-February 2011. The first LHP was designed by NIIK in 2007 and successfully installed at Azot Novomoskovsk in the Urea-2 shop.

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### **Organic chemicals & plastics**

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#### **Russian organic chemical markets**

Acetone consumption in Russia is rising again this year after the declines in 2009, partly due to renewed demand at Dzerzhinsk Orgsteklo (DOS) which has resumed its MMA production chain. Other factors include a seasonal increase in production of solvents. Sales of acetone on the merchant market totalled 14,600 tons in the first quarter, which was 14% higher than in the same period last year. DOS purchased 1,500 tons in the first quarter, whilst Kazanorgsintez has increased its captive consumption of acetone in the production of bisphenol A.

Despite increases in domestic demand, due to higher output Russia increased acetone exports by 55% to 11,200 tons in the first quarter this year against the same period last year. Samaraorgsintez, which is the main exporter, closed for a maintenance shutdown in the second half of March resulting in a reduction.

Azot at Nevinomyssk increased acetic acid sales to the domestic in March, raising volumes by 38% against February to 6,300 tons. Demand from acetate solvent producers increased 15% to 3,600 tons whilst Polief increased purchases by 41% to 1,600 tons. In total, sales on the domestic market were down 9% to 14,100 tons for the first quarter this year against the same period in 2009. The main reason for lower sales in the domestic market this year was the lack of purchases made by Stavrolen for VAM production in the months of January and February. Exports of acetic acid totalled 20,800 tons at Nevinomyssk in the first quarter, 42% more than in the same quarter last year. For the first three months of this year, production at

the Nevinomyssk plant has risen by 26% against 2009. The main destinations for Russian supplies of acetic acid have included Italy, Finland and Ukraine, which accounted for 86% of exports in the first quarter.

Russian Butanol Production Q1 2010 (unit-tons)				
Producer	Location	Normal-	Iso-	Total
Azot	Nevinomyssk	4,587	0	4,587
Angarsk PC	Angarsk	15,100	0	15,100
SIBUR-Khimprom	Perm	10,230	11,317	21,547
Salavatnefteorgsintez	Salavat	24,497	9,883	17,937
Total		54,614	21,200	75,614

Exports of butanols from Russia remain very high, accounting for over 90% of production. As a consequence of the export strategy, it means that there is a shortage of product available in the domestic market mostly affecting n-butanol. This has affected the production of butyl acetate in Russia. SIBUR-Khimprom at Perm is undertaking modernisation of its butanols plant, by replacing the vacuum system of production by BOC Edwards. Replacing the old vacuum system for dry vacuum pumps will help to reduce the cost of production including lower energy consumption.

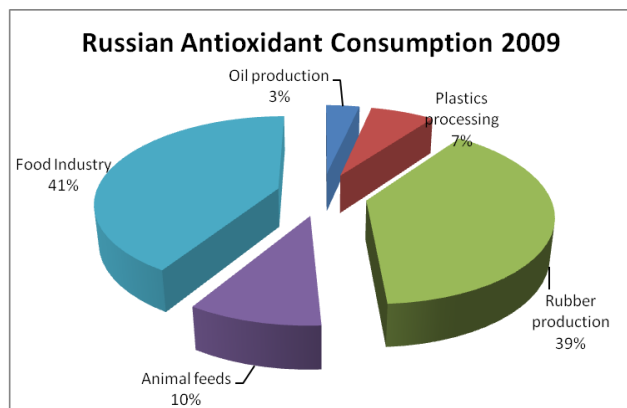
A total of 26.900 tons of MEG was exported from Russia in the first quarter this year, 10% up on the same period in 2009. The main factor contributing to the growth of export has been the increased consumption in Belarus, whereby shipments rose 2.3 times to 20,500 tons. The main suppliers of exports this year have included SIBUR-Neftekhim and Nizhnekamskneftekhim, accounting for 54% and 29% respectively.

In the first two months of 2010 Russia imported 2,900 tons of plasticizers, 70% more than the same period in 2009. The growth of imported products due to increased production of linoleum and vinyl wallpaper in Russia. The main products included DINP (2,500 tons) and DIDF (400 tons). DIDF is not produced in Russia, whilst DINP has been produced in small amounts since May 2009 at the Roschalsky Paint Plant. An increase in seasonal demand and a scheduled maintenance shutdown started by Salavatnefteorgsintez in April has tightened the supply side leading to shortages in the market. The DOP unit was suspended by Salavatnefteorgsintez from 11 April to 16 May. The capacity of the plant at Salavat is 36,000 tpa and is the largest in Russia.

#### Russian BOPP market Q1 2010

Russian production of BOPP rose 28% in March against February to 10,200 tons. For the first quarter, total production rose 33% against 2009 to 25,200 tons. Biaksplen accounted for 55% of total production, followed by Novatek-Polymer with 22%, and Isratek C with 20%. The increase in production has been due to a high demand inside the country and growing demand abroad with exports accounting for 23% of total shipments. Whilst export activity increased imports declined 11.5% against 2009 to 5,310 tons. The main volume of imports came from Germany (20% of PP-films), Poland (16%), Belgium (14%) and UK (10%). The major suppliers are the companies Innovia Films, Treofan, Amcor Flexles Reflex and ExxonMobil.

#### Other Products



#### Sterlitamak Petrochemical Plant-revamped Agidol-2 starts

Sterlitamak Petrochemical Plant (SNHZ) has re-launched its plant for Agidol-2 production following modernisation and expansion to 1,500 tpa. Agidol-2 is used to stabilise isoprene rubber, synthetic butadiene rubber, butyl rubber, etc. A feature of the new product is four times lower dosage of Agidol-1 consumption. SNHZ co-operates closely with Nizhnekamskneftekhim, which is a consumer of antioxidants produced at Sterlitamak, and is involved in the construction of a new plant for production of Agidol-110. This is a new generation of

antioxidants, which will help to reduce dependence on foreign suppliers.

Krasnoyarsk Synthetic Rubber Plant, which is part of SIBUR, has already conducted tests on the use of the antioxidant Agidol-2 in the production of butadiene-nitrile rubbers. This is aimed at helping the company to improve key indicators for quality in rubber production: colour stability, etc. The economic benefit of using Agidol-2 is estimated at around 7 million roubles per annum by reducing the quantity of antioxidant

consumption. SIBUR already uses Agidol-2 in the production of synthetic rubber at the Voronezh plant. The production capacity of butadiene-nitrile rubbers at the Krasnoyarsk Synthetic Rubber Plant is 38,000 tpa.

SNHZ's production Agidol grades of antioxidants accounts for more than half of the company's production. The other Russian producer of antioxidants Khimprom at Novocheboksarsk concentrates on special resin chemicals Atsetonanil H and Novantoks for the industry of rubber, tyres and technical rubber products. The development of new import-substituting products, a search for effective technologies and sources of raw materials represent the key areas of focus for SNHZ. In January 2009, the company added new capacity for Agidol-1 production, increasing from 1,500 tpa to 2,530 tpa. Agidol-1 is used in polymers in contact with food, as well as for stabilisation of edible oils, greases, cosmetic creams.

#### **Lanxess, Rhein-Chemie**

Lanxess plans to invest 90 million roubles in the construction of the plant of its subsidiary Rhein Chemie at Dzerzhinsk. The plant is expected to produce additives used in the manufacture of automobile tyres. Construction is expected to begin in 2010 with production planned for early 2011. For the construction company Lanxess purchased a land plot of 3.3 hectares at the industrial park Dzerzhinsk-East. Whilst market conditions remain low-key, Lanxess aims to take advantage of a growing shortage of additives in the Russian automotive tyre market where a number of foreign players are investing in new plants and products.

#### **Investments at Lipetsk special economic zone**

Japanese tyre manufacturer Yokohama Rubber is to invest \$400 million into building a plant to produce automobile tyres in Lipetsk's SEZ (special economic zone). The plant's initial projected annual capacity of 1.4 million tyres is to eventually grow to 3.5 million tyres. The plant is scheduled to be put into commission in 2011. In 2009, Russia had issued 19.8 million passenger tires, of which 49% was exported. At the same time, gross imports of tires for passenger cars reached 9.73 million units.

Bekaert is to construct a new metal cord tyre plant in the Lipetsk special economic zone which will around a year to complete and €20 million in investment. The total amount of investments into Bekaert-Lipetsk will comprise around €100 million.

#### **Investments in industrial parks in Tatarstan**

As part of the strategy on plastics processing in Tatarstan, three new production lines are planned for commissioning in the Kama Fields industrial park this year. In 2009, two lines were introduced for the production of multifilament polypropylene yarn, with a capacity of 1,000 tpa and stretch film with a capacity of 9,000 tpa. The new facilities to be started in 2010 include 1,440 tpa of reinforced stretch film and 1,400 tpa of wood-filled plastics. In addition, volumes of multifilament yarn production are expected to double, with carpeting capacity expected to reach 11,000 tpa by 2015. Total projected investments in the Kama Fields industrial park have been calculated at 1.727 billion roubles, including 498 million roubles provided from the Russian Federation Investment Fund, 346 million roubles from Tatarstan's budget, 883 million roubles invested by industrial park residents and 700 million roubles invested by Nizhnekamskneftekhim.

Developments at the Technopolis Khimgrad industrial park at Kazan are less progressive, with the main priority at present focused on infrastructure development. One positive investment involves Danaflex which will start the production of packaging film in July this year. The commissioning of this plant the company will increase the company's market share in Russia from around 12% to around 20%. Conversely, the construction of a new plant by Rosnano has been delayed due to lack of funding from state corporations, and other projects are being slowed down by the availability of finance.

#### **Evrokhim-phosphoric acid modernisation**

Evrokhim is modernising its phosphoric acid facilities at Kingisepp in the Leningrad region, at a cost of 600 million roubles. This is aimed at helping the plant to produce phosphoric acid by reducing the four stage process to two-stage, in addition to increasing the concentration from 24% to 34%. The modernisation will also lead to a reduction in energy consumption levels, whilst the project provides for the transportation of a by-product phospho-polyhydrate. The investment programme will be completed by 2011.

#### **Solvay-Soda Berezniki**

Solvay has filed a second request with Russia's Federal Antimonopoly Service (FAS) to approve the acquisition of Berezniki Soda, with the FAS expected to decide on the request in the near future unless

additional information is required. On 17 March, the FAS denied Solvay approval to acquire 97% in Berezniki Soda citing discrepancies between the registered and the actual owner of the plant.

By the end of March, the registered owner of 97% in Berezniki Soda Plant was Sodium Group Investments Ltd. Berezniki Soda Plant is a producer of soda ash largely based on the Verkhnekamsk deposit of potassium and magnesium salts. The company has capacity to produce 650,000 tpa of soda ash, but only produced 387,500 tons last year. Since 1 January 2010, output from Berezniki Soda has been sold through Solvay Plastchem, a subsidiary of Solvay.

## Synthetic rubber

### SIBUR rubber plant revamps

Voronezhskintezkavuk has started the production of new grades of butadiene-styrene synthetic rubber, involving production of around 850 tons per month. The new grades have been made possible through collaboration with Continental AG and can be used to produce green tyres. Voronezhskintezkavuk produces over 30 types of rubber.

Russian Synthetic Rubber Production (unit-kilo tons)			
Producer	Q1 10	Q1 09	Q1 08
Efremov SR Plant	6.3	10.7	17.9
Kautschuk (Sterlitamak)	18.3	22.0	36
Krasnoyarsk SR Plant	9.2	1.6	9.4
Nizhnekamskneftekhim	117.5	68.8	104.7
Omsk Kavuk	13.8	18.3	19.6
Kazan SR Plant	1.5	1.7	2.6
Togliattikavuk	43.2	22.7	70.4
Voronezhskintezkavuk	59.1	27.6	62.9
Others	13.2	0.6	1.1
Total	281.9	174.0	324.6

Togliattikavuk has launched the project on reconstruction of the butyl rubber unit, which will increase the design capacity to 53,000 tpa. The capacity increase is associated with the need to stabilise production, balancing different production sites at Togliattikavuk and increasing the reliability of the equipment. The project is designed to modernise and upgrade the equipment, taking the capacity up to 4 tons per hour. Design work is scheduled for completion in the second half of 2010, with commissioning of the reconstructed plant planned for 2013. In addition to reducing production costs, the upgrade will improve the system of quality control and reduce the negative impact on the environment.

### Russian synthetic rubber exports

Russian synthetic rubber exports amounted to 74,050 tons in March, 7% higher against February 47% against March last year. For the first quarter in 2010, a total of 209,940 tons was exported which was 64% up on 2009. The main Russian exporters were Nizhnekamskneftekhim with 48% of shipments and Togliattikavuk with 28%.

## Belarus & Ukraine

### Belarusian paraxylene imports affected by Russian duties

Due to high duties on imports of Russian paraxylene into Belarus, Mogilevkhimvolokno may be forced to seek alternative sources in order to sustain production of DMT and its range of polyester fibres and PET. Rises in export duties on paraxylene and other oil products from Russia over the past few months has made it unprofitable for Mogilevkhimvolokno to buy from Omsk, from where it receives most of its supplies.

The transshipment of paraxylene from Russian refineries to Mogilev has been operating consecutively for several decades through long term contracts. However, the position changed in January this year with the Russian government deciding to levy export duties on paraxylene shipped from Russia to Belarus. This has led to a 20-25% increase in the price of paraxylene (roughly by \$192 per ton), which has impacted directly on Mogilevkhimvolokno.

Paraxylene accounted for 64% of the company's raw material purchases in 2009. To compensate for at least part of the higher costs, Mogilevkhimvolokno has been forced to make a corresponding increase in its product prices which makes it difficult for the company to compete against imports from other regions such as Asia. Efforts may be required to find other sources of paraxylene to reduce the cost of production unless the Russian government revokes the position on export duties for light oil products, crude oil, etc. This is



clearly the preferred option for Mogilevkhimvolokno, but the Russian government has shown no sign to date of changing its position on duties and the holding company Belneftekhim is evaluating alternative options.

### Mogilevkhimvolokno-PTA

Mogilevkhimvolokno is currently in the process of assessing importing PTA supplies for May to December 2010. The company is seeking 35,000 tons in this period, with a 10% leeway either up or down depending on demand. Previously PTA purchases have been made by Mogilevkhimvolokno from Polief, but supplies from the Blagoveshchensk plant are now very tight and it may not be possible to conclude a contract for the rest of the year. The company is also seeking MEG supplies for delivery to Mogilev, but there is much less difficulty in sourcing glycols from Russia.

Product	Q1 10	Q1 09
Acetic Acid	20.7	9.0
Ammonia	992.1	756.5
Benzene (-95%)	51.8	38.6
Benzene (+95%)	24.1	9.5
Caprolactam	0.0	1.8
Caustic Soda	11.3	9.5
Formaldehyde	11.3	3.6
Methanol	22.2	21.3
Polypropylene	25.8	23.9
Polystyrene	3.5	2.9
Polyvinyl Acetate	1.2	1.5
Soda Ash	152.4	159.4
Titanium Dioxide	29.2	21.2
Toluene	1.3	0.4

### Ukrainian gas prices

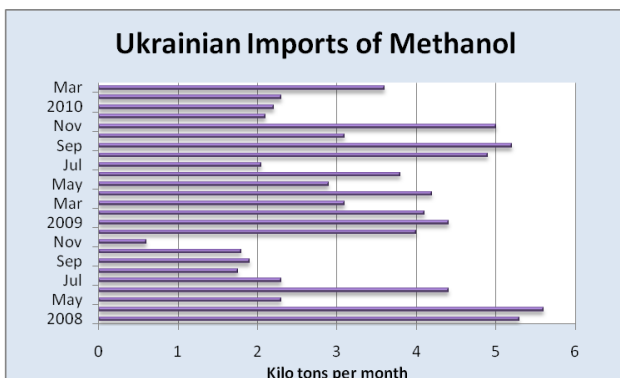
Ukraine and Russia have reached agreement on a 30% discount on natural gas prices, in exchange for an extended 25 year lease for the Russian Navy at the Sevastopol naval base in Crimea. However, this is unlikely to affect prices paid by Ukrainian chemical companies at least until the third quarter. Ukrainian chemical companies claim to face greater cost pressures than regional competitors, which they argue are paying much lower gas prices. Belarus, for example, received gas from Russia in the first quarter at \$168 per thousand cubic metres before rising to \$180 in the second quarter. This compares in dollar terms to Ukraine against \$305 and \$320 respectively.

The cost of natural gas for companies that produce nitrogen fertiliser in Ukraine is now \$205 per thousand cubic metres, which is increased to \$260 per thousand cubic metres when transport and additional costs are included. This compares against the cost of \$305 for the metallurgy sector which

receives no discounts. In contrast to Ukrainian prices, Russian fertiliser producers are buying gas at discounted prices from \$80 to \$120 per thousand cubic metres which allows them to benefit from a large margin when trading their products. Ukrainian producers, although faced by higher costs, benefit from proximity to Black Sea ports and thus transport costs are much lower.

### Ukrainian methanol market improves

Seasonal growth in demand for methanol derivatives (in particular formaldehyde resin) has caused a rapid increase in performance in sales for Azot at Severodonetsk. A dominant trend of the Ukrainian methanol market in 2009 was the lack of profitability of domestic production due to the high cost of natural gas. This in turn led to a sharp reduction in consumption of domestically produced methanol and derivatives. Methanol production dropped in total by 45% in 2009 against the previous year. Whilst methanol production is slightly higher than last year, imports from Russia continue to play an important role in the Ukrainian market.



Russian methanol imports are largely cheaper than domestic product. Acetic acid production at Severodonetsk more than doubled in the first quarter, with exports totalling 14,800 tons. The main consumers of Ukrainian acetic acid in export markets this year have included Turkey, Belgium and Russia, which combined accounted for 83% of total shipments.

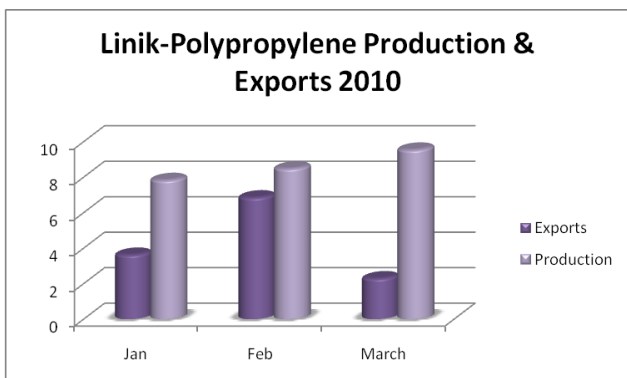
### Karpatneftekhim to restart olefin cracker

Karpatneftekhim is preparing the olefin cracker at Kalush for a restart in the third quarter, according to

company reports. The aim is to start producing ethylene and VCM in time for the start-up of the PVC plant, which is scheduled later this year. Ethylene and propylene production were stopped at Kalush in 2008 and the cracker has remained idle since, together with the VCM and HDPE plants. Karpatneftekhim is currently negotiating a contract for energy supplies from the Kalush power station in order to support cracker operations.

### Ukrainian polymer markets Q1 2010

Linik produced 25,640 tons of polypropylene in the first quarter in 2010, which is 8% more than in the corresponding period last year. Linik reduced polypropylene exports in March due to increased domestic sales and the need to build up stocks to cover a maintenance shutdown planned in the second half of May. Exports dropped from 80% of production in February to 24% in March.



10,120 tons was imported. HDPE imports totalled 18,500 tons in the first quarter, 19% up on 2009 but 18% down on 2008 which possibly provides a better indication of where the market stands. Most of the HDPE imports are sourced from South East Europe.

### Ukrainian organic chemicals Q1 2010

Ukraine produced around 4,000 tons of ethyl acetate in the first quarter this year, which was 3% more than during the same period in 2009 and due mainly to increased capacity utilisation by the Perechinsky Wood Chemical Plant. This share of this plant in the total Ukrainian production for the first three months of this year comprised 73%, and the company supplies most of its product for export. From the total of 4,000 tons production in the first quarter, 3,100 tons was exported. Deliveries of Ukrainian chemical products to export markets are beginning to recover after the fall last year when ethyl acetate prices fell sharply. The main destination for Ukrainian ethyl acetate this year has been Poland with 31% of shipments, followed by Slovakia and Hungary with 14% and 10% respectively.

## Central Asia-Kazakhstan

### Turkmenbashi polypropylene films

The Turkmenbashi oil refinery is constructing a 21,000 tpa plant in a €40 million investment for the on-site production of polypropylene films. The new plant will produce 12 different kinds of films, to be used by the agriculture, food, tobacco and construction industries, in the form of labels, adhesive tapes and various others. The plant, to be constructed by the French company DMT, will produce both for exports and domestic consumption.

### SOCAR-Azerkimya & Petkim

Following the transfer of Azerkimya to SOCAR in March, initial aims are to restore operations at the various plants at Sumgait which are either idle or running at less than 50% of capacity. To achieve these immediate goals and other longer term targets, a special programme is being devised to integrate Azerkimya into the SOCAR structure. Integration could create several new product areas through the use of ethane and propane-butane fractions extracted in SOCAR's refineries. The advantage of being part of SOCAR for Azerkimya is that the petrochemical plants, including the EP-300 cracker, should not face problems with energy supply.

SOCAR took a controlling stake in Petkim last year and may now seek to strike some sort of synergistic balance with Azerkimya. Petkim already purchases raw materials and half-finished products from Azerkimya, and in return supplies many finished goods to Azerbaijan. SOCAR is planning to construct a new refinery in Turkey for the demand of Petkim, whilst the Turkish market could represent a key outlet for Azerkimya's planned new petrochemical projects. SOCAR is currently reviewing the range of products produced by Petkim. Petkim accounts for around a quarter of the chemical product consumption in Turkey and thus offers considerable scope for a neighbouring country to supply products.

In terms of the domestic market in Azerbaijan, SOCAR has been entrusted with the goal of creating a chemical technopark at Sumgait over the next two to three years. This would follow the chemical cluster principle, providing processing outlets for Azerkimya. Currently, chemical output plays a small part in Azerbaijan's economy which is largely dominated by oil and gas. The share of export of chemical production in Azerbaijan's total exports (\$3,216,620,600) comprised 0.21% in January-February 2010 as

opposed to 0.14% last year. For the whole of 2009, chemical production accounted for 0.23% of gross exports. Thus, the aim is to expand the capacities significantly for Azerkimya (as outlined last month), to increase not only export capability but also domestic processing levels. Although there was a substantial increase in chemical production at Sumgait in the first quarter measured against last year, volumes are still quite small and therefore play only a minor part in the overall economy.

#### **Kazakh petrochemical project-Atyrau**

The construction of the gas-chemical complex at Atyrau is scheduled to start in February 2011. The Kazakh Ministry expects to start work on the infrastructure facilities in July this year funded by the Development Bank of Kazakhstan. The initial cost of the complex was valued at \$5.2 billion, including infrastructure, but project the cost has increased due to rising commodity prices. This project will be carried out in two main phases; including phase 1 on the basis of gas from the Tengiz field and phase 2 on the basis of gas from the Kashagan field. Completion of construction is targeted for 2013.

The complex will consist of two gas processing plants, three plants for the production of olefins and two plants for polymerisation. Production capacity of the complex will be 1.2 million tpa, including 800,000 tpa of ethylene, from which will then be produced 400,000 tpa tons of polyethylene of low and high density, 400,000 tpa of linear low density polyethylene and 400,000 tpa of polypropylene.

The project to build an integrated gas chemical complex in the Atyrau region is being undertaken by Kazakhstan Petrochemical Industries (KPI). KPI is owned by Sat & Company and KazMunaiGaz Exploration Production, on a parity basis. LyondellBasell was originally part in the project, but has now withdrawn and as a result Kazakhstan will commence the project on its own. KPI and Sinopec Engineering recently signed an agreement for the cooperation in the first polypropylene production phase.

In the context of the local Kazakh market, the polyolefin capacities planned for Atyrau stretch way beyond current consumption levels and projected consumption levels for the foreseeable future. Probably only an estimated 10% of the total output will go be sold in the Kazakh market, with the remaining 90% being delivered for export. As previously reported, the lion's share of production gas and chemical complex will be exported to the Chinese market, but also other markets such as Europe, Russia and Turkey could also be of interest. For the whole of 2009, Kazakhstan imported 10,400 tons of polypropylene with Russia supplying 52%, Turkmenistan 29% and South Korea 15%.

In terms of feedstock supply, the Tengizchevroil joint venture signed a contract in March last year to supply 6-7 billion cubic metres of gas per annum to the Atyrau complex. This will be followed by feedstock provision from the Kashagan field where KazMunaiGaz is investing considerable sums in offshore development.

#### **Polyplastik-Kazakh plant**

Russian converter Polyplastik started a new pipe plant in April in Kazakhstan. The plant has been constructed in the Akmola region, entailing an initial investment of around \$10 million. The plant hopes to produce 8-9,000 tons this year. In the first phase, modern equipment of the plant will of six production lines, two of which are designed to produce large pressure pipes with diameters up to 800 mm and up to 1200 mm. By 2015, Polyplastic aims to increase capacity to 24-25,000 tpa and to occupy a leading position in the Kazakh polyethylene pipe market.

## Relevant Currencies

- (Czech crown. Kc. \$1= 17.241. €1 = 25.922): (Hungarian Forint. Ft. \$1 = 177.04. €1 = 266.185): (Polish zloty. zl. \$ 2.7757. €1 =4.1740): (Romanian Lei. \$1 = 2.8526. €1= 4.289). (Ukrainian hryvnia. \$1 = 8.205. €1 = 12.3365): (Rus rouble. \$1 = 28.2963. €1= 43.916)

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