

# CIREC

## MONTHLY NEWS

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

Edited by **Andrew Sparshott** | Tel **+44 (0)20 8669 5126** | Email **enquiries@cirec.net** | Web **www.cirec.net**

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### Features from this issue

- ✚ MOL's operating profit in the petrochemical division grew by 21.5% in 2006 to Ft 23.2 billion. The EBITDA was even more impressive at 26.3% growth to Ft 41.8 billion. Operating profit reached Ft 10.1 billion in Q4 2006, which represents more than an 80% improvement.
- ✚ Consideration is being given by Petrom on what should be done with the petrochemical division in the group. One prominent idea is that the petrochemical division should be spun off from its refinery operations into a separate business, in a bid to make the company more efficient.
- ✚ After several months of extensive negotiations, PKN Orlen has sold 6,236,000 ordinary shares in Kaucuk to Dwory. The purchase represents 100% of the initial capital of Kaucuk, with a par value Kc 1,000 for each share.
- ✚ The production of bulk thermoplastics in Russia totalled 202,000 tons in December 2006, 18.1% higher than in the same month in 2005. Overall for 2006, thermoplastic production totalled 1,959 tons which showed an increase of 4.2%.
- ✚ Large-scale plans for Polief include an increase in PTA capacity to 600,000 tpa by 2011, and PET to 400,000 tpa. These projects will be co-ordinated through the jv between SIBUR-Holding and LUKoil Neftekhim, entitled Domestic Polymers.
- ✚ Sales' revenues for Dwory in 2006 reached zł 1,170,000,000, which represents an increase by 13% against 2005. The operating profit for 2006 was zł 87,450,000 and was up by 170% compared to 2005. The EBITDA figure for the four quarters was zł 144,700,000 and was up by 82%.
- ✚ In the likely event that Gazprom takes a majority stake in the Kovytko gas condensate field from TNK-BP, plans are being developed to construct an alternative gas pipeline in the Irkutsk region to the original pipeline route started by TNK-BP.
- ✚ Synthetic rubber production in Russia fell by 1% in 2006 to 1,134 million tons, influenced by a shortage of divinyl monomer for the Efremov Synthetic Rubber Plant.
- ✚ BorsodChem witnessed across the board increases in production volumes in 2006, facilitated by capacity expansions. The largest increase in production in 2006 was seen in MDI, rising 78.9% in total over 2005.
- ✚ Ukrainian ammonia and urea production fell by 2% in 2006. Azot Cherkassy posted the largest fall due to a gas supply shortage in April-June, and an ammonia facility revamp in October-November.
- ✚ Russia produced 10.95 million lorry tyres in 2006, 6.4% down on 2005. Production in December amounted to 917,000 truck tyres. 4.4% lower than in the same month of 2005. The volume of car tyres in 2006 amounted to 27.6 million pieces, 1% up on 2005.

## CENTRAL & SOUTH EAST EUROPE

### Petrochemicals-Central Europe

#### MOL 2006

MOL's operating profit in the petrochemical division grew by 21.5% in 2006 to Ft 23.2 billion. The EBITDA was even more impressive at 26.3% growth to Ft 41.8 billion. Operating profit reached Ft 10.1 billion in Q4 2006, which represents more than an 80% improvement. Improving market conditions, as well as volume growth, were the major drivers behind the results. Petrochemical integrated margins improved further in Q4 by 14.4% due to a 12% fall in the dollar denominated naphtha quotations.

#### MOL's Petrochemical Production (Unit-kilo tons)

| Product   | 2006 | 2005 |
|-----------|------|------|
| Ethylene  | 775  | 796  |
| Propylene | 386  | 404  |
| LDPE      | 263  | 284  |
| HDPE      | 353  | 360  |
| PP        | 496  | 441  |

Due to the stronger market conditions from the middle of the third quarter onwards, the annual average value of the integrated margin increased by 12.2% in 2006. This was the combined result of a 20% increase in the dollar denominated naphtha price and an 8-20% increase in euro denominated polymer quotations.

Olefin sales increased by 6.2% in 2006, largely as a result of higher utilisation of new capacities. In addition, the production of the new Olefin-2 plant in TVK surpassed its nominal capacity. Polymer sales for the MOL Group (including TVK and Slovnaft) rose by 5.7% to 1,126,000 tons, due to good capacity utilisation at the new plants (i.e., HDPE-2 at TVK and PP-3 at Slovnaft). The composition of polymer sales changed, however, with the ratio of PP sales moving up to 45%, whilst HDPE accounted for 32% and LDPE accounted for 23%.

#### TVK's Main Financial Indicators (Ft million) (Hungarian Forint, Ft, \$1 = 191.00, €1 = 252.69)

| Category           | 2006    | 2005    |
|--------------------|---------|---------|
| Total revenue      | 309,103 | 251,411 |
| Raw material costs | 227,873 | 196,989 |
| Operating profit   | 21,263  | 13,136  |
| Profit before tax  | 17,355  | 8,085   |

#### TVK 2006

TVK's EBITDA in Q4 more than doubled against Q3 2006, whilst EBITDA reached Ft 33.7 billion which was 47% over 2005. This represented a record year in the history of TVK. The growth was fuelled by favourable changes in the external environment from the middle of the third quarter onwards. TVK group sales reached Ft 84 billion in the fourth quarter and close to Ft 310 billion in 2006. In November and

December, the company repaid €60 million from the foreign exchange loans taken out earlier to finance the Petrochemical Development Project. As a result, TVK Group total debt reduced to Ft 52 billion on 31 December 2006.

#### TVK's Feedstock & Polymer Prices

| \$/ton            | 2006  | 2005  |
|-------------------|-------|-------|
| Naphtha           | 537   | 448   |
| Gas Oil           | 597   | 517   |
| €/ton             | 2006  | 2005  |
| Ethylene          | 863   | 739   |
| Propylene         | 826   | 710   |
| LDPE              | 1,095 | 1,012 |
| HDPE film         | 1,076 | 899   |
| HDPE blow         | 1,066 | 901   |
| PP homo raff      | 1,067 | 950   |
| PP homo injection | 1,071 | 968   |
| PP copolymer      | 1,131 | 1,010 |

Calculated in euros, the integrated petrochemical margin was up by almost 14% in Q4 2006 on the previous quarter as a result of simultaneous changes in prices of feedstock and polymer products. It was also helped by €/Ft cross rates. The integrated petrochemical margin rose by 20% in Ft terms and by 12% in euro terms in 2006 compared to the previous year.

In 2006, the total capital expenditure of the TVK group reached Ft 6,644 million, including maintenance projects of the parent company at Ft 4,772 million. Capitalisation, in connection with scheduled general overhauls in Olefin-1 plant and parallel in the LDPE-2, HDPE-1 and PP-3 plants amounted to Ft 1,073 million.

#### Petrom-new petrochemical division?

Consideration is being given by Petrom on what should be done with the petrochemical division in the group. One prominent idea is that the petrochemical division should be spun off from its refinery operations into a separate business, in a bid to make the company more efficient. The spin-off, entitled Petrochemical Arges,

could start operations as early as the second half of 2007. It has been suggested that Petrom wants to set up a company intended for petrochemical activities, and to subsequently to sell it.

An alternative plan involves Oltchim. Petrom representatives have stated that they are carrying on discussions with Oltchim, regarding interest expressed in the pyrolysis installations. It is therefore possible that Arpechim should be incorporated into Oltchim prior to the privatisation of the Ramnicu Valcea company. AVAS stated in February that Oltchim intends to assume several activities belonging to the plant, such as Arpechim and the National Salt Company, which can provide a large part of the raw materials used by Oltchim.

Petrom's Arpechim is the main domestic supplier of petrochemical products for the Romanian chemical industry. Its main petrochemicals include ethylene and polyethylene, followed by acrylonitrile. Petrom's petrochemicals production in 2005 was lower than in 2004 because of the steamcracker turnaround at Arpechim. As a result, petrochemicals sales decreased by 6.6% to 553,000 tons in 2005 (from 592,000 tons in 2004). The separation of the refining activities from the petrochemical ones at Arpechim Pitesti would be the first major decision of OMV since the takeover of Petrom.

### Intermediates-Central Europe

#### **BorsodChem Sales' Revenues 2006 by Product Group (Ft million)**

(Hungarian Forint, Ft, \$1 = 191.00, €1 = 252.69)

|                            |             |             |
|----------------------------|-------------|-------------|
| <b>PVC</b>                 | <b>2006</b> | <b>2005</b> |
| Domestic                   | 8,267       | 6,216       |
| Export Total               | 50,406      | 41,708      |
| Total                      | 58,672      | 47,924      |
| <b>PVC Compounds</b>       | <b>2006</b> | <b>2005</b> |
| Domestic                   | 922         | 1,101       |
| Export Total               | 5,438       | 4,609       |
| Total                      | 6,359       | 5,710       |
| <b>MDI</b>                 | <b>2006</b> | <b>2005</b> |
| Domestic                   | 1,130       | 605         |
| Export Total               | 50,633      | 29,074      |
| Total                      | 51,763      | 29,678      |
| <b>TDI</b>                 | <b>2006</b> | <b>2005</b> |
| Domestic                   | 2,810       | 1,330       |
| Export Total               | 40,422      | 28,292      |
| Total                      | 40,422      | 28,292      |
| <b>Caustic Soda</b>        | <b>2006</b> | <b>2005</b> |
| Domestic                   | 3,672       | 3,206       |
| Export Total               | 5,356       | 3,339       |
| Total                      | 9,028       | 6,545       |
| <b>Aniline</b>             | <b>2006</b> | <b>2005</b> |
| Export                     | 13,851      | 12,996      |
| <b>Ethylbenzene export</b> | <b>2006</b> | <b>2005</b> |
| Export                     | 10,387      | 0           |
| Plastic/finished products  | <b>2006</b> | <b>2005</b> |
| Domestic                   | 3,888       | 4,531       |
| Export Total               | 8,644       | 7,715       |
| Total                      | 12,532      | 12,245      |
| <b>Other Products</b>      | <b>2006</b> | <b>2005</b> |
| Domestic                   | 14,610      | 10,909      |
| Export Total               | 25,356      | 18,668      |
| Total                      | 39,966      | 29,577      |
| Total Sales Revenue        | <b>2006</b> | <b>2005</b> |
| Domestic                   | 35,297      | 27,898      |
| Export Total               | 243,000     | 172,966     |
| Total                      | 243,000     | 172,966     |

#### **BorsodChem 2006**

BorsodChem witnessed across the board increases in production volumes in 2006, facilitated by capacity expansions. The largest increase in production in 2006 was seen in MDI as shown on page 4, rising 78.9% in total over 2005. The aniline plant at Ostrava saw an increase of 23.8%. VCM at Kazincbarcika increased by 16.4%, PVC by 7.4% and TDI by 7.3%. Exports accounted for 85.5% of total sales' revenues, increasing 1.6% over 2005. The geographical breakdown is divided between domestic and Central East Europe 42% and West Europe 54%.

BorsodChem Group increased its sales' revenues in 2006 by 40.5% over 2005 to Ft 242,999 million. Higher MDI, caustic soda, TDI and PVC product sales volumes primarily drove improving sales' revenues. Other factors included Petrochemia Blachownia's first-time consolidation and significantly higher TDI and PVC product prices compared to 2005.

The growth of purchase prices (particularly those of energy, ethylene, toluene, benzene, methanol and carbon monoxide) played an important role in the increase of direct costs, rising 46.7%. In addition, depreciation was 44.8% higher compared to 2005. The EBIT of Ft 19,831 million corresponds to an 8.2% margin. The increase of EBIT falls behind the rate of sales' revenues increase, which is mainly due to higher raw material and energy prices, a maintenance shutdown in the third quarter and significant accounted depreciation.

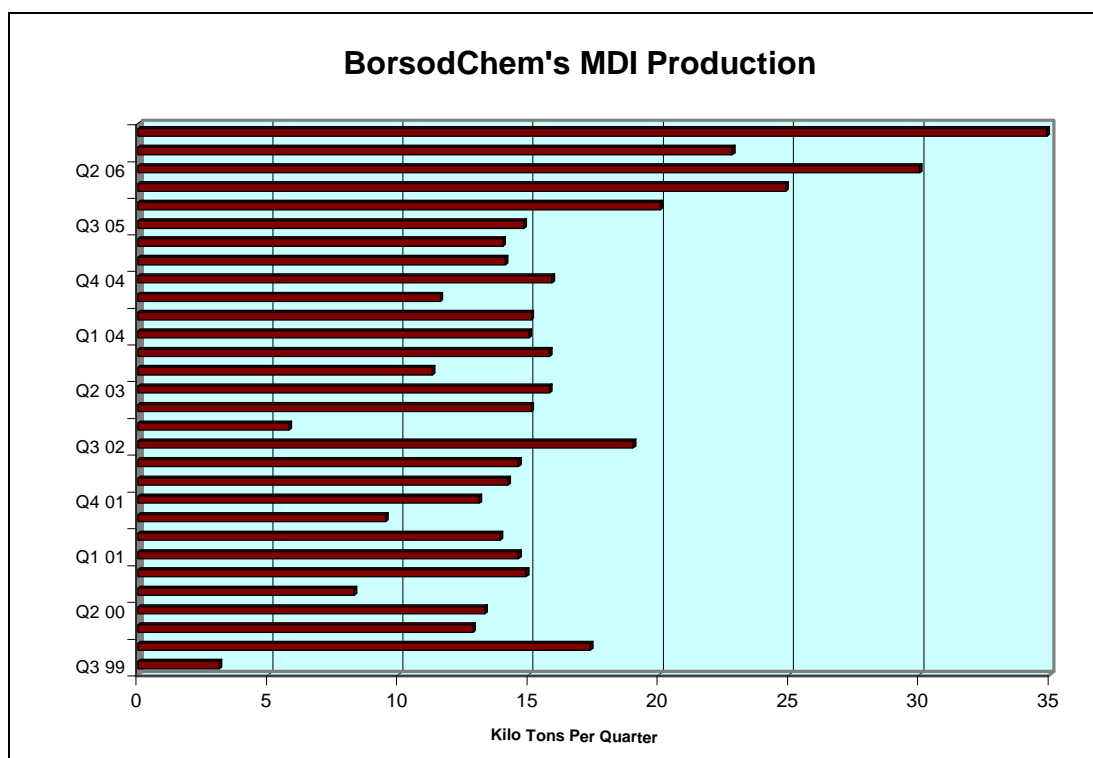
#### **Oltchim-Arpechim**

Oltchim has started negotiations through the Authority for State Assets Realization (AVAS), with Petrom in order to take over the pyrolysis unit from the Arpechim refinery at Pitesti. Following the company's proposals, AVAS has also accepted to initiate procedures for Oltchim to take a

controlling position in the National Salt Company. AVAS stated recently that a series of measures are needed for the consolidation of the company's activity, that would help Oltchim to reduce raw material dependency on other companies.

Oltchim will continue to be prepared for privatisation throughout 2007, according to AVAS, with the aim to try and include Arpechim and the National Salt Company into the portfolio. Oltchim accounts for over 65% of the industrial output of Valcea County and is controlled by AVAS with a stake of 95.73%.

This year Oltchim plans to commission several production lines, financed through a capital increase. The capital increase includes a debt-for-shares swap that requires approval from the European Commission, whether or not it falls under a form of government aid for Oltchim.



### **Chemko**

Chemko Group in Slovakia estimates a SKK 1.4 million profit for 2006, despite reporting a loss of almost SKK 3 million for the January-September period. Total revenues should reach SKK 1.95 billion in 2006 and added value should be at SKK 225 million. In addition to restructuring of existing product areas in aldehyde chemistry, phenolic resins, etc, the strategic plan of Chemko is to build a functioning industrial park in the local region. This will involve a so-called brown field park, with a concentration of industrial production, companies, and services.

### **Unipetrol sells Kaucuk to Dwory**

After several months of extensive negotiations, PKN Orlen has sold 6,236,000 ordinary shares in Kaucuk to Dwory. The purchase represents 100% of the initial capital of Kaucuk, with a par value Kc 1,000 for each share. The shares will be paid for by Dwory in the form of €195,000,000, based on average €/zl exchange rates, as of 29 January 2007.

The conclusion of the transaction will occur only after the satisfaction of several conditions agreed by both Unipetrol and Dwory, which may take as long as two to three quarters. These conditions include the securing of all necessary consents from the relevant anti-monopoly authorities to the sale of shares to Dwory, and the transactions within the Share Purchase Agreement. This Share Purchase Agreement includes the formation of a joint venture between the Unipetrol Group and Kaucuk for the purpose of the construction and operation of a new butadiene unit. It also includes the performance of an environmental audit concerning the land owned by Unipetrol and used by Kaucuk, in order to identify any existing environmental problems. Finally, it involves the execution of commercial contracts between the Unipetrol Group and Kaucuk, on the basis of the already-agreed principles.

### **Dwory-Kaucuk**

The acquisition of shares in Kaucuk will be financed from Dwory's own resources, as well as through debt financing. The acquisition of shares in Kaucuk is expected to ensure further stabilisation of the material

resources and further prospects for Dwory's long-term development. Synergies resulting from similar production profiles of both companies, will allow Dwory to improve the financial results of integrated entities. As part of the contract on the acquisition of shares, Dwory, Unipetrol, Chemopetrol and Kaucuk concluded a contract of co-operation, for the construction and operation of new butadiene unit. Dwory will hold 49% and 51% will be held by the Unipetrol Capital Group.

**Conditions for completing the contract for acquisition of shares in Kaucuk are:**

1. obtaining permits from relevant anti-monopoly body.
2. concluding by Kaucuk of the long-term commercial contracts with companies from Unipetrol Capital Group. This includes deliveries of ethylene, benzene and C4 fractions, as well as off-takes of raffinate 1.

**Acquisition of shares in Kaucuk shall be preceded by:**

1. performing an audit aiming at identifying the current environmental status on the area to which Kaucuk holds the property rights.
2. concluding a contract between Ceska Rafinerska and Kaucuk, concerning sharing hydrogen supply. Should an agreement fail to materialise Dwory shall be entitled to withdraw from the share acquisition contract.

***Currently Kaucuk has the following production lines:***

- ? ethylbenzene capacity 300.000 tpa
- ? styrene capacity 170.000 tpa
- ? butadiene capacity 90.000 tpa
- ? styrene/butadiene rubber capacity 85.000 tpa,
- ? polystyrene capacity 70.000 tpa.

**Dwory 2006**

Sales' revenues for Dwory in 2006 reached zł 1,170,000,000, which represents an increase by 13% against 2005. The operating profit for 2006 was zł 87,450,000 and was up by 170% compared to 2005. The EBITDA figure for the four quarters was zł 144,700,000 and was up by 82%.

The value of synthetic rubber sales went up by 27%, which translated into a 21% increase in the volume of sales. There was an increase of more than 28% in the value of sales within the styrene plastics product range accompanied by a significant drop of 9% in the tonnage of plastics sold. In the area of dispersions and other products there was a drop in the value of sales of about 22%. This was the result of the closure of the company's electrolysis installation, and halting the production of chlorine-derivative products in the first half of 2006.

The synthetic rubber market in the fourth quarter showed traditionally high demand due to the strength of the tyre market and technical goods, and also the high price of natural rubber which was again on the rise.

The good sales performance figures for the fourth quarter in the area of expandable polystyrene and dispersions, products were to a large extent due to the good weather conditions. This allowed contractors to continue work on construction and renovation projects into what is normally regarded as an "off-season". Apart from those developments the previous year and the beginning of 2007 saw a breakthrough in the implementation of the company's strategic plans which may have a significant impact on the future performance figures of the Dwory capital group.

Firma Chemiczna Dwory signed an Agreement on Strategic Co-operation with PKN Orlen to ensure long-term supplies of strategic raw materials produced by PKN Orlen and processed by Dwory into styrene plastics and rubber. The concluded agreement will ensure stabilisation of the company's material supply base and open up prospects for Dwory's long-term development.



# EURASIA, COMMONWEALTH OF INDEPENDENT STATES

## Russia

### Russian chemical sector performance 2006

The Russian chemical industry recorded an increase in production of 1.9% in 2006, according to the Ministry of Industry and Energy. Fertiliser output fell by 2.7% due a large part to the delays affecting export contracts, and the accident at Uralkali in October 2006 where the mine for potassium chloride was flooded. As a preliminary estimate, net profits in the chemical industry for 2006 will total around 93.5 billion roubles, of which around 27% will be re-invested into capital. Average wages in 2006 were 10,863.3 roubles per month, 22.4% higher than in 2005.

### Russian petrochemicals 2006

Ethylene production rose 2.1% in 2006, helped by slightly more output at Kazanorgsintez after two difficult years. Problems with ethane supplies have restricted ethylene production at Kazan, but 2006 was better and 2007 is likely to see more volume production following the cracker expansion. Total ethylene production in Russia could increase by over 100,000 tons in 2007, taking it close to 2.3 million tons. This assumes no unplanned outages take place, as occurred at Stavrolen for example in 2006.

Benzene production fell in 2006 by 2.5% to 1.153 million tons, largely the result of extended cracker outages. This impacted on non-integrated benzene consumers, such as the caprolactam plants. Phenol production fell 9.1% to 221,000 tons partly as a result of benzene bottlenecks. Styrene production was largely unaffected with a 2.5% increase, totalling 599,000 tons. Benzene imports increased in 2006 to compensate for lower domestic production, particularly after August via the Kavkaz terminal near Krasnodar.



### Russian polymers 2006

The production of bulk thermoplastics totalled 202,000 tons in December 2006, 18.1% higher than in the same month in 2005. Overall for 2006, thermoplastic production totalled 1,959 tons which showed an increase of 4.2%. The increase was due largely to developments in polypropylene and polystyrene. Nizhnekamskneftekhim and Kazanorgsintez showed positive production increases, whilst Stavrolen at Budyennovsk recorded lower output due to an extended cracker outage.

Utilisation levels for polyethylene capacity in 2006 were close to maximum loads, and capacity will be boosted in 2007 by the expansion of capacity at Kazanorgsintez. Polypropylene production increased by 7.8% in 2006 over 2005, with average plant utilisation rated at 98%. Polyethylene production totalled 1.075 million tons, 2.4% up on 2005. PVC production increased by 2.1% in 2006 to reach a total of 592,000 tons. Sayanskkhimplast increased production, but notwithstanding imports of PVC started to become more significant in 2006. A fall of 27.3% in PVC was recorded at Azot at Novomoskovsk due to a lack of chlorine. Capacity in the PVC sector overall ran at 90%, with high rates also recorded by Kaustik at Sterlitamak and Plastkard at Volgograd. .

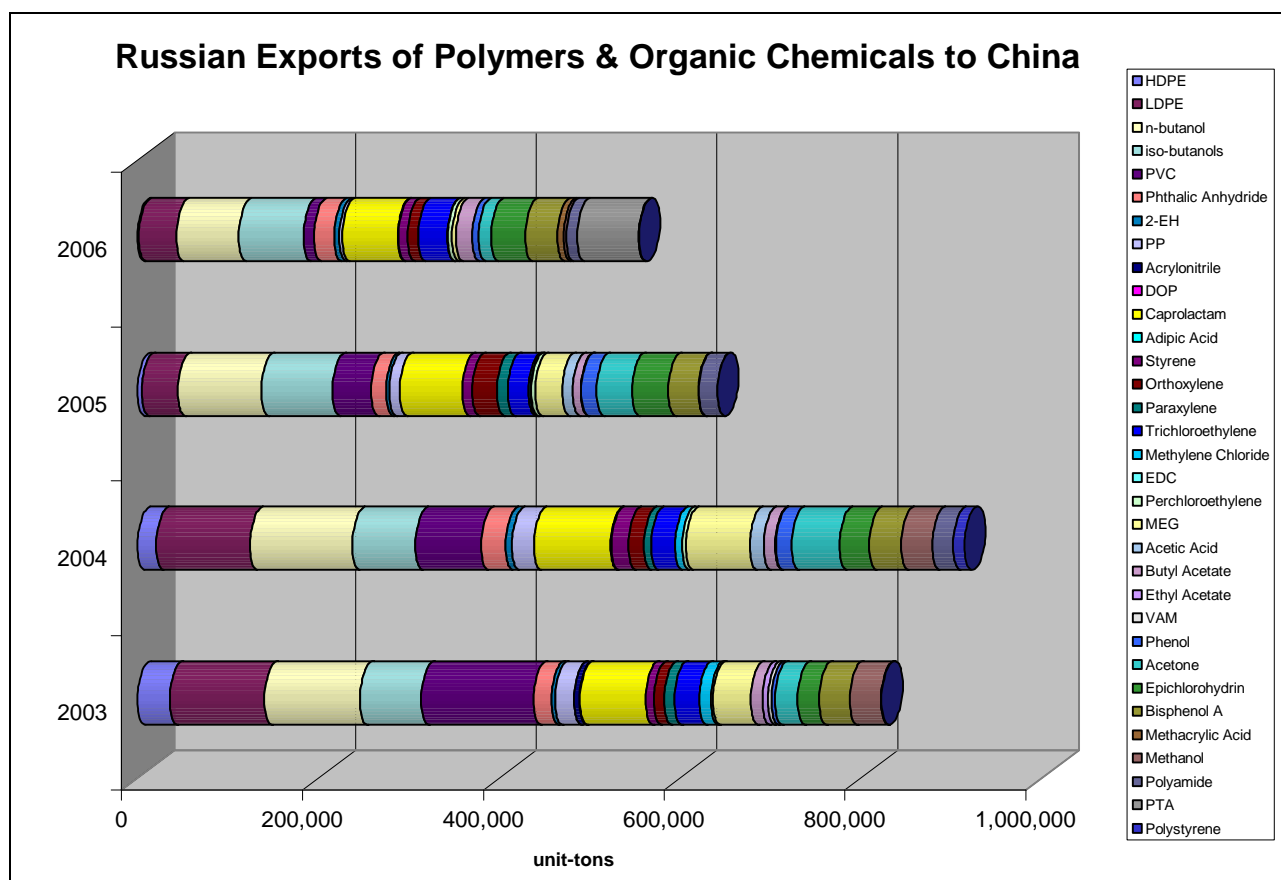
The largest increase in the plastics sector was reserved for polystyrene production, which rose 22.2% over 2005. The main growth was seen at Nizhnekamskneftekhim which recorded an increase of 45.4%, and also Polystrol at Omsk which increased production by 20%.

#### Russian synthetic rubber 2006

Synthetic rubber production in Russia fell by 1% in 2006 to 1,134 million tons, influenced by a shortage of divinyl monomer for the Efremov Synthetic Rubber Plant. Increases in production volumes, however, were noted at Nizhnekamskneftekhim, Krasnoyarsk Synthetic Rubber Plant and Voronezhskintezkaucuk. The production of synthetic rubber in December 2006 was reduced by 4.3% to 94,400 tons in contrast to December 2005.

#### Russian base chemicals 2006

Caustic soda production totalled 1.266 million tons in 2006, 1.7% higher than in 2005. All plants recorded increases, with the exception of Azot at Novomoskovsk. Utilisation rates were in the range 75-78%. Calcium carbide production rose 13.2% to 155,000 tpa, with soda ash rising 8.9% to 2.81 million tons. Ammonia increased by 2.8% as the result of ongoing modernisation and expansion, with the total reaching 12.8 million tons. Methanol also saw an increase due to expansion at Togliattiazot. Production in total rose 7.2% to 3.156 million tons.



#### Russian chemical trade 2006

Exports of organic chemicals from Russia increased though Finland in 2006, mostly influenced by higher methanol volumes. However, exports of organic chemicals and polymers to China fell again in 2006 as more

product was directed towards internal consumption. As the graphic below on page 7, the peak of Russian exports was achieved in 2004, but the last two years have seen much lower volumes.

From 1 February, export duties for petrochemicals were reduced by the Russian government to \$133.4 per ton for benzene, toluene, xylenes, propane, butanes, ethylene, propylene, butylene, butadiene, and also other liquefied gases. Petrochemical monomers are generally accounted for by captive consumption and long term contracts with internal customers, so these duties are hypothetical for some products.

| <b>Russian Chemical Commodity Exports<br/>(\$ Million)</b> |             |             |
|--|-------------|-------------|
| <b>Product</b>   | <b>2006</b> | <b>2005</b> |
| Methanol   | 636.1       | 248.8       |
| Synthetic Rubber   | 1,161.0     | 965.1       |
| Ammonia  | 707.5       | 628.9       |
| Nitrogen Fertilisers                                       | 1,510.0     | 1,413.0     |
| Potassium Fertilisers                                      | 1,208.0     | 1,189.0     |
| Phosphate Fertilisers                                      | 158.3       | 172.7       |
| Mixed Fertilisers  | 1,362.0     | 1,277.0     |
| Total  | 6,742.9     | 5,894.5     |

Chemical exports out of Russia remain a strong area of activity, despite the increase in imports in recent years. Exports of chemicals in 2006 were valued at \$14.2 billion, 3% up on 2005, representing around a third of total production. Exports largely consist of low value commodities, such as mineral fertilisers which accounted for 32% of export revenues last year, whilst the main focus of imports are added value products, including plastics, paint materials, polyester fibres and plant protection agents. The export values from commodities are listed opposite

Imports of chemical products amounted to \$19.3 billion in 2006, 29% up on 2005. The government seemed to loosen its policy on protection last year, with some import duties reduced for products which were in short supply domestically.

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### **Feedstocks**

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#### **Oil refining 2006**

The volume of refined oil in Russia totalled 220 million tons, 5.7% higher than in 2005. Automobile gasoline production totalled 34.4 million tons, an increase of 7.4%, and diesel fuel 64.2 million tons, showing an increase of 7%. Total oil and gas condensate production rose by 2.1% in 2006, reaching 480 million tons.

#### **Novatek-Nizhnekamskneftekhim**

Novatek has signed a protocol with Nizhnekamskneftekhim over co-operation initially up to 2009, and beyond up to 2012. The main focus of the protocol is on how to increase supplies of hydrocarbon gases from Novatek to Nizhnekamskneftekhim. The two companies are also considering Nizhnekamskneftekhim supplying polypropylene to Novatek-Polimer at Novokuibyshevsk for the production of BOPP.

Novatek plans to produce up to 30 billion cubic metres of gas in 2007, with targets set for 45 billion cubic metres of gas in 2010 in agreement with Gazprom. In 2006, the company produced 28.7 billion cubic metres, which was 13.9% higher than 2005.

#### **SIBUR-Kazanorgsintez**

SIBUR and Kazanorgsintez have run into dispute over gas and polyethylene supplies. SIBUR claims that Kazanorgsintez has failed to abide by an agreement whereby in exchange for gas supply from Orenburggazprom it delivered polyethylene to SIBUR. The two sides had a tolling agreement to supply Gazprom with polyethylene, but Kazanorgsintez did not meet its obligations in January this year, which may result in SIBUR going to court.

#### **Minnibayev-Kazanorgsintez**

Tatneft plans to reconstruct the Minnibayev gas processing plant, with the aim of increasing ethane supplies to Kazanorgsintez. Around 623 million roubles have been provided for the project for the 2007-2008 period, increasing capacity from 120,000 tpa to 170-180,000 tpa. The price of ethane will be set so that the investments would be paid for in seven years. These requirements are explained in that ethane has limited sale opportunities. The problems with SIBUR recently over ethane and polyethylene supplies (see above) are putting more pressure on Tatneft to find alternative feedstock sources.

#### **Petersburg Fuel Company**

Petersburg Fuel Company (PTK) plans to open a processing plant for wide fractions of light hydrocarbons in the Kirov district of the Leningrad region. PTK has reached agreement with the Leningrad region to



construct a processing plant for hydrocarbons. The capacity of the plant will be 100,000 tpa with raw materials coming from Surgut.

#### **Gazprom-KMG**

KazMunaiGaz (KMG) and Gazprom are creating a jv at the Orenburg Gas Processing Plant, which will involve the purchase of crude gas and the sale of dry gas. KMG paid \$350 million for a 50% stake, which will have a term of 15 years. Gas will be supplied from the Karachaganak gas field, in the north western part of Kazakhstan.

#### **TAIF-RUSAL**

RUSAL, one of the top-three global aluminium producers, announced last year an agreement with TAIF to build a heavy oil waste processing plant at Nizhnekamsk. The plant will have a capacity of 400,000 tpa of coke and 450,000 tpa of straight-run gasoline, which will be consumed by Nizhnekamskneftekhim. The estimated cost of the project is over \$400 million. TAIF has placed a tender for the construction of a plant for the deep processing of with a capacity of 3 million tpa, with a prospect of increasing capacity to 6 million tpa. The results of tender will become known in the first half of 2007. The project is intended to be finished by 2009.

The coke will be processed from tar oil and heavy oil waste from the Nizhnekamsk NPZ and Nizhnekamskneftekhim. This project brings RUSAL closer to achieving full raw material self-sufficiency by 2013 not only in bauxite, but also in coke and resins, which are key components in the technological process. The facility will help RUSAL boost the secure supply of coke to its smelters by almost one fourth. The project will also provide additional feedstocks to Nizhnekamskneftekhim.

RUSAL's aluminium smelters currently require about 1.5 million tpa of coke, which is purchased in Russia, the CIS and China. By 2010, RUSAL's needs in this raw material will have risen to 2.5 million tpa.

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### **Petrochemicals**

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#### **Russian ethylene market**

Russian ethylene production totalled 2.1 million tons in 2006, with capacity utilisation overall for the sector rated at 73%. Details of quarterly production results for individual crackers, together with capacity data, can be seen at [www.cirec.net/report](http://www.cirec.net/report). The next few years should see steady increases in production levels, in line with the expansions and new capacity which is under construction or planning stages. After expecting an increase to over 2.3 million tons in 2007, production is forecast to reach 2.7 million tons by 2009 and 2.86 million tons by 2010. Large scale increases are expected in the 2011-2012 period.

#### **SIBUR-Holding, Production 2006 (unit-million tons)**

| <b>Product group</b>        | <b>2006</b> | <b>2005</b> |
|-----------------------------|-------------|-------------|
| Liquefied hydrocarbon gases | 2.942       | 2.891       |
| Monomers                    | 2.149       | 1.903       |
| Polymers                    | 0.557       | 0.577       |
| Syn Rubber                  | 0.624       | 0.584       |
| Organic synthesis           | 1.038       | 0.986       |
| Fuels and lubricants        | 0.667       | 0.656       |
| Mineral fertilisers         | 1.362       | 1.382       |

#### **SIBUR-Holding 2006**

SIBUR-Holding increased petrochemical production by 9% in 2006, totalling 14.121 million tons against 12.956 million tons in 2005. Also, the group reported a 10.2% rise for the output of dry gas from 10,951 cubic metres in 2005 to 12,076 cubic metres. The results were achieved due to an increase in oil and gas processing, and improvements in logistics.

Tobolsk-Neftekhim increased capacity of its gas fractionating unit in 2006 and butadiene plant, whilst

SIBUR-Neftekhim expanded its production of ethylene oxide and glycols. Other projects in 2006 included the start-up of the expanded styrene plant at SIBUR-Khimprom, and the reconstruction of the ammonia and urea plants at Azot at Kemerovo.

#### **Sayanskkhimplast-ethylene**

In the likely event that Gazprom takes a majority stake in the Kovytko gas condensate field from TNK-BP, plans are being developed to construct an alternative gas pipeline in the Irkutsk region to the original pipeline route started by TNK-BP. The problem for Sayanskkhimplast's ethylene plans is that the Gazprom gas pipeline will be directed to Angarsk, rather than Sayansk. Gas from Kovytko is integral for the development of Sayanskkhimplast. TNK-BP had been planning to direct the pipeline to Sayansk, as part of the jv arrangements with Sayanskkhimplast. TNK-BP has already created a jv with Sayanskkhimplast (ZAO Gas-

Processing Company) for the construction of a processing plant with a capacity of 2.5 billion cubic metres of gas per annum. The project was started in 2006, but construction has now been stopped. Without the ethane, Sayanskkhimplast cannot develop its VCM and PVC complex. It seems improbable that two gas pipelines will be built, leaving Sayanskkhimplast without a feedstock source.

As a result of these developments Sayanskkhimplast would have to organise alternative feedstocks. Sayanskkhimplast has a license in the Zima section in the Irkutsk region, where it is now searching for gas. A second exploration well is planned for May 2007. However, Sayanskkhimplast has stated that this gas cannot replace material from Kovytko.

Gazprom considers Angarsk as a promising location for the development of gas-chemicals. Thus, it may mean that large-scale petrochemical plans are developed at Angarsk, which may ultimately provide the increased volumes of ethylene for the VCM-PVC complex at Sayanskkhimplast. However, it would not be the independent raw material position that Sayanskkhimplast was seeking.

#### **Tatneft-Nizhnekamsk NPZ**

Tatneft plans to invest 600 million roubles on the infrastructure for the new Nizhnekamsk NPZ petrochemical complex. The project documentation for the construction of a railway link is expected to be ready by April 2007, and the product pipeline should be ready by June. The project will receive support from the central government for the development of infrastructure.

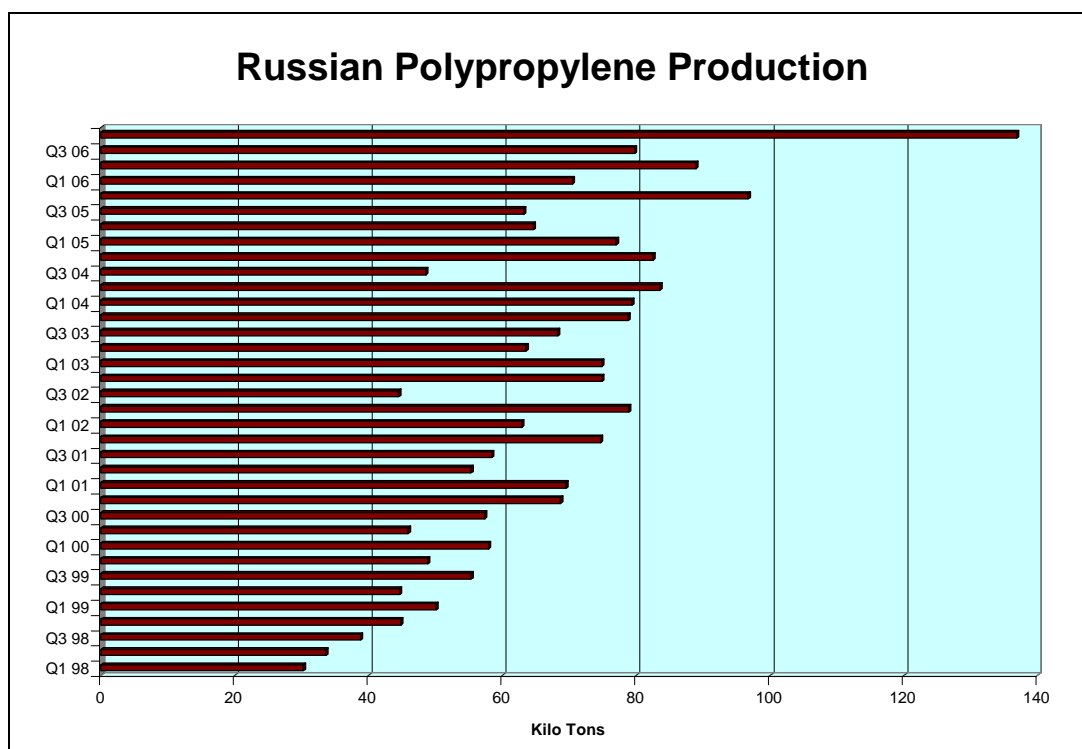
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### **Polyolefins**

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#### **LUKoil-Neftekhim, polypropylene**

LUKoil-Neftekhim expects to complete to start up the polypropylene plant soon at Budyennovsk, after several years of construction. Around 3.6 billion roubles has been invested in the project at the Stavrolen complex, which will have a capacity of 120,000 tpa. This year LUKoil-Neftekhim also plans to begin the building of a second stage for the production of polyethylene at a cost of 900 million of roubles. Production of polypropylene saw a major increase in the fourth quarter of 2006, as shown in the graphic below.



#### **Tobolsk-Neftekhim**

Tobolsk Power Station is increasing supplies of energy by 2009 for Tobolsk-Neftekhim to support investment projects in polypropylene and the new petrochemical complex. The complex will cost a total of 52 billion roubles involving two main stages. The polypropylene plant will be constructed in the 2007-2009 period, with

a capacity of 450,000-500,000 tpa, followed by the construction of the polyethylene plant with a capacity of 500,000 tpa. Production from Tobolsk will be exported to other regions and possibly abroad. The main part of industrial production in Tobolsk is based around Tobolsk-Neftekhim, which means that investments have an enormous effect on the social and economic development of the city.

#### **Nizhnekamskneftekhim-polypropylene**

Nizhnekamskneftekhim has conducted the successful guarantee tests of homopolymers of polypropylene, together with Basell and Tecnimont. Nizhnekamskneftekhim' is set to produce co-polymer grades of polypropylene and block-copolymers. The capacity of polypropylene production of the plant, which started in 2006, is 180,000 tpa. The eventual target is to expand capacity to 400,000 tpa. However, this is largely dependent on propylene investment and may not be feasible until Nizhnekamskneftekhim undertakes a major expansion in cracker capacity.

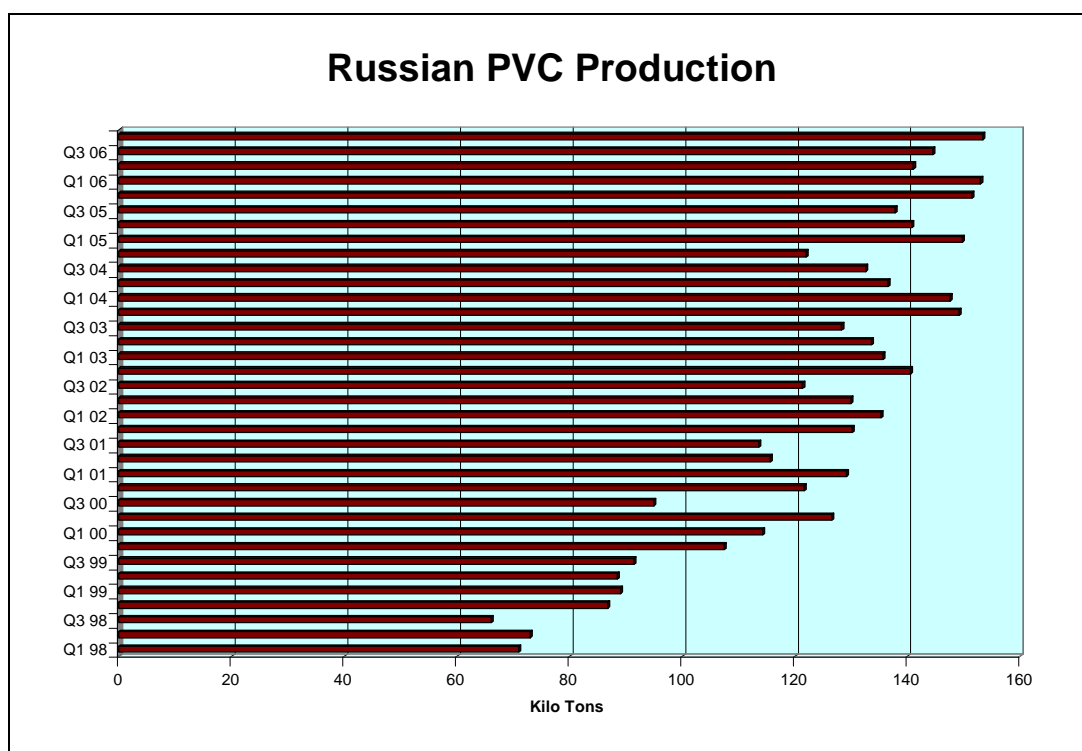
#### **Novy Urengoy LDPE**

Recent reports have indicated that the Novy Urengoy ethylene-polyethylene project in West Siberia could be completed and ready to run in the next three years. This is not the first time that a completion date has been signalled for the Novy Urengoy project, but reports from the plant are that the main problem of finance for the development of the infrastructure has now been resolved. Should the project be completed the plant capacity would be 400,000 tpa. The licensors for the complex are BASF and Linde, whilst ethane will be the feedstock for the ethylene plant.

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#### **PVC-Chlorine**

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#### **Plastkard 2006**

Plastkard increased PVC production by 5% in 2006 against 2005, with VCM exceeding design capacity by 38%. Turnover amounted to 2.5 billion roubles, with the company currently established in third place amongst Russian PVC producers, behind Sayanskkhimplast and Kaustik at Sterlitamak. This year capacity will be expanded to 90,000 tpa, with another 20-30,000 tpa to be added in 2008.

#### **PVC project Nizhniy Novgorod**

SIBUR-Holding is currently preparing the documentation for the construction of a new PVC complex in the Nizhniy Novgorod region. One of the major factors to be considered is the effect on the local environment. SIBUR-Holding and Solvay and the Nizhniy Novgorod government could conclude an agreement for the project in the near future, but there are many factors to be taken into account. The location of the new plant

was the subject of choice between the Kaprolaktam division at Dzerzhinsk and Kstovo, and now it seems it will be the latter. Investments into the project are expected to total around \$750 million. The project has been influenced by a deficit of PVC in the Russian market, where demand is rising rapidly and has been forecast in some circles to reach 1.2 million tpa by 2010.

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**Synthetic Rubber**

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**Russian tyre production 2006**

Russia produced 10.95 million lorry tyres in 2006, 6.4% down on 2005. Production in December amounted to 917,000 truck tyres, 4.4% lower than in the same month of 2005. The volume of car tyres in 2006 amounted to 27.6 million pieces, 1% up on 2005. Agricultural sector tyres amounted to 1.34 million pieces in 2006, 21.6% lower than 2005. Growth was seen at the Kirov Tyre Plant, Michelin at Orekhovo-Zuyevo, Nizhnekamskshina, and Amtel-Chernozeme at Voronezh. Falls were noted at the Moscow Tyre Plant and Voltyre at Volzhskiy. Lower production resulted from lower demand for obsolete standard sizes, and also due to the reconstruction of a number of plants. Yaroslavl Tyre Plant, which is part of SIBUR-Holding, reduced the production of car tyres by 19.6% in 2006 to 4.3 million pieces. The reduction was due to the reorganisation of the tyre business under SIBUR-Holding.

Nokian Tyres has decided to expand the Vsevolzhsk tyre plant by introducing a second line at a cost of €195 million. Tyre production capacity is expected to increase two fold to 10 million tpa by 2011. Nokian Tyres produces summer and winter tyres in Russia, with production starting in 2005.

**Kazan Plant of Synthetic Rubber 2006**

Kazan Plant of Synthetic Rubber (KPSR) recorded losses of 15 million roubles for 2006, due mainly to the increases in raw material costs. In the past four years, raw material costs have risen 3.5 fold. Despite the losses KPSR achieved a turnover of 1,393 billion roubles in 2006, reflecting an increase of 7.9%. The increase was due to the production of Thiokol and rubber compounds. The main problem facing the company is a lack of butadiene, over the past three years the shortfall from suppliers (mainly Nizhnekamskneftekhim) has amounted to 23,000 tons.

KPSR is the sole producer in Russia of butadiene rubber grade SKV, which is used in the construction of automobiles, the food and cable industries, etc. This market is characterized by strong product competition from other natural rubbers, butadiene and butadiene-styrene. The advantage of SKV on the Russian market is the lower price in comparison with other butadiene rubbers.

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**Aromatics & derivatives**

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**Russian PET market**

The expansion of PET capacity in Russia over the next few years should turn a market largely dependent on imports into a strong surplus by 2010-2011. Capacity for PET could have grown to 1.6 million tpa in the next three to four years, if all the projects materialise against a projected demand of 800-850,000 tpa. In 2006, imports accounted for 76.9% of Russian PET consumption, comprising 407,000 tons out of a total market of 530,900 tons.

Most of PET consumption in Russia is directed to bottles (94.8%), compared to the global trend of using PET for the production of fibres. If Russian PET bottle capacity is to exceed demand producers will be forced into export markets or to diversify consumption in the domestic fibre market.

Whilst the capacity of PET production is set to rise dramatically, the position is less clear for the paraxylene. Apart from the announcement of the Tatneft project at Nizhnekamsk there is no other news of paraxylene developments, although it is likely that SIBUR-Holding and LUKoil Neftekhim will provide some investment. In southern Russia, Appleks in the Stavropol region has unveiled plans to construct a PET plant in several stages with a total capacity of 460,000 tpa. SIBUR-PETF plans to increase capacity to 90,000 tpa at Tver by 2010 and Senezh to 220,000 tpa.

**Kaliningrad PET project**

Uhde Inventa-Fischer was awarded in late 2006 a contract by the Russian company Alco-Naphtha LLC for the construction of a large-scale PET resin plant. The new PET resin plant, which will have a capacity of

240,000 tpa, will be located at Alco-Naphtha's site in Kaliningrad. It will be the biggest single-line polyester plant in Europe, and is expected to come on stream in the first half of 2009. .

Alco-Naphtha has chosen Uhde to supply the permit engineering in accordance with Russian statutory regulations and the outside-battery-limit engineering for the plant site near Kaliningrad.

The new plant will use Uhde Inventa-Fischer's proprietary 2-Reactor technology and Melt-To-Resin process to produce high-quality PET resin grades for Russia and other markets which can be processed into PET bottles and containers for CSD. The new plant in Kaliningrad will be the first plant in the CIS and East Europe based on the MTR process that is said to be the most advanced process for PET resin production. Overall, the 2R-MTR technology allows to reduce the cost of converting PTA and MEG into PET resin by around 28% compared to conventional polycondensation technologies.

### **Polief-PET start-up**

Polief expects to complete the construction of the PET plant at Blagoveshchensk in Bashkortostan by the start of July this year, which is several months later than expected. Up until May, the company will focus on establishing the buildings for the raw materials, such as isophthalic acid. Investment costs into the project are estimated at 1.5 billion roubles.

### **Polief-PTA & PET expansions**

SIBUR-Holding and LUKoil-Neftekhim plan to complete the transfer of shares in Polief by the start of March, which will make the companies the joint controlling owner of the Blagoveshchensk plant. Large-scale plans for Polief include an increase in PTA capacity to 600,000 tpa by 2011, and PET to 400,000 tpa. These projects will be co-ordinated through the JV between SIBUR-Holding and LUKoil Neftekhim, entitled Domestic Polymers. The project is planned in two stages. The first stage involves the expansion of PTA capacity to 250,000 tpa by the end of 2008, and the PET plant to 210,000 tpa by 2010. The second stage involves the construction of a new plant for PET with a capacity of 200,000 tpa and PTA for 350,000 tpa. The start-up dates for these two projects seem likely to take place in 2011-2012. Capacity developments can be monitored on the CIREC Report Tool at [www.cirec.net/report](http://www.cirec.net/report). The major question that needs to be resolved regarding the proposed PTA plans is over paraxylene supply, and how this will be increased.

### **Senezh-isophthalic acid**

Senezh has started the construction of an isophthalic acid plant with a capacity of 6,000 tpa. Production will be located on the Senezh site at Solnechnogorsk. Isophthalic acid is used as one of the raw materials in the production of bottle PET.

Senezh Polymer Plant hopes to account for 20-25% of the Russian PET market in 2007, increasing market share to 40-45% by 2009 although this may be constrained by other plant developments. Senezh Polymer Plant started its 90,000 tpa PET plant in the Moscow region in May 2006 and increased production capacity of PET at its first line from 90,000 to 100,000 tpa, after completing adjustments to the equipment. With the introduction of the second line in 2009, the capacity will total 220,000 tpa.

### **PET project-Stavropol**

At the end of January, the Stavropol Administration signed a general agreement with Lurgi Zimmer, the local company Appleks and Korus-21 of South Korea for the construction of a PET plant in the region. The project concept was initiated in 2006, passing agreement in the territorial ministries and departments. The construction site was selected (near the Cossack village of Marinskiy in the Kirov region).

The capacity of the plant initially is expected to be 140,000 tpa in October 2008, with a second line of 160,000 tpa planned for December 2008. A third line is planned for May 2009, with capacity eventually rising to 460,000 tpa. Raw materials for the plant are likely to come from South Korea and Bashkortostan. Such a project would require a substantial amount of PTA and other intermediates, and this may prove the most challenging aspect of the project.

### **Novomoskovsk Orgsintez-benzene sulphonic**

Orgsintez at Novomoskovsk has started supplying benzene sulphonic acid to Norilsk Nickel. The product is used in the production of additives for the diesel oils and diesel fuel, and it serves as a catalyst in the reactions of condensation and polymerisation. Novomoskovsk Orgsintez is the only producer of benzene sulphonic acid in Russia and its main clients are Procter & Gamble, Rosenergoatom, etc.



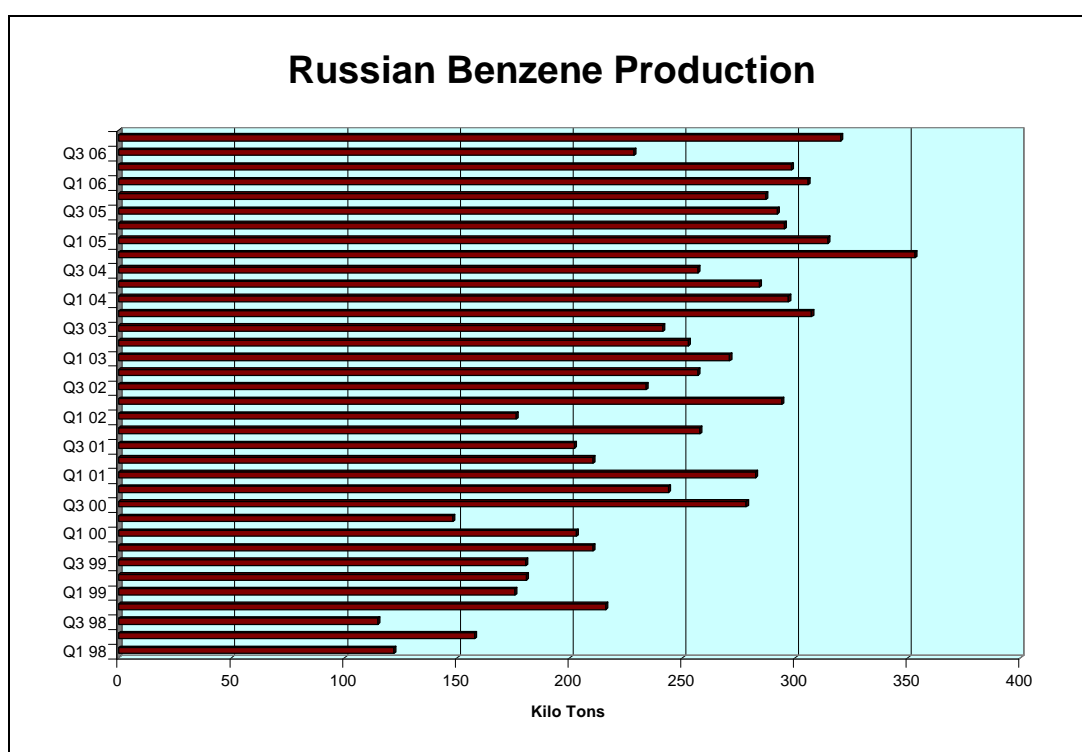
**Shchekino Khimvolokhno-polyamide 6**

Shchekino Khimvolokhno, which is a part of Shchekinoazot, is undertaking work on its third line for the production of polyamide 6 which will increase total capacity to 2,400 tons per month, or 80 tons per day. Installation should be completed in the next few weeks. The construction of the new air-compressor station at Khimvolokhno is in the final stages, which will make it possible to provide an uninterrupted supply of compressed air for production.

**Altai-Koks-benzene**

Altai-Koks produced 31,900 tons of benzene in 2006, 11.6% down on 2005. The plant produced 2.9 million tons of coke, 6% down on the previous year. The company also produced 67,200 tons of ammonium sulphate, 3.4% up on 2005. The start of the fifth coke unit last year added 173,100 tons of production.

In total, Russia produced 2.03 million tons of coke in 2006, 1.14 million tons higher than 2005. Exports amounted to 0.92 million tons of coke. Benzene production in Russia overall has hardly changed since 2002, ranging around 80,000 tons per month from crackers, steam reformers and coke based producers. Quarterly production trends for benzene production in Russia from Q1 1998 to Q4 2006 are illustrated below.



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**Methanol/Gas based products**

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**Azot Novomoskovsk 2006**

Azot at Novomoskovsk increased urea output in 2006 by 16.7% to 848,600 tons, due partly to an increase in ammonia production. Fertiliser production increased by 4.47%, whilst methanol rose 12.1% after reconstruction. Azot reduced chlorine and caustic soda production due to the strength of competition in the domestic market. Chlorine production fell by 20.9%, whilst caustic soda fell 16.2%. Calcium carbide production increased 4% to 6,030 tons, whilst dimethyl ether increased 2.2 fold to 1,040 tons. Azot has started work on modernisation and expansion of the ammonia-2 installation, which is aimed at increasing productivity and reducing energy consumption. This project will increase ammonia production to 1,550 tons per day and reduce consumption of gas in ammonia production.

**Azot Nevinnomyssk 2006**

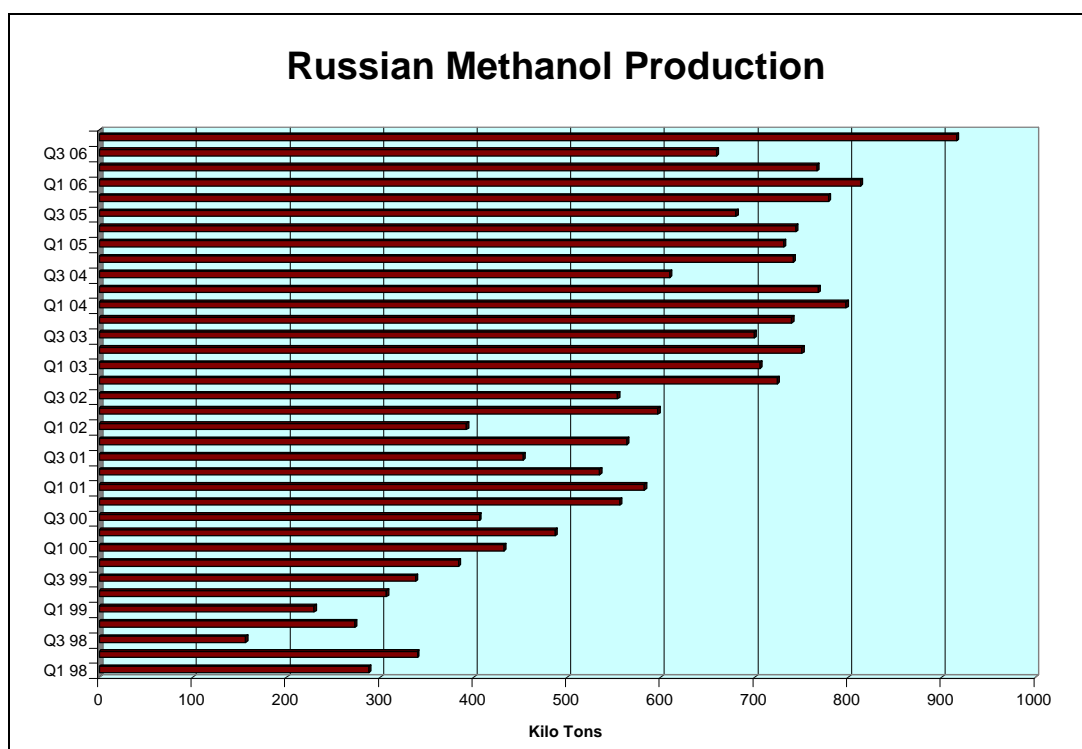
The ongoing modernisation programme at the Azot complex at Nevinnomyssk resulted in lower production in 2006, with mineral fertiliser production falling 8.7% to 1.070 million tons and urea falling by 65,500 tons to 815,000 tons. Methanol and acetic acid production fell 5% and 4% respectively. At the same time, production of butyl acetate and methyl acetate increased due to an improving market. Azot invested more

than one billion roubles in modernisation in 2006, by increasing ammonia production by 70 tons per day at the number two unit. Production volumes in total increased 5.3% at Nevinnomyssk over 2005.

#### **Metafrax 2006**

Metafrax increased turnover by 20% in 2006 to reach a total of 6.17 billion roubles. Methanol production fell 6.3% to 788,000 tons, with formaldehyde rising 12.2% to 224,000 tons and utropin by 1.8% to 15,900 tons. The company's biggest increases were in pentaerythritol which increased 1.3 times to 16,274 tons, and sodium formate by 1.48 times to 8,412 tons.

Metafrax is currently building a new utropin plant. Efforts were first addressed towards revamping the existing plant, but this did not correspond to the contemporary requirements of market. Urotropin is used in the production of explosives and in medicine, and accounts for around 3.5% of total turnover of Metafrax. The cost of project will be \$12-13 million with a payback period of five years. A contract with the equipment suppliers is expected to be concluded by the end April 2007. The new installation will be put into operation at the beginning of 2008, and will have a capacity of 20,000 tpa against the current plant of 14,000 tpa.



#### **SIBUR interested in Togliattiazot**

SIBUR-Holding has started negotiations over the purchase of a controlling packet in Togliattiazot. SIBUR-Holding sees the purchase of Togliattazot as part of the new structure of the group. In 2006, Togliattazot increased production of ammonia by 10% to 2.635 million tons, methanol by 6% to 407,000 tons), and urea-formaldehyde resins by 20% to 36,700 tons. Urea production totalled 783,000 tons. The methanol complex was expanded last year to 1 million tpa, and a new line for urea-formaldehyde resins was started up with a capacity of 25,000 tpa.

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### **Belarus**

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#### **Oil prices**

Belarus has concluded advantageous contracts for oil supplies with Russia for this year with companies such as Surgutneftegaz, LUKoil, Tatneft, and Rosneft. The contracts have been concluded under a new pricing formula, which mean that the price of oil for Belarus will be at least \$130 cheaper than for consumers of Russian oil in Poland, Germany and other countries. Prices are likely to increase in the short to medium term, but at least the agreements for 2007 give some respite for petrochemical producers. Polimir at Novopolotsk has been running at normal rates since the start of 2007, but higher crude prices will have to be factored into the large-scale investment plans.

### Mogilevkhimvolokno

Mogilevkhimvolokhno plans to increase production by 18% in 2007 due to projects involving modernisation and revamping that have been completed over the past couple of years. The main project in 2006 consisted of the start-up of polyester high-modulus high-strength thread production, and polyester bicomponent fibres. In 2006, the company invested a total of \$64.740 million (138.8 billion Belarussian roubles). In 2007, Mogilevkhimvolokhno plans to undertake four projects, all of which are part of the investment programme covering the 2006-2010 period.

### Soda ash-Gomel

A new soda ash plant is being planned in Belarus, in conjunction with Austrian investments. The project is planned for the Gomel region, and is the revival of an idea that was first considered several years ago. The plant's location has been selected due to its access to rail and road links.

## Ukraine

### Karpatneftekhim 2006

Karpatneftekhim increased the production of ethylene in 2006 by 17%, propylene by 15% and benzene by 13%. The reasons for the increased were due to the installation for C4-C5 fractions, which increased processing of diesel fuel to 135,000 tons. In other product areas, Karpatneftekhim achieved only 61% of the VCM production total in 2005, and 71% of caustic soda.

| Ukrainian Ammonia & Urea Output<br>(unit-kilo tons) |         |         |
|---|---------|---------|
| Ammonia   |         |         |
| Producer  | 2006    | 2005    |
| Stirol  | 1,329.6 | 1,385.0 |
| Odessa portside                                     | 1,127.9 | 1,135.3 |
| Azot Severodonetsk                                  | 1,014.7 | 965.6   |
| Azot Cherkassy                                      | 753.0   | 874.0   |
| Dniproazot  | 523.0   | 508.6   |
| Rivneazot   | 382.1   | 357.3   |
| Total   | 5,130.3 | 5,225.8 |
| Urea  |         |         |
| Producer  | 2006    | 2005    |
| Stirol  | 815.9   | 862.8   |
| Odessa portside                                     | 902.5   | 869.0   |
| Azot Severodonetsk                                  | 371.9   | 352.4   |
| Azot Cherkassy                                      | 688.3   | 748.8   |
| Dniproazot  | 738.6   | 760.3   |
| Total   | 3,517.2 | 3,593.3 |

### Ukrainian ammonia & urea output

Ukrainian ammonia and urea production fell by 2% in 2006. Azot Cherkassy posted the largest fall due to a gas supply shortage in April-June, and an ammonia facility revamp in October-November. Stirol reported the second largest fall, 4% in ammonia and 5% in urea, stemming mainly from repairs in September-November following an explosion at one of its ammonia facilities. Azot Severodonetsk increased production of ammonia and urea by 5% for each product, its highest level since 2003. The high price of the gas for the most part makes Ukrainian enterprises noncompetitive in comparison with Russian producers. Collective Ukrainian growth targets for 2007 include 227,000 tons of ammonia or a 4.4% increase, with urea increasing by 72,000 tons or 1.2% over 2006.

### Azot Severodonetsk-profits 2006

Azot at Severodonetsk saw net profits fall to 131 million roubles in 2006, or by around ten-fold less than in 2006. The main factor behind the fall in profits was the increase in gas prices at the start of 2006, which after tax and transport costs averaged \$185 per thousand cubic metres. To offset high gas prices, the company needs to sell urea and ammonia at high prices, which can be difficult in an over-supplied market. Influenced by gas prices Azot saved 6.9 million cubic metres of natural gas for the sum of \$812,500 in 2006, due to the use of energy-saving technologies. This enforces the view that higher raw material prices stimulate improved efficiency. Azot not only made savings on gas purchases, but in other areas of procurement such as steam and imported raw materials.

Orgsintez, which is part of Azot, has introduced a line at Severodonetsk for the production of ABS plastics based on purchased materials from outside the complex. Products from the line will be shipped to Africa and South America.

### Khimprom Pervomaisk-chlorine restart

Khimprom at Pervomaisk, in the Kharkov region, started the process in January of reviving caustic soda and chlorine production. The restoration period required 12-13 days in order to heat up the furnace. The Ministry of Industry will soon start talks with potential investors in Khimprom. One of the requirements is that the investor should provide funds for the purchase of gas and paying off outstanding wages. The privatisation of the bankrupt Khimprom was first considered in May 2006.

After the restart of production at Khimprom the company is looking towards the modernisation of the production facilities. The reconstruction of chlorine plant with the introduction of the new membrane technology of electrolysis is the main point of this programme. Currently the plant uses the diaphragm process, but the new technology could facilitate a 40% reduction in costs on energy consumption, and an improvement in quality of caustic and chlorine production.

### **Crimean Titan**

Crimean Titan produced 86,950 tons of titanium dioxide in 2006, 0.28% lower than 2005. The lower production was due to the ongoing modernisation of the plant. Sulphuric acid production fell by 3,024 to 533,476 tons.

### **Stirol Gorlovka**

Ukraine's Antimonopoly Committee has approved the purchase of a 50+1 % stake in the nitrogen fertiliser producer Stirol by Dotterbloem Holding B.V. of the Netherlands. Most likely, this is a technical deal and the beneficial ownership will not change. However, there is still a possibility that Stirol's management could sell out a portion of its stake.

Stirol is examining ways of reducing dependency on Russian styrene for polystyrene production at Gorlovka. Ideally, the company could produce its own styrene, but whilst there is benzene available in Ukraine ethylene is only available in the western part of the country and is some distance from the Stirol complex. Thus, it seems that eliminating the need for Russian styrene imports is unlikely to happen quickly. Stirol introduced a new line for the production of polystyrene suspension grade in 2006, taking capacity to 50,000 tpa.

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## **Central Asia**

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### **Navoiazot**

A 49% package in Navoiazot has been up for sale to foreign investors by the Uzbek government. The company was created originally in 1964 and known as the Navoi Chemical Combine it produced 130 types of products covering a number of product groups in fertilisers, methanol, etc. The existing complex includes 76 production units, covering 682 hectares and employing 9,700 people.

Navoiazot's investment programme is focused on the construction of a chlorine unit, in conjunction with chlorine based products and caustic soda. Other investment plans include the technical re-equipping and building of energy-saving technologies, for products such as ammonia, nitric acid, ammonium nitrate and dry cyanide salts.

Navoiazot has two joint ventures with foreign investors, which are helping to expand production. Tomas Navoi has been founded with Czech partners for the production of dry cyanides, with a capacity of 10,000 tpa. The second and larger venture is called Navoi-Plast and is with Kaustik of Volgograd for the production of 120,000 tpa of PVC and 80,000 tpa of chlor-alkali.

This latter project is expected to start construction by the end of 2007. The start-up of the new complex is planned for Navoi for 2009 and will cost around \$200 million. The Uzbek side will control 30% of the jv, with Kaustik being the major owner providing the equipment and technology for the project. The Uzbek side will provide the site for the production facilities. Navoiazot already produces 30,000 tpa of caustic soda, and will raise production to over 100,000 tpa after the start-up of the new plant. For the production of PVC, around 10-15% will be directed towards the domestic market and the remainder is planned to be sold in Russia.

In the past year, the company has undertaken studies on the expansion of its market sales. This research has been extended to outside of the region, whilst its traditional markets include Tadzhikistan, Turkmenistan, Kazakhstan, Kyrgyzstan, Afghanistan, Iran, China and Turkey.

## Currencies

(Czech crown, Kc, \$1= 21.531, €1 = 28.351)  
 (Hungarian Forint, Ft, \$1 = 191.00, €1 = 252.69)  
 (Polish zloty, zl, \$1 =2.9486, €1 =3.8826)  
 (Ukrainian hryvnia, \$1 = 5.0348, €1 = 6.6296)  
 (Rus rouble, \$1 = 26.170, €1= 34.459)

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