

# CIREC

## MONTHLY NEWS

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

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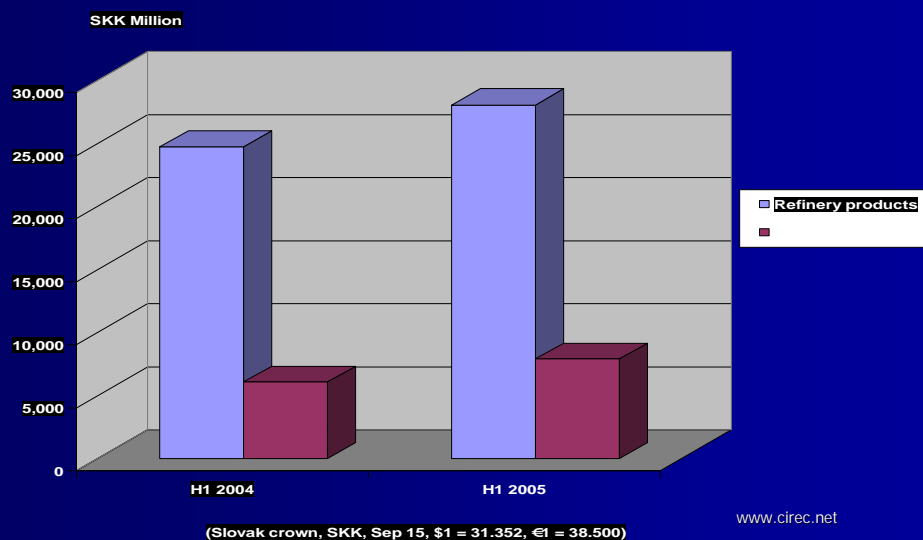
Czech Republic | Slovakia | Hungary | Poland | Bulgaria | Romania | Croatia | Slovenia | Yugoslavia | Baltic States | Russia | Belarus | Ukraine | Transcaucasus | Central Asia | Kazakhstan

Issue 178, 19 Sept 2005

### ***Features from the tenth issue in 2005***

- ? PKN Orlen has been required to pay Kc 1.645 billion more for the stake in Unipetrol than it had initially agreed to, following an audit in Unipetrol carried out by KPMG. PKN Orlen originally paid Kc 13.05 billion for Unipetrol, of which Kc 11.304 billion was directed for Unipetrol's shares held by the Czech privatisation agency FNM.
- ? The expansion of polyolefin units at BOP is in line with PKN Orlen's strategy regarding investment in middle distillates and petrochemicals. In October, 2005, the new HDPE and polypropylene installations will be launched and starting from 1 October 2005, Basell Orlen Polyolefins will be responsible for an off-take to be sold in Poland.
- ? Zimmer will also upgrade a Polish polyamide plant operated by Zakłady Azotowe W Tarnowie-Moscicach. The work will increase production capacity of PA chips from 23,000 tpa to 45,000 tpa by the end of this year. The project is an expansion of the existing PA 6 plant built by Zimmer in 1995.
- ? Russian petrochemical production in the first seven months of 2005 showed little improvement on the same period last year. Production of ethylene, propylene, polyolefins in Russia all showed lower volumes for the first seven months. This was partly due to the continued feedstock shortages at Kazanorgsintez. This situation at Kazan should be addressed by the end of the year, with the completion of the repairs at the Orenburg helium plant.
- ? The new polyethylene project planned for Astrakhan is being balanced against local environmental concerns, so there are a few delays in getting the project started. The project will be based on ethane from Gazprom's local subsidiary Astrakhangazprom, which has 12 billion cubic metres of gas of which can produce up to 70% ethylene.
- ? In the middle of September Kazanorgsintez started operating the benzene unit plant as part of the ethylene complex. The process for start-up has taken around 18 months and has been developed internally by engineers at Kazanorgsintez.
- ? LUKoil-Neftekhim is considering the opportunity of constructing an ethylene complex in the range of 500,000 tpa, but no decisive plans yet exist for the project. In October 2005, Salavatnefteorgsintez (SNOS) plans to start the production of orthoxylene, after the company's Sintez division undertook product trials in July. The production of in-house orthoxylene will allow the company to cease purchases from other plants such as Ufaneftekhim and the Omsk refinery. The capacity of the plant is only 15,000 tpa, but this will be sufficient to meet captive demand for phthalic anhydride production.
- ? Following maintenance Lukor has postponed for at least a month the restart of production at Kalush as growing crude oil prices have made its operation unprofitable. Lukor was supposed to resume operation in early September, but the high oil prices will keep it shut until early October.

# Slovnaft's Sales Revenues Jan-Jun 2005



## Slovnaft

Slovnaft's operating profit in the first half of 2005 reached SKK 2,516 million, which was just slightly behind the Q2 2004 profit of SKK 2,686 million. However, the adjusted operating profit of SKK 1,735 million for the second quarter in 2005 is significantly lower than in the same period in 2004. The decline in operating profit was due largely to the trends in prices of both crude oil and refined products. Internal drivers which influenced the performance during Q2 2005 included the shutdown of several production units with negative impact on crude oil processing and the production of both gasoline and diesel. This resulted in reduced sales' revenues. Conversely, the new polypropylene production unit was put into production by Slovnaft during Q2 2005 and started to contribute to the results. Revenues from product sales increased in Q2 2005 compared to Q2 2004, mainly due to a positive trend in refinery and petrochemical product prices.

Overall, Slovnaft is benefiting from synergies from the integrated activities are being achieved in the MOL group from the continuously improving supply chain management, single sales channel operations in fuel sales and plastics, and through joint crude oil purchasing.

## CENTRAL EUROPE

### Czech Republic

(Czech crown, Kc, Sep 15, \$1 = 29.292, €1 = 29.399)

## Unipetrol

PKN Orlen has been required to pay Kc 1.645 billion more for the stake in Unipetrol than it had initially agreed to, following an audit in Unipetrol carried out by KPMG. PKN Orlen originally paid Kc 13.05 billion for Unipetrol, of which Kc 11.304 billion was directed for Unipetrol's shares held by the Czech privatisation agency FNM. However, the price was subject to change depending on the outcome of an audit. The overall price of Unipetrol will therefore increase to Kc 14.695 billion.

PKN Orlen has accepted the request to pay the price determined by the audit. By 11 October, PKN Orlen and the FNM have to either approve the outcome of the audit or to raise comments to it, which then have to

be made clear by 25 October. After the audit is approved by both sides, PKN Orlen will need to pay the sum in approximately 20 days.

This aspect of the privatisation seems to be going ahead as planned, but major problems have arisen in PKN Orlen's relations with Agrofert over the arrangements that were originally planned for the transfer of assets in Unipetrol's chemical plants.

Under a contract, PKN Orlen was by 25 July 2005 required to deliver to Agrofert a letter of intent on a share transfer. Agrofert was to acquire from PKN Orlen a 100% stake in Kaucuk for €57.9 million, and a 40% share in Chemopetrol for €23.3 million. It is not clear what price had been agreed for Spolana. However, PKN Orlen decided this year to change its position on the transfer of these assets which has caused a rift between the two companies. PKN Orlen now regards the contract as disadvantageous and wants to back out of it, even if it has to pay a fine. The fine would equal 75% of the total value of the contract worth €103 million, which equates to €77 million. The broad opinion is that the companies are worth two or three times more than €103 million, but nonetheless the original price from the agreement was still binding. PKN has not made any steps to implement the terms of the agreement.

To recap, Agrofert won the first failed tender for Unipetrol in 2001 and its support for PKN Orlen in the April 2004 tender was regarded as a significant advantage in the eventual successful outcome. In the event, PKN Orlen was the only bidder in the tender and, at Kc 99 a share, offered much more than had been expected for the state's 63% stake. Part of the problem stems from the change in management in PKN Orlen, with the new regime attempting to withdraw from the contract with Agrofert. It had put aside a provision of zł 376 million in its second quarter results to pay for the fine. Agrofert has argued that the case should be re-opened for further discussion.

The deadline for payment of the contractual penalty amounting to €77 million expired on 9 September. However, Orlen did not pay despite the provision and stated in a letter to Agrofert that the claims are unjustified. Agrofert hopes that after the election on 25 September that PKN Orlen will finally present its specific proposals. The situation is extremely complicated and needs to be resolved before the chemical plants in the Unipetrol group know their future. If all options fail it could reach the point where Agrofert might even have to sue PKN Orlen. It has been suggested that Agrofert will demand at least Kc 10 billion from PKN Orlen if it fails to comply with agreements on the sale of five Unipetrol units to Agrofert.

### **Spolchemie**

The Via Chem Group, which holds almost 50% of shares in Spolchemie and is now the new principal owner, has announced that it wants to continue modernisation at Usti nad Labem. Via Chem Group, 100% held by Canada's Euro Capital Alliance Ltd, plans no job cuts in Spolchemie, which employs over 1,000 people, but wants to raise staff numbers in connection with expansions in production. Spolchemie expects sales of Kc 3.5 billion and a profit of Kc 30 million for 2005. State-controlled Ceska financni transferred 39% of shares to Via Chem Group in early September 2005. The company paid Kc 246 per share, or a total of Kc 372 million. A total of 12% of Spolchemie shares is in the hands of Jihomoravske drevarske zavody and 14.7% is still owned by Ceska financni, which finished a tender to sell the stock. The objective of Via Chem Group, set up in 2002, is to invest in the chemical industry in Central and East Europe so it may have further aspirations beyond Spolchemie.

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### **Poland**

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(Polish zloty, zł, Sep 15, \$1 = 3.2027, €1 = 3.9101)

### **PKN Orlen**

The Unipetrol deal continues to dominate the news about PKN Orlen. The company's website stated on 15 September "that PKN Orlen had asked Agrofert for consent with an entire disclosure of all the contracts signed by Agrofert and the previous management of PKN Orlen in 2003 and 2004. So far Agrofert has agreed only to reveal selected parts of contractual documentation. PKN Orlen is ready to make these contracts public in full text and original versions immediately after the receipt of consent from Agrofert."

PKN Orlen states that it has issued a consent for the full disclosure of the share purchase agreement with the National Property Fund. In view of public statements made by Agrofert, PKN Orlen has thus again requested Agrofert to countersign the letter to agree for disclosure of not only parts, but all the agreements,

letter of interest. So the picture is rather muddled and both sides are looking at the problem from a different angle, but there is still hope for a peaceful outcome.

#### Orlen's petrochemical expansions

Away from the Czech debacle projects have been reaching fruition in Poland at Plock, both for PKN Orlen and Basell Orlen Polyolefins (BOP).

<b>Polish Chemical Production (unit-kilo tons)</b>		
<b>Product</b>	<b>Jan-Jul 05</b>	<b>Jan-Jul 04</b>
Oleum	128.3	127.4
Soda Ash Light	213.8	213.4
Soda Ash Heavy	486.8	487.3
Ethylene	132.8	193.0
Propylene	122.9	113.8
Butadiene	19.0	25.9
Toluene	31.4	83.3
Phenol	22.1	38.1
Caprolactam	93.7	89.8
Polyethylene	60.9	84.9
Polystyrene	50.0	60.0
PVC	107.3	154.8
Polypropylene	78.4	72.6
Synthetic Rubber	62.3	58.8
Pesticides	20.3	21.5

The expansion of polyolefin units at BOP is in line with PKN Orlen's strategy regarding investment in middle distillates and petrochemicals. In October, 2005, the new HDPE and polypropylene installations will be launched and starting from 1 October 2005, Basell Orlen Polyolefins will be responsible for an off-take to be sold in Poland.

Due to the introduction of new petrochemical installations (including Olefin 11, Butadiene 11, gasoline dehydrogenation, and pyrotol) and the maintenance shutdown of other units (including Ethylene Oxide I and II, Ethylene Glycol I and II, and Phenol), the production of petrochemical products by PKN Orlen was limited in the second quarter of 2005.

In the first seven months of 2005, ethylene production was down by 60,000 tons on the same period last year. Propylene production was higher due to output from the FCC, but toluene was down due to modernisation of the

aromatics unit.

Notwithstanding the lower production volumes, new installations have been integrated without the shutdown of other operating installations. By the end of second quarter the start-up had been performed of the aromatic extraction unit producing benzene and toluene (based on products from Reforming 5 and Olefin II).

The major olefin and polyolefin expansions are listed below.

<b>Plock petrochemical expansions (PKN Orlen &amp; BOP, unit tpa)</b>		
<b>Product</b>	<b>Pre-expansion</b>	<b>Post-expansion</b>
LDPE	150,000	105,000
HDPE	-	320,000
Polypropylene	140,000	400,000
Ethylene	360,000	700,000
Propylene	240,000	485,000

#### Nafta Polska

Nafta Polska has now reached the stage where eight out of eleven entities, which submitted their investment proposals in August, have been qualified to the next stage of the privatisation process. Due diligence is now being performed, with the aim of finishing the privatisation process this year, or in early 2006 at the latest.

The greatest interest was noted for Organika-Sarzyna where five companies, namely, Advent, Polish Enterprise, Ciech, PCC and Organika Azot, were admitted to further negotiations. Sarzyna's profits are rising, and the company has been financially solvent for some time. PCC, Anwil and Norwegian Yara will compete for the Kedzierzyn and Tarnow plants, while Zachem may be taken over by PCC, Ciech or Malbork-based Organika.

Nafta Polska has reportedly dismissed Agrofert Holding from a privatisation tender for Zakłady Azotowe Kedzierzyn (ZAK). Agrofert sees the exclusion from the privatisation of ZAK as the first tangible effect of negative publicity in the Polish media over Unipetrol. Agrofert submitted the key document for the tender, an investment plan, on 9 August, a day after a Polish newspaper cast doubt on the privatisation of Unipetrol. The Rzeczpospolita newspaper said that PKN Orlen, which bought Unipetrol from the Czech government, had signed secret contracts with Agrofert before the Unipetrol privatisation, pointing at possible corruption.

Agrofert is convinced it has placed a good bid in the tender for ZAK, and is asking the Polish side for more detailed information about the causes that led to the decision to eliminate it from this tender. The Polish government first tried to sell ZAK in 2001 and Agrofert, represented by its unit Deza, reached the finals of the

tender. The other finalist was PKN Orlen, but the Polish government decided to cancel the privatisation process just before it announced the winner.

#### **Zakłady Azotowe W Tarnowie-Moscicach**

Zimmer will also upgrade a Polish polyamide plant operated by Zakłady Azotowe W Tarnowie-Moscicach. The work will increase production capacity of PA chips from 23,000 tpa to 45,000 tpa by the end of this year. The project is an expansion of the existing PA 6 plant built by Zimmer in 1995. The chips will be further processed to engineering plastics and film products. Besides the technology, Zimmer will provide basic engineering as well as the key equipment, and will be responsible for the supervision of erection and start-up of the plant. Start-up is scheduled for the fourth quarter of 2006.

## **EURASIA, COMMONWEALTH OF INDEPENDENT STATES**

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### **Russia**

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**(Rus rouble Sep 15, \$1 = 28.250, €1= 34.494)**

Russian petrochemical production in the first seven months of 2005 showed little improvement on the same period last year. Production of ethylene, propylene, polyolefins in Russia all showed lower volumes for the first seven months. This was partly due to the continued feedstock shortages at Kazanorgsintez. This situation at Kazan should be addressed by the end of the year, with the completion of the repairs at the Orenburg helium plant. Products which saw an increase in the first seven months included polystyrene, which was up by 35% and styrene monomer which was up 44%. Most of the olefin producers have been undergoing various types of modernisation this year regarding furnaces, etc, and to date this has been aimed largely at improving cash costs rather than adding volume capacity. However, new capacity is a key to current investment strategy and olefin production will start to see some degree of increase in the next 12-24 months.

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### **SIBUR/Gazprom**

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The shareholders of SIBUR intend to approve the sale of 100% of AKS Holding stocks to Gazprom and Gazprombank at the Extraordinary Meeting, which is to be held on 29 September 2005. The shareholders will also hold the extraordinary meeting on 30 September and 2 November to approve the agency agreement between SIBUR and AKS Holding, and to re-elect the board of directors of the company.

SIBUR completed the formation of AKS Holding on 6 September 2005 and transferred its liquid assets in the account of new company, as well as subsidiaries of SIBUR, including 26 manufacturing enterprises and affiliated companies. The rapid speed with which this process has been completed suggests that the next twelve months will start to see the emergence of a clearer model of management for Russia's leading petrochemical company. Eventually, the aim is to make it much easier than the current SIBUR format to develop partnership links with foreign companies in the sphere of production and technology.

#### **Tobolsk-Neftekhim**

Since becoming the owner of Tobolsk-Neftekhim SIBUR has attempted several times to start a project for propylene and polypropylene, and now there is a serious examination of the project again. The original project concept at Tobolsk in the 1990s was entitled Irtyshpolymer (and before going back to 1993 it was called Wespec), which was abandoned after the 1998 default of the Russian banks. At present, Tobolsk-Neftekhim is reviewing the technical conditions for a project which would consist of 250,000 tpa of polypropylene.

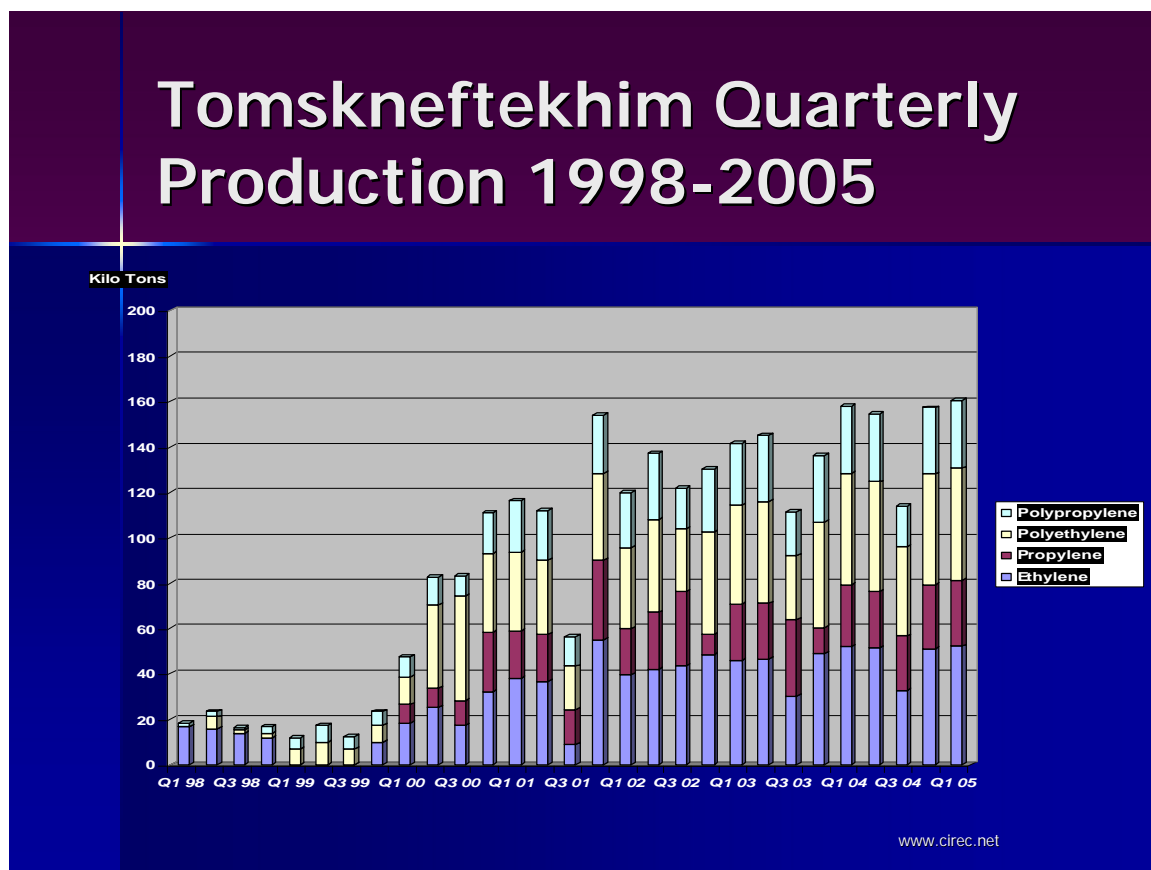
An essential part of the investment programme is to increase the processing of SHFLU. Other ideas for polypropylene projects in Russia are being considered by Surgutneftegaz, Novatek, Gazprom, and LUKoil, but none of these companies have moved further with these plans. By the start of November, SIBUR expects to have completed a study of co-production of propylene and polypropylene so much will depend on the findings.

For Tobolsk-Neftekhim the goal is to move further downstream from basic commodity output in products such as (butadiene and isobutylene, which are used by other chemical plants in Russia, into end products. Finance is being directed towards the completion of the butyl rubber and halobutyl rubber plants which were started as long ago as 1988. The capacity of the butyl rubber plant is 90,000 tpa, and would add to the existing Russian plants at Nizhnekamsk and Togliatti.

### Tomskneftekhim

Tomskneftekhim returned from a planned maintenance shutdown on 22 August. During the shutdown the opportunity was taken to carry out the modernisation and reconstruction of the EP-300 cracker, using equipment supplied by Sulzer. These steps will allow Tomskneftekhim to increase the capacity in 2006 of polyethylene up to 200,000 tpa, from its 150,000 tpa original design. In 2005, the company plans to produce 185,000 tons of polyethylene. The total cost of the polyethylene expansion is around 600 million roubles, of which 300 million has been outlaid already. In 2006, the polypropylene plant capacity will also be increased, from 100,000 tpa to 130,000 tons. Plant production volumes can be seen at [www.cirec.net/report](http://www.cirec.net/report), for full subscribers.

In addition to polyolefin developments, the company is to undertake an improvement in the water supply from nearby Seversk that will help to provide economic savings. There is also consideration of the construction of Tomskneftekhim's own power station, with the aim of contributing around 10-12% of steam and gas of total consumption levels. The production volumes achieved at Tomskneftekhim before and after it became a part of SIBUR are shown in the graphic below.



The consolidation of shares in SIBUR under the management of Gazprom through the formation of AKS-Holding is a process helping to hasten the construction of gas chemical complex in the Tomsk region. Thus, the conversion of shares is seen as a benefit to Tomskneftekhim, according to the plant's management.

The gas-chemical complex represents the largest and most important project under consideration at Tomsk, which would be undertaken at the Tomskneftekhim site. A feasibility report on the investment plans is under review by Linde. The raw material base for the plant is gas from the Nizhnevartovsk-Parabel-Kuzbass pipeline network. Gas consumption for the complex could reach around 6 billion cubic metres per annum, with the main focus on polyethylene and polypropylene production. It is still too early to know what the

capacity levels might be for such a project, but more information will be available after the feasibility report has been completed.

This new complex would represent a major investment for the new AKS Holding and the intention would be to transform Tomskneftekhim into the largest producer of monomers and polymers in Russia. At some stage in the not too distant future one of the options will be selected, and rather ambitiously Tomskneftekhim has said that construction could be completed by 2007.

The reasons behind these investments are demand related and rising consumption of polymers in Russia. The intention is to direct the plant installations towards domestic sales rather than the export market.

#### **Astrakhan**

The new polyethylene project planned for Astrakhan is being balanced against local environmental concerns, so there are a few delays in getting the project started. The project will be based on ethane from Gazprom's local subsidiary Astrakhangazprom, which has 12 billion cubic metres of gas of which can produce up to 70% ethylene. The project is not moving as quickly as hoped due in part to some slowness by Astrakhangazprom. The capacity for this new plant is projected to be 350,000 tpa of polyethylene. The project costs are placed at around \$800 million, with an outlay of 4.5 years and potential profitability of 24%.

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#### **Tatarstan**

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##### **TAIF**

Tatneft has recently sold its stake in the Nizhnekamsk refinery (NNPZ) to TAIF for 9 billion roubles. In August, TAIF and Nizhnekamskneftekhim signed a contract about sale of share Nizhnekamskneftekhim in NNPZ for \$139 million. Consequently, TAIF now controls the whole NNPZ complex. From 1 September 2005, control of primary oil refining unit ELOU-AVT-7, which produces naphtha for Nizhnekamskneftekhim, was returned by Tatneft to TAIF.

##### **Tatneft**

Tatneft itself has started the construction of a new refinery and petrochemical complex at Nizhnekamsk which will process 7 million tpa of crude. This is the project which previously involved LG from South Korea. Work is currently being carried out on the base design for the new complex. The complex is expected to be completed in the 2008-2010 timeframe, providing in the range of 7,000 new highly skilled jobs. Investments could reach around 90 billion roubles in the project.

The programme of development by Tatneft involves the spending of 12 billion roubles in Nizhnekamskneftekhim, including the start-up of the polypropylene plant. A further 26 billion roubles will be invested in the development of Kazanorgsintez, with the focus on the increase in polyethylene capacity. Polyethylene demand is rising rapidly in Russia and Kazanorgsintez is seen as best placed to take advantage of this demand.

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#### **Kazanorgsintez**

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##### **Benzene**

In the middle of September Kazanorgsintez started operating the benzene unit plant as part of the ethylene complex. The process for start-up has taken around 18 months and has been developed internally by engineers at Kazanorgsintez. As the original Ethylene-100 plant did not provide a benzene unit, major changes have been made in order to be able to produce benzene which Kazanorgsintez uses for the production of cumene. Until now, Kazanorgsintez has delivered pygas to Salavatnefteorgsintez which is then returned to Kazan as benzene. This has been considered to be a highly expensive method of cumene production, and thus the company was decided to construct its own sources of benzene production with a capacity unit of 60-65,000 tpa.

This is particularly important in view of the planned start-up of the new bisphenol-A and polycarbonate plants in 2006/2007. The initial capacity of the bisphenol A plant will be 500 tons per month, with the intention to increase it up to 1,000 tons per month. Owing to the low cost price of the company's own benzene production it will help to keep the cost of phenol down to a reasonable level.

Kazanorgsintez has introduced a control system, supplied by the Japanese company Yokogawa, for the production process for HDPE. Kazanorgsintez has developed a pilot model of production management, which will help to find a material balance for ethylene production and consumption.

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**Nizhnekamskneftekhim**

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Nizhnekamskneftekhim will undertake a maintenance shutdown from 15 September until the end of the month for the butyl rubber, divinyl and hydrocarbon raw material plants. The Petrokam glycol division will simultaneously undergo maintenance. Petrokam is located on the territory of Nizhnekamskneftekhim and specialises in oil products and the output of MEG, DEG and TEG.

Nizhnekamskneftekhim has signed a contract with Berstorff GmbH for its daughter company Polimer-NKNKh for an automated line for the production of resin profiles. The contract is worth \$5 million. Polimer-NKNKh specialises in the production of polyethylene films and resin-technical products.

More agreements have been signed with Tecnimont regarding licensing and equipment sales for the polyolefin projects. The last few weeks have seen more activity Nizhnekamskneftekhim's dealings with foreign companies, suggesting that they are not looking to settle for one partner alone but see opportunities for joint ventures and co-operation on a wider sphere. In November 2005, Sasol will present to Nizhnekamskneftekhim a sensibility study for a project for the production of LAB at Nizhnekamskneftekhim. Similar projects have been considered before but Sasol looks closest to meeting the criteria. Chemtura, the newly formed merger of Great Lakes Chemical Corporation and Crompton Corporation, is seeking to create joint ventures in Tatarstan, including Nizhnekamskneftekhim. The company is known for its position in the field of polymeric additives.

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**Bashkortostan**

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**Salavatnefteorgsintez**

In October 2005, Salavatnefteorgsintez (SNOS) plans to start the production of orthoxylene, after the company's Sintez division undertook product trials in July. The production of in-house orthoxylene will allow the company to cease purchases from other plants such as Ufaneftkhim and the Omsk refinery. The capacity of the plant is only 15,000 tpa, but this will be sufficient to meet captive demand for phthalic anhydride production.

Salavatnefteorgsintez has signed an agreement with the German company GEA for the supply of equipment for the modernisation of the existing phthalic anhydride plant. The new equipment will allow SNOS to increase phthalic anhydride production from its current level of around 11-12,000 tpa, and will also help to reduce production costs.

In the next five years Gazprom plans to invest \$100 million in the development of SNOS. In 2006, SNOS plans to start the reconstruction of the refinery and to start the construction of the mazut plant and the polyethylene plant. SNOS has started a programme for increasing the efficiency of oil processing which will require around 1.2 billion roubles in investment in the 2005-2006 timeframe. The refinery equipment was installed originally in the 1970s and requires a substantial upgrade in order to make production competitive. In 2004, SNOS processed 6.25 million tons, including 3.6 million tons of crude and 2.6 million tons of gas condensate.

**Polief**

The dispute over Polief and the new owners Selena continues in the Moscow courts, with SIBUR and LUKoil-Neftekhim challenging the outcome. Selena won the shares in March 2005, but in April SIBUR and LUKoil-Neftekhim challenged the deal. On 15 September, at the Arbitration Court in Moscow, the case of Selena was reviewed, and will face further examination on 20 September. In opinion of SIBUR and LUKoil-Neftekhim, the buyer formally broke the antimonopoly law regarding the notice of Federal antimonopoly service of Russia (FAS) and there was no sanction by the FAS for the fulfilment of the transaction LUKoil-Neftekhim and SIBUR were planning to create a joint venture for the privatisation of Polief.

In the meantime, the construction of the complex at Blagoveshchensk is in full swing and will be completed very soon, with the launch scheduled for October. The original agreement between Selena and the government of Bashkortostan was that the plant should be running by mid-2007, but construction has been



pushed forward quite quickly. A group of specialists have undergone training in China so the personnel are ready for the start-up.

The completion of the PTA plant is important for the Russia and for SIBUR's PET plant at Tver. Imported PTA is estimated to be around 25-30% higher than the prices being quoted by Polief. Selena can meet the demand of the current Russian capacities for processing PTA into PET in full. In future, as new PET facilities are constructed Polief's capacity might be expanded to increase the market share of Russian producers.

#### **Bashkiria Khimya**

Bashkiria Khimya (BKH) plans to invest around \$600 million into its two Sterlitamak subsidiaries Soda and Kaustik, half of which will go towards the increase in ecological safety. According to the investment programme Kaustik's PVC capacity will increase up to 450,000 tpa and Soda's soda up to 2 million tpa. If these goals are achieved, by 2010 BKH will control more than 50% of Russian market for PVC and about 70% for soda ash. The major question mark is over ethylene availability, ethylene expansions are taking place in Russia but mainly to meet new captive requirements rather than create more product for the merchant market.

The strategic programme for Soda includes the replacement of out-of-date technologies and in the next five years BKH plans to invest around \$300 million in the complex. Apart from its own sources of finance BKH plans to use credits from banks.

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### **Nizhniy Novgorod**

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#### **Korund**

Korund plans to invest around €30 million in the production of 30,000 tpa of polyester on the basis of alkyl per year. The plant is planned to come on stream in April 2006. The workshop will be situated at Korund premises where since July 2005 obsolete equipment has been dismantled. This project follows other projects at Korund, in particular polyisocyanates.

#### **Zarya**

Zarya has stated that it is ready to sell or lease its polycarbonate capacity. Currently, the plant is idle due largely to the technology which was used polycarbonate production is considered obsolete. In particular, the technology does not allow the plant to produce pure polycarbonate. For modernisation of the plant, equipment is required to update the system of water purification for the production of polycarbonate optical quality. The plant has own its power resources, but Zarya's financial position is tenuous to say the least and the company needs to sell assets to repay debts.

#### **Akrilat**

In the first half of 2005 Akrilat recorded a net profit of 31.726 million roubles against losses of 55.007 million roubles in 2004. Turnover increased 30.5 times to 689.892 million roubles, which was largely explicable to the fact that the company only started the acrylic ester plants in the latter part of 2004. Japanese company Sojitz Corporation plans to co-operate with Akrilat in the processing of acrylic acid, and higher added value products which are not produced in Russia at present.

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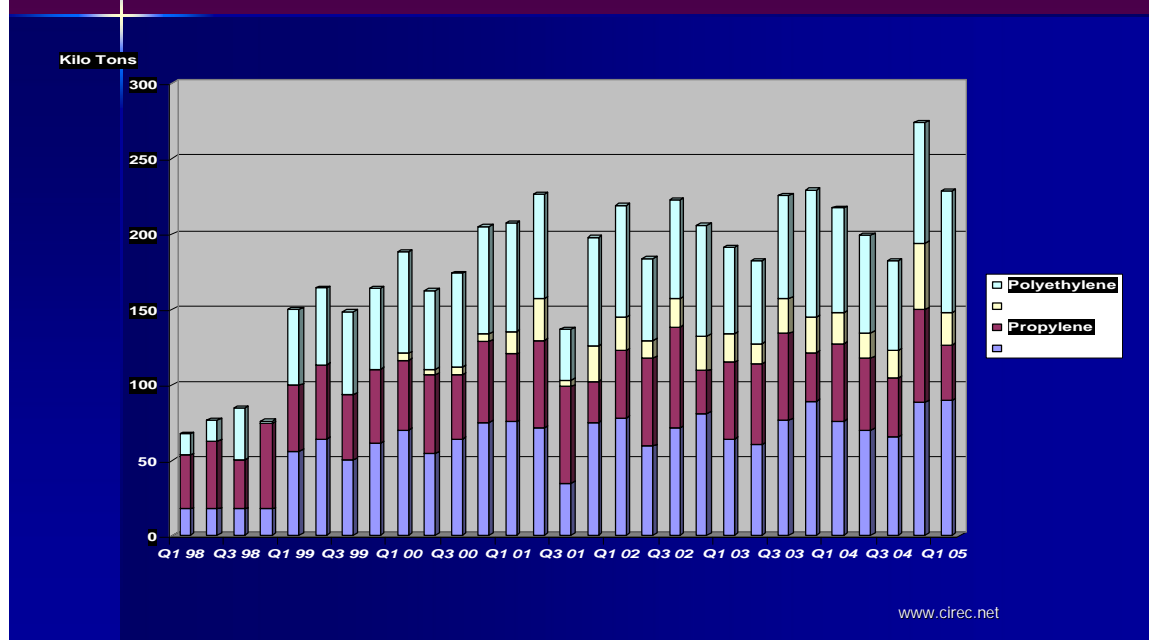
### **LUKoil-Neftekhim**

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LUKoil-Neftekhim is considering the opportunity of constructing an ethylene complex in the range of 500,000 tpa, but no decisive plans yet exist for the project. LUKoil has made statements before about building a new cracker, particularly in the Caspian region, but it is not entirely clear at what stage the plans are at the moment. The main thing that has come to light is that the plant could be located either at Volgograd or Budyennovsk. The production volumes achieved at the Budyennovsk plant before and after it became a part of LUKoil-Neftekhim are shown in the graphic below.

At the end of September, LUKoil-Neftekhim will start up the new sodium cyanide unit at Saratovorgsintez. The new plant has a capacity of 18,000 tpa, and will be a by-product of acrylonitrile production. The product will be directed towards applications in the gold industry. The project has been undertaken by Glatt Ingenieurtechnik, based on DuPont technology, at a project cost of 600 million roubles.

## Stavrolen Quarterly Production 1998-2005



LUKoil, LUKoil-Neftekhim and Uhde have been in discussions regarding the reconstruction of the chlorine plant at Kalush in western Ukraine and the introduction of membrane technology. Other projects at Kalush under consideration include PVC. A contract is expected to be signed in October 2005 for the reconstruction of the caustic soda and chlorine plants belonging to Karpatneftekhim (which is part of LUKoil-Neftekhim), which should also lead to an increase in capacity with caustic soda rising to 200,000 tpa. The project is planned for completion by 2007 which would make Karpatneftekhim the first chlorine producer in the CIS to use the membrane method. However, Sayanskkhimplast is also undertaking membrane conversion and may even complete modernisation sooner than Kalush.

### Product/Company News

#### Plastics

Polad at Togliatti has taken delivery of a complex manufacturing system from Battenfeld to produce bumpers for motor cars. It comprises two injection moulding machines, several moulds, plus a mould change system and extensive peripheral equipment. Polad is one of the largest suppliers of technical components in the Volga region.

The production line delivered by Battenfeld for manufacturing polypropylene/EPDM bumpers for the Lada consists of two HM 27000 2P/19000 Unilog B4 injection moulding machines, each with 2,700 tpa clamping force and customised peripheral equipment. Previously, Polad had 15 injection moulding machines with clamping forces of up to 1,000 tpa. With the acquisition of the extensive new equipment for bumper production from Battenfeld Injection Moulding, the company has now substantially increased its capacity.

Exports of plastics and rubber machinery from Germany to Russia increased from €46.45 million in 2000 to €162.93 million in 2004, without counting tooling, moulds and peripheral equipment.

Deceuninck reports that its Russian subsidiary Deceuninck Rus has started production of PVC window profiles for the Russian market. The new extrusion unit is located at Serpuchov, around 80 km south of Moscow. PVC windows are estimated to have captured a market share of over 60% since the second half of the 1990s. Deceuninck has been present in the Russian market through sales for several years, and has now reached the stage where the company has moved into production. The success of Thyssen Polymer

windows sold by Deceuninck is attributable to meeting the requirements of the Russian market at a competitive price.

A new polypropylene pipe plant started production in September at Ulyanovsk, principally intended for the domestic housing market and the gas sector in the local region. The plant has the capacity to produce up to 10 km of pipes per day. The amount of investment was \$2.5 million with a payback period of 2.5 years. The finance was provided for the reconstruction of the plant, which previously produced macaroni. The use of polymer pipes will significantly reduce the cost of repairs to energy and water systems in the Ulyanovsk region.

#### **Synthetic rubber**

Kauchuk at Sterlitamak has produced a trial run of a new grade of styrene rubber SKMS-30 ARKM-27. Production is intended for application in the tyre industry. Capacity of the new unit has not yet been decided, but will depend on estimations of demand. Kauchuk is also considering an opportunity for the production of emulsion polybutadiene rubber EPB-M155, which would replace rubber grades SKS-30 ARKM-15.

Voronezhskintezkauchuk has started the production of new types of synthetic rubber, cis-butadiene and divinyl styrene. The new line has a capacity of 35,000 tpa. SIBUR currently is in the middle of an investment programme at Voronezhskintezkauchuk, involving between 700-800 million roubles.

#### **Orthocresol**

In August Uralkhimplast restarted the production of orthocresol after undertaking a revamp and the reduction of production costs. The unit has already has sufficient orders up to the end of the year. Product will be exported mostly to West Europe where prices are strong on the back of supply side tightness.

#### **Methanol**

A new methanol project has come under consideration for Nyagan in the Yamal-Nenets region of West Siberia. Nyagan is the site of gas processing plant which would be used for the methanol unit. One of the major consumers is expected to be LVL-Yugra for the production of resins. The major problem for the plant would be the transportation of methanol and how it would be shipped to customers.

Vostokgazprom's maintenance programme for Metanol at Tomsk in the 2005-2006 timeframe will involve expertise and involvement from ??? and Johnson Matthey. The first stage of reconstruction will involve the modernisation of the reactor with the replacement of the catalyst, whilst the second stage will lead to a full reconstruction of the plant.

Metadynea, a jv between Dynea and Metafrax, has now decided not to locate the second industrial platform at Roshal in the Moscow area. Instead of the project to produce CFC concentrate has been moved to Orekhovo-Zuyevo, at the site of Karbolit where there is an existing infrastructure in place.

Metafrax and Pörner Ing of Austria have concluded a contract for a project to build a new formaldehyde plant. The new plant will have a capacity of 270,000 tpa of 37% formaldehyde. The project will cost €21 million, of which €11 million will be spent on equipment. It is part of the strategy adopted by Metafrax to reduce the dependency on methanol exports to the global marketplace and to develop more captive usage.

The sale of 100% shares in Novochoerkassk Synthetic Products Plant (NZSP) could take place before the end of the year. An estimated cost of the price of 100% shares in the company could range between 180-200 million roubles. The main product of the company is methanol, accounting for two thirds of its revenue. Up to the end of 2005, NZSP plans to spend around \$1 million in the modernisation of the methanol unit. Further expansions are being considered in the field of syngas products, involving methanol, ammonia and urea.

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#### **Ukraine**

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(Ukrainian hryvnia, Sep 15, \$1 = 5.010, €1 = 6.1160)

#### **Azot Severodonetsk**

Another few weeks of high tension have passed by at Azot, and the case has become extremely important in the political crisis that seems to have followed the Orange Revolution. On 2 September, the plant was

seized by an armed group, allegedly under orders from Industrial Policy Ministry and the newly appointed director of Azot. This very muddled affair has led to resignations over corruption and questions about vested interests.

The aim of the government now is to privatise Azot under a new auction, possibly in early 2006, and to cancel any agreements which were concluded in the latter days of the Kuchma government. In March 2005, the Pechory District Court of Kiev ruled that the existence of the new closed stock company Azot, with a charter capital of 1,056.7 million hryvnia, (around \$400 millions) was illegal. It was created on December 24, 2004, by the State Property Fund of Ukraine and the US company Worldwide Chemical LLC.

The state claims that it has not received any money for the 60% stake in Azot from Worldwide Chemical LLC, which concluded the purchase contract for Azot in 2004. However, Worldwide Chemical agreed to take on the 60% of the shareholding in Azot with the aim to invest \$120 million in the plant's development and upgrading. It claims to have already invested around half of this sum, but has ceased further investments due to the uncertain political situation. The Cabinet of Ministers has already approved a schedule for putting the plant up for a repeat privatisation process. Any investor, even Worldwide Chemical, can take part but it is likely that they will have to pay much more than the first time. As Worldwide Chemical is a US company this is not creating a favourable impression of the Orange Revolution in Washington. It seems a political issue rather than a commercial issue, as it will be very difficult to find an investor such as Worldwide Chemical.

In the meantime, a new general director of Azot has been appointed. One of the first announcements given by the new director involves a rekindling of plans to restart the idle 200,000 tpa polyethylene unit, although these plans are dependent on a Japanese investor providing finance. There are plans to start production of polyethylene in 2006, based on ethylene from the old cracker at the Lisichansk refinery. However, this decision seems rather bizarre considering the physical condition of the Lisichansk cracker. (After a plant visit in January 2003, I compiled a report about Azot, with a focus on the polyethylene plant. Please contact me if it is of interest.)

#### **Karpatneftekhim**

Following maintenance Lukor has postponed for at least a month the restart of production at Kalush as growing crude oil prices have made its operation unprofitable. Lukor was supposed to resume operation in early September, but the high oil prices will keep it shut until early October.

Lukor/Karpatneftekhim expects the new C4-C5 fraction hydrogenation plant for the polyolefin production facility at Kalush to start in the middle of October. The polyolefin complex underwent a maintenance shutdown in the whole of August in order to complete the installation of the C4-C5 unit. It is based on design provided by Linde, whilst the plant will have a capacity of 90,700 tpa and has been constructed under guarantees from LUKoil-Neftekhim. The construction of a pyrolysis products hydrogenation plant will facilitate the conversion of C4-C5 fractions into a feedstock that will be reused in the production process. This will help to reduce the cost of purchase and transport of the feedstock. The annual economic savings from this process will amount to €14.5 million, while the plant itself has cost €9.5 million.

Political issues continue to create problems. The government of Ukraine is now considering plans to sell its share belonging in the authorised capital of Lukor, which still exists but Karpatneftekhim has effectively become the legal face of the company. The aim of the government is to search for an investor with the focus on modernisation of the plant facilities, and meeting outstanding obligations to the Bayerische Vereinsbank in Germany which include repayments of debts against the state budget. A total of 212.5 million Deutschmarks was taken from Bayerische Vereinsbank as credit for the construction of the polyethylene plant at Kalush, in the early mid 1990s. This credit is still to be repaid.

#### **Crimea**

Crimean Titan has started a second effort to try and find a technology provider for the construction of a new sulphuric acid plant. The competition appears to be between Lurgi with its own technology, and a Ukrainian company using Monsanto's technology. The capacity of the new plant is 600,000 tpa at a cost of €55 million. The company currently produces around 570,000 tpa from its three lines, but as soon as the new plant is installed there will be some reorganisation of the existing lines and production will be reduced to around 360,000 tpa. Thus, total production at the plant, together with the new unit, would reach around 1 million tpa.

Crimean Soda plans to invest \$25 million by the end of 2006 into the production of soda ash. Around a quarter of the sum will be invested directly by RSI Erste BeteiligungsGmbH, which will be aimed at increasing soda ash capacity to 800-820,000 tpa. In 2004, the company produced 638,000 tons.

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**Belarus**

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**Grodno Azot**

Grodno Azot has undertaken the base design work for a project for the reconstruction of urea-3 unit, with the aim of converting to the production of granulated urea. The purpose of the project is targeted on the improvement of quality of urea and the competitiveness in the world market. Stamicarbon is involved in the project.

**BOPS**

The shipment of the equipment from Bruckner for the production of biaxially oriented polystyrene (BOPS) has been delivered to Gomel, for a project being organised by the German company Alcopack and the Russian packaging company Multipack. The capacity of the new BOPS plant is expected to be 20,125 tpa, with the aim of producing polystyrene films for thermoforming. By the end of 2005 Multipack plans to complete delivery and the installation of the equipment. Production is planned to start in the first quarter of 2006.

The new plant will possibly use both Russian and West European polystyrene. At present, Multipack is in negotiations with BASF, Atofina, Nizhnekamskneftekhim, Styrovit, etc. The value of the project is estimated at \$20 million.

The project is important as BOPS to date is not produced elsewhere in the CIS. However, there are projects underway at Elabuga in Tatarstan, which involves Nizhnekamskneftekhim, and Omsk. Large volumes of packaging materials are imported annually into the region from West Europe. The new plant at Gomel gives several key advantages in terms of product offering, range, quality, and volume economics that will allow it to mount a strong challenge to existing producers with relatively old plants in Europe. The plant is aiming at 50% export once its tenter frame line from Bruckner starts production in January.

For thermoforming, the company will produce three-layer sheet made from general purpose PS and styrene butadiene styrene (SBS) to get the clarity, high gloss, stiffness, and formability needed in gauges from 100 to 800 µm. MOPS and BOPS film in thicknesses between 25 and 100 µm targets applications in shrink sleeves, twist wrap, synthetic paper, and envelope windows.

**Khimvolokhno Svetlogorsk**

In the fibre sector, Khimvolokhno at Svetlogorsk has stopped the production of viscose fibres until further notice. The operation has been unprofitable over the past three last years, largely the result of the use of out-of-date technologies. At the same time, demand for viscose fibres is falling in the domestic market. The company is investing into the reconstruction and doubling of capacity at its technical cord unit. Cords are in strong demand from the Belarussian tyre producer at Belshina.

**Mogilevkhimvolokno**

Mogilevkhimvolokno continues to be faced by raw material problems (paraxylene and MEG) from Russia, whilst Svetlogorsk Khimvolokhno has also seen problems as it depends on Mogilevkhimvolokno for supplies.

Mogilevkhimvolokno has started a tender process for the supply of equipment to produce textile polyester colourless and coloured fibres. Mogilevkhimvolokno has also signed agreements for a PTA project with a capacity of 400,000 tpa. The project is in the pre-investment stage and the company has already put together an estimation of costs involved. The value of the project is estimated at \$275.8 million, of which \$34.2 million is planned to be taken from the company's own resources. The remaining larger sum will be taken through credit.

The construction of a PTA plant would be designed to replace the existing DMT complex which provides the basis for the PET and polyester facilities. PTA is a more cost-effective starting material, using around 10% less paraxylene than DMT and also one ton of PET requires around 15% less PTA than DMT. Also, e PTA

requires less MEG is entered than in DMT production. All of the PTA produced would be intended for captive consumption at Mogilev.

#### **Itera**

By mutual consent Itera is reported to be leaving the Belarussian market, and by doing so taking its plans for investing up to \$1 billion. The Belarussian government considers it unlikely that Itera will participate in the further discussion of 12 joint projects. These projects were focused on a wide range of activity, including gas and power, but also chemical plants Grodno Azot and Mogilevkhimvolokno.

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#### **Kazakhstan**

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The Aktau Plastics Plant finally started polystyrene production on 4 September. As stated last month, the styrene monomer was provided by Nizhnekamskneftekhim. The Aktau plant is run under a 50/50 joint venture basis between Atoll, which is a subsidiary of SAT Operating Aktau, and a subsidiary of KazMunaiGaz (KMG). The Aktau plant has invested around \$11.8 million, from the Peoples Bank of Kazakhstan, into the revamp of production facilities. Polystyrene production is now running at between 55-60 tons per day, which would equate to around 21,000 tpa.

In the long term, the Aktau plant plans to commission three lines for the production of shock-resistant and foam polystyrene. It is expected that around 12% of polystyrene production will be delivered to the home market, such as for the production of disposable utensils, about 30-40% to be exported to Russia and other CIS countries, and the remainder to China.

KMG has reiterated its goals for the development of the petrochemical industry up to 2010 in the region of West Kazakhstan, based largely on the deposits of Tengiz and the Caspian Sea. The raw material base is seen as dependent therefore on ethane from Tengizchevroil and the further use of KMG's own gas deposits from the Kashagan field in the sea. LG International Corp, having lost out in Tatarstan, is leading discussions with KMG over a joint polyethylene project.

**Contents Issue No 178**

Slovnaft .....	2
<b>CZECH REPUBLIC .....</b>	<b>2</b>
Unipetrol .....	2
Spolchemie .....	3
<b>POLAND .....</b>	<b>3</b>
PKN Orlen .....	3
Orlen's petrochemical expansions .....	4
Nafta Polska .....	4
Zakłady Azotowe W Tarnowie-Moscicach .....	5
<b>RUSSIA .....</b>	<b>5</b>
Tobolsk-Neftekhim .....	5
Tomskneftekhim .....	6
Astrakhan .....	7
<b>TATARSTAN .....</b>	<b>7</b>
TAIF .....	7
Tatneft .....	7
<b>KAZANORGSINTEZ .....</b>	<b>7</b>
<b>NIZHNEKAMSKNEFTEKHIM .....</b>	<b>8</b>
<b>BASHKORTOSTAN .....</b>	<b>8</b>
Salavatnefteorgsintez .....	8
Polief .....	8
Bashkiria Khimya .....	9
<b>NIZHNIY NOVGOROD .....</b>	<b>9</b>
Korund .....	9
Zarya .....	9
Akrilat .....	9
<b>LUKOIL-NEFTEKHIM .....</b>	<b>9</b>
<b>PRODUCT/COMPANY NEWS .....</b>	<b>10</b>
Plastics .....	10
Synthetic rubber .....	11
Orthocresol .....	11
Methanol .....	11
<b>UKRAINE .....</b>	<b>11</b>
(Ukrainian hryvnia, Sep 15, \$1 = 5.010, €1 = 6.1160) .....	11
Azot Severodonetsk .....	11
Karpatneftekhim .....	12
Crimea .....	12
<b>BELARUS .....</b>	<b>13</b>

Grodno Azot .....	13
BOPS .....	13
Khimvolokhno Svetlogorsk .....	13
Mogilevkhimvolokno .....	13
Itera .....	14

<b>KAZAKHSTAN.....</b>	<b>14</b>
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