

CIREC

MONTHLY NEWS

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

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CENTRAL & SOUTH EAST EUROPE

Petrochemicals

**Central European Refining Volumes
(unit-mil tons)**

| Company | Jan-Jun 15 | Jan-Jun 14 |
|-----------------|------------|------------|
| INA | 1.6 | 1.5 |
| Lotos | 5.0 | 4.4 |
| Lukoil Bourgas | 3.2 | 2.7 |
| Lukoil Ploiesti | 1.0 | 1.0 |
| MOL Hungary | 3.5 | 5.1 |
| NIS | 1.4 | 1.6 |
| Orlen-Lietuva | 4.0 | 3.3 |
| Orlen-Plock | 7.6 | 6.8 |
| Petrom | 2.0 | 1.7 |
| Rompetrol | 2.3 | 2.4 |
| Slovnaft | 2.9 | 2.4 |
| Unipetrol | 3.1 | 2.5 |
| Total | 37.6 | 35.4 |

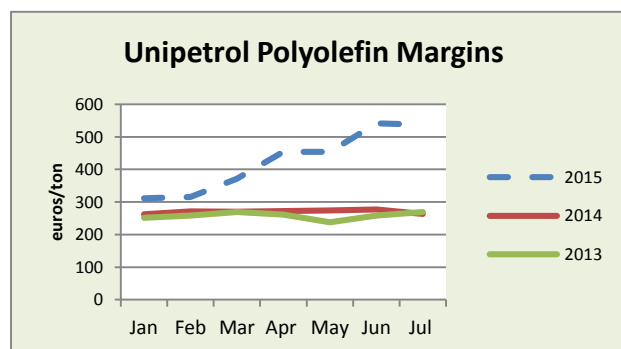
Central European refining, Jan-Jun 2015

Refining volumes increased overall across Central and South East Europe for the first half of 2015, particularly in the Czech and Slovak republics and Poland. In relation to feedstock production Grupa Lotos increased naphtha at Gdansk to 137,400 tons in the second quarter this year against 91,600 tons in April to June 2014. Xylene production was down at Gdansk from 25,500 tons in 2014 to 22,900 tons in the second quarter this year. Grupa Lotos' subsidiary Lotos Asphalt has recently awarded a €304m contract to Kinetics Technology, a unit of Maire Tecnimont, to modernize the Gdansk refinery.

Petrom, the sole producer of oil and gas in Romania, recorded a net profit of 691 million lei in the second quarter increasing by 122% against 2014, while the company's sales dropped 16% to 4.5 billion lei. For the first six months of 2015, Petrom posted sales of 8.8 billion lei, 18% lower than the same period last year. Although the refinery division performed well overall net profit dropped 18% to one billion lei.

Whilst Unipetrol was able to increase oil refining in the first half of 2015, due largely to taking full control at Ceska Rafinerska, the second half of the year is expected to witness lower volumes following the cracker accident at Litvinov in August. The adjacent Litvinov refinery, which provides the plant with naphtha

feedstock, was not directly affected by the fire but as a precaution, crude oil throughput was reduced to a minimum. Unipetrol's second Czech refinery at Kralupy nad Vltavou was unaffected by the accident and is operating at full capacity.



unplanned outages at Litvinov in June and July which has cost the company in the range of Kc 270 million (\$11 million).

Unipetrol-ethylene plant outage

Unipetrol's ethylene facility in Litvinov was forced to reduce production on 13 August after a fire. The initial blast and fire at the Chempark Záluží resulted from a propylene leak in the 545,000 tpa steam cracker unit. This follows

The initial view was that losses may be mitigated by better-than-expected earnings from the first half of the year. However, it looks as if the plant will be partially closed for several months, thus impacting on profits in the second half of the year.

Orlen Group margins

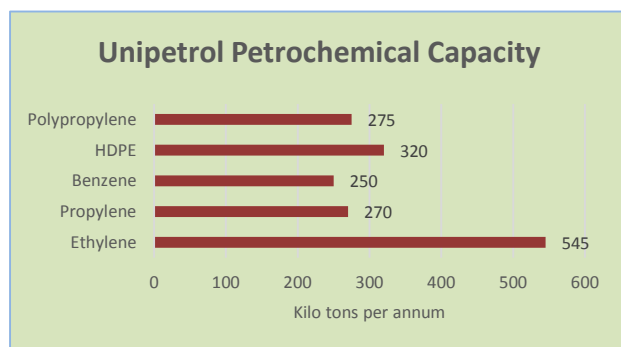
PKN Orlen continues to record extremely high margins, achieving \$11.20 per barrel in August for refining and €1,147 per ton for petrochemicals. Previously the highest model refining margin for Orlen was generated in September 2008 at \$10.50 per barrel. In terms of quarterly operational results the record margins play a key role, although Orlen recognises this trend is only likely to be short term and thus does not change the overall direction of the group.

However, the rubber division at Kralupy, owned by Synthos, in addition to Spolana at Neratovice may experience feedstock restrictions until the Litvinov cracker fully restores production activity.

Another incident for the Orlen group took place at the Plock site of Basell Orlen Polyolefins in August which may have impacted LDPE supply. BOP controls one LDPE plant at Plock, with a capacity of 150,000 tpa along with a 320,000 tpa HDPE plant and a 400,000 tpa polypropylene plant.

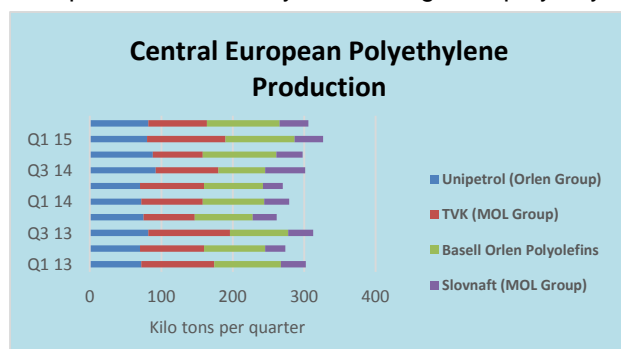
Unipetrol-Technip polyethylene project

Unipetrol and Technip signed a contract on 10 September for the construction of a new polyethylene unit at Litvinov. The new polyethylene unit will be built on the basis of the technology license from Ineos that Unipetrol gained at the end of 2013.



The investment represents the largest project for Unipetrol since the Litvinov complex was originally constructed. The value of the contract with Technip amounts to Kc 5.76 billion, with the overall project costs estimated at Kc 8.5 billion. The unit is expected to be put into operation by the middle of 2018.

replace the existing 120,000 tpa polyethylene unit PE1. The polyethylene unit PE2 (with a capacity of 200,000 tpa is remaining in operation. The investment will help to increase the utilisation of the ethylene unit and will contribute to greater integration of the petrochemical and refining production of Unipetrol Group. Furthermore by introducing new polyethylene technology, Unipetrol should be able to target



The new polyethylene unit PE3 will have a production capacity of 270,000 tpa and will replace the existing 120,000 tpa polyethylene unit PE1. The polyethylene unit PE2 (with a capacity of 200,000 tpa is remaining in operation. The investment will help to increase the utilisation of the ethylene unit and will contribute to greater integration of the petrochemical and refining production of Unipetrol Group. Furthermore by introducing new polyethylene technology, Unipetrol should be able to target new industrial applications, including cosmetic or packaging industry.

The construction of the new polyethylene unit is scheduled for the second quarter of 2016. Most of the subcontractors are planned to be hired from the local market, including companies Metrostav and ČKD Praha DIZ which are already present at the Litvinov site.

Slovnaft new LDPE unit

Slovnaft has completed the installation of its new LDPE Lupotech T production technology purchased from LyondellBasell. Production is expected to start at the beginning of 2016 following several months of testing. Slovnaft is the smallest of the four individual plants in Central Europe after Basell Orlen Polyolefins, TVK and Unipetrol.

| Polymer Projects in Central Europe | | | | |
|------------------------------------|-----------|---------------|------------|------------|
| Company | Product | Status | Cap (ktpa) | Start-date |
| Grupa Azoty | Polyamide | Construction | 80 | Late 2016 |
| MOL | SSBR | Construction | 60 | mid-2017 |
| Synthos | SSBR | Commissioning | 120 | late-2015 |
| Slovnaft | LDPE | Commissioning | 220 | early-2016 |
| Unipetrol | HDPE | Construction | 270 | mid-2018 |

The new production LDPE4 unit has been constructed in order to substitute the existing polyethylene plant, facilitating the production of higher quality polyethylene coupled with minimum emissions. Current plants use autoclave production technology which will be replaced in the new plant by tubular LDPE.

four-fifths of production is expected to be exported to foreign markets. Slovnaft plans to focus mainly on film types for a variety of applications from food packaging to industrial packaging. The reactor's production and inspection tests were overseen by the main construction contractor Tecnimont. The LDPE unit cost around €200 million to construct, whilst another €100 million was targeted on the reconstruction of the ethylene unit for the processing of primary virgin naphtha and gas. Slovnaft has financed these investments from a combination of its own funds, a loan from the EBRD, and commercial loans.

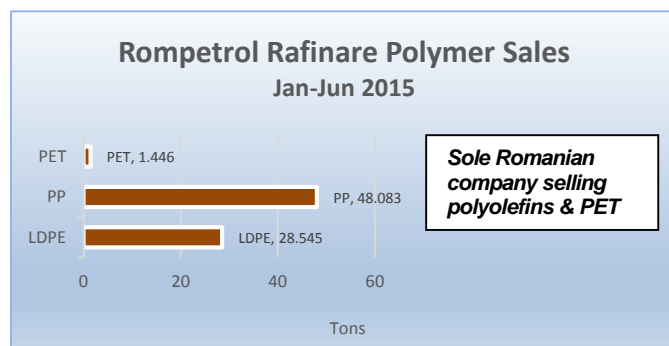
The production capacity of LDPE at Bratislava is increasing by 40,000 tpa to 220,000 tpa. Around

Rompotrol, Jan-Jun 2015

Rompotrol Rafinare, part of KMG International, registered a consolidated net profit of \$18 million in the first half of 2015 versus a loss of \$46.9 million in the same period in 2014. The company ended the second quarter of 2015 with a profit of \$18.4 million, compared to a loss of \$20 million reported for the same period

PCC Rokita, Jan-Jun 2015

PCC Rokita has signed a contract with Dubai International DMCC BGN company for the supply of propylene. The agreement was concluded for the period from 17 August 2015 to 31 December 2015, with further possibility for cooperation.



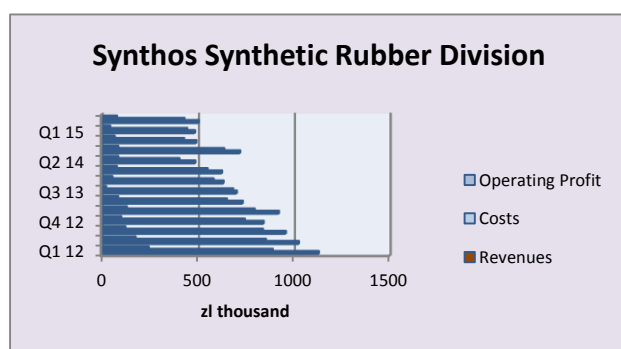
processed 156,732 tons of crude in January to June 2015 against 132,176 tons in 2014.

Synthos-SSBR plant

Synthos started test operations at the new SSBR plant at Oswiecim at the end of July. The capacity of the new plant is 90,000 tpa, adding to the 275,000 tpa of existing SBR emulsion capacity. The total investment for this project has amounted to around zł 555 million.

On 15 June of this year the construction of the SSBR facility ended. After the acceptance of the machinery, pipelines and systems needed for the construction of the production processes, preparations for the launch of the facility began. Within the process of the facility launch, the first test SSBR rubber brick was produced on 4 August 2015. Currently, the production tests for the rubber assortment under the license and other activities aimed at a full start of the facility are conducted.

The investment carried out by Synthos Dwory 7 is based on a license agreement of May 2012 with The Goodyear Tire & Rubber Company. The development of the project leads to the expansion of the production capabilities of Grupa Kapitałowa Synthos S.A. within the scope of modern SSBR rubber up to the volume of 90,000 tpa. The SSBR rubber will be sold mainly to major global tyre manufacturers



246.120 million in the first half of 2015 against zł 168,760 million in 2014, due mainly to activities at Oswiecim.

the year before. Rompetrol's Rafinare's exports went up by 12% in the first half of 2015, to over \$763 million.

Rompetrol Rafinare's consolidated operational result (EBITDA) amounted to \$56 million in the first half of 2015, double compared to the result posted for the same period the previous year. In the second quarter, the EBITDA reached \$67 million. The company's financial performance was supported by the quality of feedstock processed in the first half at refineries Petromidia, Vega and increased production of petrochemicals (11% more than in H1 2014).

The Petromidia refinery processed 2.355 million tons of crude in the first half of 2015, against 2.129 million tons in the same period last year. The smaller Vega refinery

Rompetrol's Rafinare increased olefin processing by 8.2% in the first half of 2015 to 91,636 tons. Polypropylene sales totalled 48,000 tons in January to June 2015, polyethylene 27,000 tons and PET 1,446 tons.

MOL-butadiene & rubber plant

TVK began test production in August for the new butadiene plant. The 130,000 tpa plant follows other new plants in Europe, with a combined capacity of 160,000 tpa established this year by OMV and Evonik at Burghausen and Antwerp respectively.

Initially MOL will be active in the merchant market and should remain market based until the rubber plant is constructed. MOL is already in the foundation stages this year for construction of the styrene butadiene rubber (SBR), which is being undertaken as jv with a capacity of 60,000 tpa. The Hungarian company owns 49% in the joint venture, while the share of the Japanese JSR Corporation will be 51%.

Synthos, Jan-Jun 2015

Synthos recorded a slight increase in net profit in the first half of 2015, but with declining revenues primarily from the rubber division. Net revenues amounted to zł 2.12 billion against zł 2.35 billion in 2014.

The operating profit amounted to zł 256.560 million in the first half in 2015 against zł 252.22 million. The net profit for Synthos totalled zł

The extended shutdown at Unipetrol's Litvinov cracker presents problems for Synthos Kralupy in relation to C4s, ethylene and benzene. The event could have a negative impact on the financial results of the group. In connection with the above, the group has launched alternative sources of deliveries and uses the existing stock of raw materials and products.

| Oltchim Sales Revenues (€ mil) | | |
|--------------------------------|------------|------------|
| Product Group | Jan-Jun 15 | Jan-Jun 14 |
| Petrochemicals | 59.6 | 42.8 |
| Chlorine division | 14.9 | 12.9 |
| Finished Products | 2.4 | 3.0 |
| Materials for construction | 0.0 | 1.1 |
| Sales to Pitesti | 0.0 | 0.0 |
| Oxo alcohols | 3.3 | 0.0 |
| Other | 0.8 | 0.0 |
| Total | 81.1 | 59.9 |

Chemicals

Oltchim, Jan-Jun 2015

Oltchim's revenues increased 35% in the first half of 2015 to 81 million euros, whilst at the same time the company managed to pay back part of the outstanding debts. Oltchim recorded the best economic and financial results in the last four years. The plant is owned by the state through the Ministry of Economy, with 54.8% of the shares, PCC SE with 32.34% and other shareholders, with 12.85%.

PCC Rokita, Jan-Jun 2015

PCC Exol recorded a net profit of zł 5.54 million in the first half of 2015 against zł 2.59 million in 2014, whilst revenues increased from zł 251.570 million to zł 252.760 million. PCC Rokita recorded a net profit of zł 23.73 million in the first half of 2015 against zł 23.38 million in the same period in 2014. The operating profit for the period rose from zł 30.27 million to zł 33.19 million. Consolidated sales revenues reached zł 463.91 million in the first half in 2015 versus zł 505.65 million in 2014.

Grupa Azoty, Jan-Jun 2015

Grupa Azoty achieved revenues of zł 5.12 billion in the first half of 2015, slightly up on 2014, but the main change was seen in the rise of net profit from zł 241.030 million to zł 457.630 million and an 80% rise in operating profit to zł 535 million. Improved results are largely the result of lower costs for raw materials, particularly gas.

The fertiliser division recorded an increase in EBITDA of zł 14 million to zł 181.1 million due largely to the gas purchasing strategy based on diversification of sources of supply. In the plastics division the EBITDA increased by zł 26 million in the second quarter, helped by polyamide margins. Sales levels for the chemical division recorded a decline in revenues about zł 60 million (nearly 10%), mainly due to a decrease in prices in OXO prices which followed the decline in propylene. The Kedzierzyn OXO plant also underwent a shutdown affecting production.

Grupa Azoty-polyamide project

Grupa Azoty officially commenced construction of its polyamide project at Tarnow on 21 September, costs of which have been estimated at around \$77 million.

| Polish Chemical Production (unit-kilo tons) | | |
|---|------------|------------|
| Product | Jan-Aug 15 | Jan-Aug 14 |
| Caustic Soda Liquid | 213.4 | 201.2 |
| Caustic Soda Solid | 39.7 | 55.5 |
| Soda Ash | 703.1 | 707.1 |
| Ethylene | 371.6 | 326.0 |
| Propylene | 262.6 | 231.6 |
| Butadiene | 43.0 | 40.0 |
| Toluene | 6.5 | 8.9 |
| Phenol | 26.7 | 20.1 |
| Caprolactam | 104.3 | 111.2 |
| Acetic Acid | 7.1 | 6.2 |
| Polyethylene | 265.5 | 232.7 |
| Polystyrene | 39.3 | 44.8 |
| EPS | 52.1 | 45.3 |
| PVC | 214.0 | 199.5 |
| Polypropylene | 167.0 | 153.6 |
| Synthetic Rubber | 148.4 | 130.5 |
| Ammonia (Gaseous) | 881.7 | 866.9 |
| Ammonia (Liquid) | 909.1 | 844.6 |
| Pesticides | 21.0 | 24.5 |
| Nitric Acid | 1558.0 | 1557.0 |
| Nitrogen Fertilisers | 1329.0 | 1270.0 |
| Phosphate Fertilisers | 330.5 | 276.8 |
| Potassium Fertilisers | 260.3 | 209.9 |

margins. Sales levels for the chemical division recorded a decline in revenues about zł 60 million (nearly 10%), mainly due to a decrease in prices in OXO prices which followed the decline in propylene. The Kedzierzyn OXO plant also underwent a shutdown affecting production.



The new 80,000 tpa plant will provide an important outlet for caprolactam production and reduce the need to sell to markets such as China where export opportunities have been in decline. The new installation will also allow Grupa Azoty to become a more important player in the market for engineering plastics.

RUSSIA



Russian chemical trade, first half of 2015

The impact of the weaker rouble this year on Russian chemical trade has been to increase export activity whilst reducing imports. Russia increased the export of chemical products in physical terms by 12.8% in the first seven months this year whilst in value terms exports decreased by 4.3%. By sector, exports of inorganic chemicals increased by volume by 15%, and fertilisers by 14.4%. Plastics rose by 15.4%, whilst rubber exports rose 22.8%. Export revenues from plastics and rubber were affected by low oil prices

which impacted on product prices.

| Russian Chemical Production (unit-kilo tons) | | |
|--|------------|------------|
| Product | Jan-Aug 15 | Jan-Aug 14 |
| Caustic Soda | 746.9 | 693.1 |
| Soda Ash | 2,017.0 | 1,657.6 |
| Ethylene | 1,870.0 | 1,586.8 |
| Propylene | 1,115.7 | 970.2 |
| Benzene | 810.0 | 756.0 |
| Xylenes | 368.1 | 356.4 |
| Styrene | 442.5 | 426.1 |
| Phenol | 165.2 | 168.6 |
| Ammonia | 9,700.0 | 9,951.7 |
| Nitrogen Fertilisers | 5,647.0 | 5,588.8 |
| Phosphate Fertilisers | 2,182.0 | 2,177.3 |
| Potash Fertilisers | 5,394.0 | 5,634.5 |
| Plastics in Bulk | 4,798.0 | 4,130.2 |
| Polyethylene | 1,075 | 1,070 |
| Polystyrene | 343.6 | 356.9 |
| PVC | 580.6 | 431.5 |
| Polypropylene | 901.3 | 622.2 |
| Polyamide | 92.9 | 98.1 |
| Synthetic Rubber | 1,021.9 | 849.7 |
| Synthetic Fibres | 84.6 | 88.2 |

The rouble's status is currently around half of its average value in the decade preceding the annexation of Crimea and subsequently imports of chemical products fell by 28.2% by value in the period January to July 2015 and 14.5% in physical terms. By sector, physical imports of cosmetic products decreased by 15.3% in 2015, plastics fell by 29.3% and rubber by 26.4%. Not all falls can be attributed to the economic situation, for example in the case of bulk plastics Russian production has increased this year for polyethylene, polypropylene and PVC thus helping to displace imports.

The share in value of chemical products in total Russian exports for the period January to July 2015 comprised 6.6% against 5% in 2014. The share of chemical products in the commodity structure for Russian imports in January to July 2015 totalled 15.6% versus 11.7% in 2014.

Russian chemical production, Jan-Aug 2015

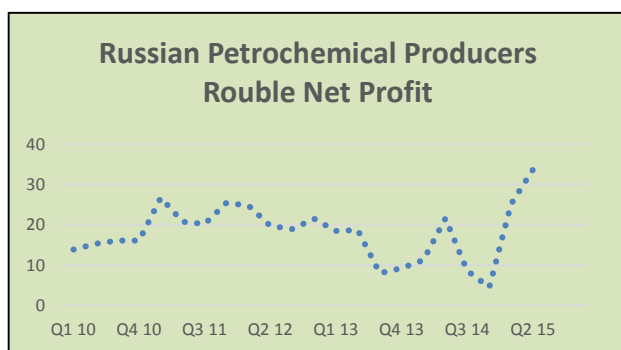
Russian chemical production increased by 3.8% in volume in the first eight months in 2015. The largest increase was recorded in ethylene, propylene, polyolefins, PVC and synthetic rubber, whilst falls were recorded in the production of chemical fertilisers. Ethylene and propylene production were bolstered by the restart of the Stavrolen cracker. Polypropylene production has increased due mainly to increased utilisation by Tobolsk-Polymer and Polyom at Omsk.

PVC production has increased significantly this year due primarily to the start-up of the RusVinyl complex at Kstovo, which has also been important in adding to caustic soda production in Russia. Caustic soda production rose from 693,100 tons in January to August 2014 to 746,900 tons in the same period in 2015. Synthetic rubber production has also risen, aided by the rouble devaluation and impact on the economics of export activity.

Russian petrochemical producers & markets

Effects of low oil prices & rouble devaluation on Russian petrochemical industry

Despite the fall in Russian GDP in 2015 and the budgetary impact on government revenues from low oil prices Russian petrochemical producers have been benefitting to some extent from lower feedstock costs



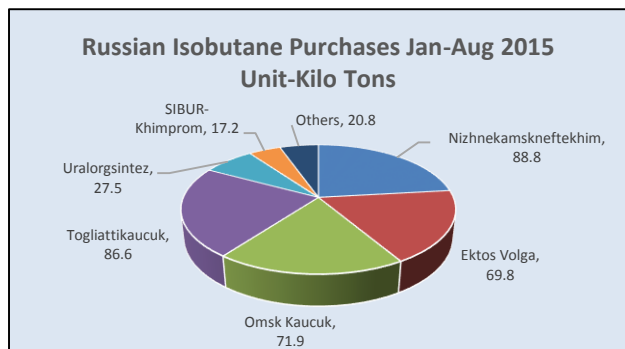
although not as much as some global competitors. The main profit driver in the first half of 2015 for Russian petrochemical producers was the devalued rouble, which has made exports significantly more profitable. Sales on the domestic market have also shown better margins, but it is in the sphere of export activity where producers have been able to achieve the largest gains.

Costs for the production of ethylene from naphtha in Russia fell sharply in the first half of 2015, which

has helped industry performance in relation to operational economics. At the same time however, Russian naphtha crackers have generally benefited less than global competitors due in large part to the current pricing system for naphtha and duties. LPG cost dynamics have improved, but most plants LPG as a supplementary feedstock to support naphtha. Companies expect the trend of high rouble profits to continue in the second half of the year whilst at the same time pressurising the government on the tax manoeuvre issue which is affecting feedstock costs.

Russian cracker feedstocks, Jan-Aug 2015

Russian petrochemical plants reduced purchases of gas liquids in August by 39% down against July to 116,100 tons, due in part to outages. Nizhnekamskneftekhim reduced purchases in August 3.5 times



to 23,350 tons, Tomskneftekhim reduced its consumption by 66% to 14,620 tons, whilst Stavrolen increased purchases 4.7 times to 16,570 tons. Russian petrochemical plants bought 1.045 million tons of gas liquids in January to August this year against 847,800 tons in the same period in 2014.

Russian gas processing plants increased consumption of natural gas liquids by 16% in August to 233,050 tons. From January to August 2015 the volume of natural gas liquids delivered

to the Russian market amounted to 2.64 million tons, which is 4% more than in 2014.

Russian isobutane market, Jan-Aug 2015

Isobutane sales on the domestic market amounted to 47,480 tons in August, 5% down on July but 24% up over August 2014. From January to August 2015 sales on the domestic market totalled 382,640 tons which is 38% more than in the same period last year. All of the Russian consumers use isobutane for MTBE production, with Nizhnekamskneftekhim the largest individual buyer and from its three plants SIBUR the largest group buyer.

Russian olefin production, Jan-Aug 2015

Russian ethylene production amounted to 208,000 tons in August against 225,100 tons in July. Production dropped over the summer months due to planned outages. Over the first eight months in 2015 Russian ethylene production totalled 1.859 million tons against 1.587 million tons in the same period last year.

Propylene sales on the domestic market amounted to 29,800 tons in August, 3% up on July. Lukoil-NNOS supplied 20,800 tons, 1.9 times up on July. Angarsk Polymer Plant and Gazprom neftekhim Salavat did not sell in August due to maintenance. In the first eight months in 2015 sales on the domestic market totalled 253,300 tons which is similar to last year.

| Russian Propylene Exports (unit-kilo tons) | | |
|--|------------|------------|
| Producer | Jan-Aug 15 | Jan-Aug 14 |
| Lukoil-NNOS | 1.2 | 0.0 |
| SIBUR-Kstovo | 40.2 | 5.0 |
| Angarsk Polymer Plant | 10.0 | 0.0 |
| Total | 51.4 | 5.0 |

Russian propylene production amounted to 123,100 tons in August, 6% down on July. Production totalled 1.060 million

tons for the period January to August 2015 against 922,000 tons in the same period last year. Propylene exports have risen this year from only 5,000 tons in the period January to August 2014 to 51,400 tons in 2015.

Russian styrene, Jul-Aug 2015

Styrene sales on the Russian domestic market amounted to 3,200 tons in July, 2.6 times down on June. The significant decline in July was due to repair work at Salavat and Angarsk. Russian styrene sales on the domestic market increased by 1.9 times in August over July to 6,200 tons. Following maintenance Gazprom neftekhim Salavat increased shipments of monomer 11.5 times to 4,500 tons. However, due to the planned outage SIBUR-Khimprom reduced shipments 4.7 times to 555 tons in August. In the first eight months of 2015, producers supplied 58,800 tons of styrene to the merchant market in Russia, 7% more than in 2014. Russian styrene exports totalled 72,700 tons in the first eight months in 2015, 8% less than in 2014.

| Russian Styrene Production (unit-kilo tons) | | |
|--|-------------------|-------------------|
| Producer | Jan-Jul 15 | Jan-Jul 14 |
| Nizhnekamskneftekhim | 173.3 | 163.0 |
| Angarsk Polymer Plant | 22.5 | 20.9 |
| SIBUR-Khimprom | 80.7 | 72.5 |
| Gazprom n Salavat | 87.5 | 86.4 |
| Plastik, Uzlovaya | 25.1 | 28.3 |
| Total | 389.2 | 371.0 |

In August, the volume of Russian exports of styrene by rail increased by 36% to 5,400 tons. After completing repairs Gazprom neftekhim Salavat resumed export activity. Russian styrene exports totalled 72,700 tons in the first eight months in 2015, 8% less than in 2014.

Bulk Polymers

Russian polyethylene production & outages, Jan-Aug 2015

Russian production of polyethylene increased by 5.7% for the first eight months of this year to 1.075 million tons against 1.07 million tons in the same period in 2014. HDPE production increased by 3% to 599,000 tons, whilst LDPE production increased by 4.5% to 434,100 tons. LLDPE production at Nizhnekamskneftekhim totalled 40,000 tons in the first eight months in 2015 against 16,200 tons in 2014. Kazanorgsintez for eight months of 2015 produced a total of 490,000 tons of polyethylene, 2.3% more than the same period last year.

| Russian HDPE Production (unit-kilo tons) | | |
|---|-------------------|-------------------|
| Producer | Jan-Aug 15 | Jan-Aug 14 |
| Kazanorgsintez | 341.9 | 353.8 |
| Stavrolen | 88.3 | 47.9 |
| Nizhnekamskneftekhim | 104.4 | 117.7 |
| Gazprom neftekhim Salavat | 64.4 | 59.7 |
| Total | 599.0 | 579.1 |

Regarding outages, Gazprom neftekhim Salavat stopped HDPE production for maintenance on 24 July

and restarted on 24 August. The LDPE unit at Salavat undertook maintenance between 24 June to 28 July. Angarsk Polymer Plant resumed production of LDPE after maintenance on 31 August. Production was stopped on 20 July, by which time the company had produced 38,200 tons of LDPE since in January 2015 or 2% more than in 2014. Angarsk Polymer Plant is undertaking modernisation of the olefin complex which will increase ethylene capacity to 454,000 tpa and propylene to 210,000 tpa. Current polyethylene capacity at Angarsk stands at 76,800 tpa.

| Russian LDPE Maintenance Shutdowns 2015 | | |
|--|-------------------------|-------------------|
| Company | Date of Stoppage | Completion |
| Angarsk Polymer Plant | 20 July | 31 August |
| Gazprom neftekhim Salavat | 24 June | 28 July |
| Kazanorgsintez | 19 September | 1 October |
| Tomskneftekhim | 28 August | 24 September |

Tomskneftekhim stopped production of LDPE for scheduled maintenance, on 28 August, scheduled to last for around 30 days. The polypropylene plant at Tomsk closed for maintenance at the start of September for a period of 14 days. Tomskneftekhim produced

173,300 tons of LDPE in the period January to August 2015, 2% up on last year. As part of SIBUR, Tomskneftekhim currently includes capacities of 245,000 tpa and 130,000 tpa respectively of LDPE and polypropylene which are planned to be upgraded to 270,000 tpa and 140,000 tpa.

Kazanorgsintez started the maintenance on one of its LDPE lines in September, halting production at the 117,000 tpa plant on 19 September. The outage is scheduled to last until the end of the month, effectively to correlate with the resumption of ethylene deliveries from Nizhnekamskneftekhim. The HDPE plant at Kazan was closed for maintenance on 19 September, and is expected to restart on 10 October. The

capacities of the LDPE and HDPE plants for Kazanorgsintez stand at 117,000 tpa and 640,000 tpa respectively.

| Russian HDPE Imports (unit-kilo tons) | | |
|--|------------|------------|
| Category | Jan-Aug 15 | Jan-Aug 14 |
| Extrusion | 38.7 | 39.0 |
| Pipe | 20.5 | 51.4 |
| Film | 8.7 | 22.0 |
| Blow | 16.7 | 29.4 |
| Injection | 31.1 | 33.8 |
| Others | 7.4 | 7.3 |
| Total | 123.1 | 182.9 |

Russian polyethylene imports, Jan-Aug 2015

HDPE imports into Russia dropped 33% in the first eight months in 2015 to 123,100 tons. The largest decline in imports occurred in the film and tubular polyethylene sectors. Imports of HDPE for extrusion coatings declined from 39,000 tons in January to August 2014 to 38,700 tons in 2015. Pipe grade HDPE declined from 52,400 tons to 20,500 tons. Overall the key factors that influenced the decline in imports this year have consisted of the significant decline in demand for finished products in the domestic market, coupled with the sharp fall in value of the rouble.

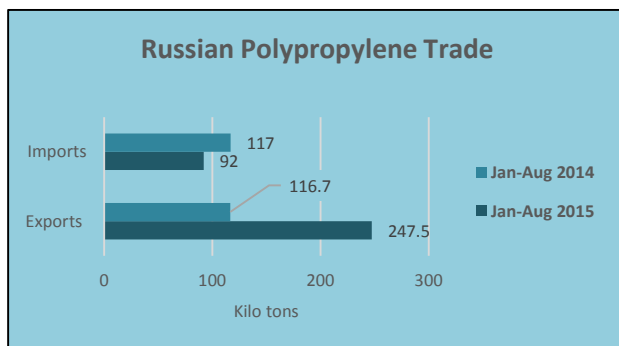
Russian LLDPE imports totalled 125,100 tons in January to August 2015, 12% down on 2014 when volumes totalled 141,500 tons. The largest decrease occurred in demand for rotational moulding grades. Reduced imports this year has resulted from the increased LLDPE production by Nizhnekamskneftekhim coupled with weaker demand in some application areas.

| Russian Polypropylene Market (unit-kilo tons) | | |
|---|--------------|--------------|
| | Jan-Jun 2015 | Jan-Jun 2014 |
| Production | 688.5 | 503.5 |
| Exports | 200.9 | 102.6 |
| Imports | 49.9 | 69.8 |
| Market Balance | 537.5 | 470.8 |

Russian polypropylene trade 2015

In the first eight months of 2015 the total volume of imports of polypropylene in Russia decreased by 21% to 92,400 tons. The largest decrease occurred for block copolymers, whilst the smallest decline was seen in stat-propylene copolymers (PP-random). Imports have been affected by weaker economic conditions, but the main factor has been

the rise in domestic production.



Russian polypropylene exports totalled 247,500 tons in the first eight months in 2015, 112% up on the same period in 2014 when exports totalled 116,700 tons. The key exporters include Tobolsk-Polymer, Polyom and Stavrolen, which accounted for 49%, 29% and 7% respectively in the first eight months.

The main markets for Russian polypropylene exports this year have included China, Turkey, Belarus, Ukraine and Belgium, which together

have accounted for around 66% of shipments. Homo-PP is the main product grade exported by Russian companies.

Russian polypropylene production, Jan-Aug 2015

Russian polypropylene production totalled 901,000 tons in the period January to August 2015, 37% up on the same period in 2014. Tobolsk-Polymer produced 240,000 tons against 98,200 tons in January to August 2014, whilst Polyom increased production by 13.6% to 117,100 tons against 103,100 tons. Polyom stopped production of polypropylene on 3 September for the planned two-week preventive maintenance, thus slightly slowing the trend of exports. Polyom is capable of producing 210,000 tpa of polypropylene based on the Spheripol process.

| Russian PVC Market Balance (unit-kilo tons) | | |
|--|------------|------------|
| | Jan-Aug 15 | Jan-Aug 14 |
| Production | 521.8 | 409.6 |
| Exports | 27.1 | 2.2 |
| Imports | 47.3 | 194.2 |
| Market Balance | 542 | 601.6 |

Russian PVC imports, Jan-Aug 2015

Russian PVC imports totalled 47,300 tons in the first eight months in 2015, against 194,200 tons in the same period in 2014. Imports increased over the summer months due to outages at Sterlitamak and Sayansk, despite the weak rouble, and August provided the largest volume of shipments in 2015 at 24,200 tons. Even US imports resumed in July. China remains the largest source of imported PVC into Russia although

volumes are considerably down against previous years. Russian PVC exports totalled 27,100 tons in the first eight months against 2,200 tons in 2014. Overall for the first eight months this year PVC consumption totalled 542,000 tons against 601,600 tons in the same period in 2014.

| Russian PVC Production (unit-kilo tons) | | |
|--|------------|------------|
| Producer | Jan-Aug 15 | Jan-Aug 14 |
| Bashkir Soda | 157.5 | 152.5 |
| Kaustik | 63.2 | 64.2 |
| RusVinyl | 153.9 | 0 |
| Khimprom | 0.0 | 12.4 |
| Sayanskkhimplast | 147.2 | 180.5 |
| Total | 521.8 | 409.6 |

Russian PVC production, Jan-Aug 2015

Russian PVC production totalled 521,400 tons in the period January to August 2015, 27% up over 2014. Sayanskkhimplast undertook a shutdown between 10 August and 15 September to coincide with the shutdown by Angarsk Polymer Plant. Original plans to restart on 30 August had to be delayed due to ethylene supply questions at Angarsk.

Bashkir Soda at Sterlitamak also undertook a two week shutdown in August. Overall Sayanskkhimplast reduced PVC production by 18% over the first eight months in 2015 to 147,200 tons, the decline forced by the lower volumes of ethylene delivered from Angarsk. Bashkir Soda increased production 3% to 157,500 tons, whilst RusVinyl produced 153,400 tons in 2015 (started September 2014) of which 3,200 tons was emulsion grade. The other Russian producer Kaustik at Volgograd produced 63,200 tons in the first eight months in 2015, 1% down against last year.

Russian polycarbonate trade, Jan-Aug 2015

Over the period January-August imports of polycarbonate to the Russian market amounted to 16,400 tons which is 35% down on the same period in 2014. Imports increased over July and August due to a seasonal increase in demand, and purchases were made largely before the most recent fall in value in the rouble which has now made imports very expensive. Regarding polycarbonate grades, imports of product for sheet extrusion amounted to 12,000 tons in the first eight months in 2015 which is 37% less than the same period last year. Imports of injection granular grade for the period January-August amounted to 2,000 tons which was 22% down on 2014. SABIC is about the only company to have increased imports into Russia this year.

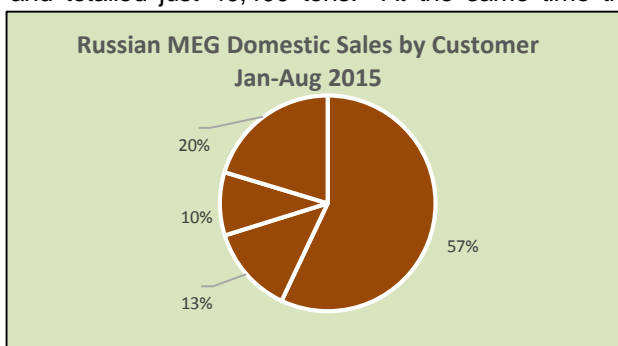
| Russian Polycarbonate Trade (unit-kilo tons) | | |
|---|------------|------------|
| | Jan-Aug 15 | Jan-Aug 14 |
| Exports | 0.0 | 1.0 |
| Imports | 16.8 | 27.6 |

Russian polycarbonate production & consumption, Jan-Jul 2015

Polycarbonate production for January-July totalled 37,400 tons, which is 8.9% lower than in 2014. The decline is due to technical problems in the production in the first quarter. Kazanorgsintez resumed production of polycarbonate on 10 August after a maintenance shutdown. The company this year has not exported polycarbonate and sells all of its products on the domestic market.

| Russian Polycarbonate Market (unit-kilo tons) | | |
|--|------------|------------|
| | Jan-Jul 15 | Jan-Jul 14 |
| Production | 37.4 | 42.7 |
| Consumption | 50 | 58.5 |

Polycarbonate consumption is estimated to have fallen 17% in the first seven months in 2015 to 50,000 tons. The main decline has been seen in the consumption of granules for sheet extrusion, which occupies more than 80% of the total market. Demand for extrusion granulation grades fell 22% in January to July 2015 compared with 2014 and totalled just 40,400 tons. At the same time the casting division, is estimated to have increased performance and amounted to 8,600 tons against 6,700 tons last year.



2,600 tons over July. SIBUR-Neftekhim supplied 10,200 tons in August, 12% up over July, whilst the main consumer in August was Polief which took 7,600 tons. MEG sales on the domestic market for the first eight months in 2015 totalled 103,800 tons of which SIBUR-Neftekhim was the main supplier accounting for 74%

PET Chain

Russian MEG, Jan-Aug 2015

As PET production in Russia has been rising this year the demand for MEG on the domestic market has risen with a subsequent impact on export activity. MEG sales on the Russian domestic market In August 2015 amounted to 15,300 tons,

and Polief the main buyer accounting for 56% of shipments. Alko-Naphtha mainly imports MEG and accounted for most of the 9,400 tons imported in January to August 2015.

Regarding exports of MEG, Russia continues to focus primarily on Belarus but little elsewhere. In August Russian MEG exports amounted to 7,170 tons against 6,970 tons in July. SIBUR-Neftekhim was responsible for exporting 5,790 tons in August and Nizhnekamskneftekhim 1,110 tons, whilst Belarus, accounted for 6,360 tons. Russian MEG exports totalled 69,746 tons in the period January to August 2015, of which 76% was shipped by SIBUR-Neftekhim.

| Russian PX Production | | |
|---------------------------|------------|------------|
| Producer | Jan-Jun 15 | Jan-Jun 14 |
| Gazprom Neft | 93.8 | 84.5 |
| Ufaneftekhimi | 49.7 | 51.7 |
| Kinef, Kirishi | 33.3 | 38.4 |
| Total | 176.8 | 174.6 |
| Russian PX Domestic Sales | | |
| Producer | Jan-Jun 15 | Jan-Jun 14 |
| Gazprom Neft | 43.4 | 37.2 |
| Ufaneftekhimi | 48.1 | 53.8 |
| Kinef | 0.2 | 0.0 |
| Total | 91.7 | 91.0 |
| Russian PX Exports | | |
| Producer | Jan-Jun 15 | Jan-Jun 14 |
| Gazprom Neft | 25.7 | 29.1 |
| Ufaneftekhimi | 13.7 | 29.4 |
| Kinef | 18.5 | 1.0 |
| Total | 57.9 | 59.5 |

Russian paraxylene market 2015

Paraxylene exports from Russia totalled 78,100 tons in the first eight months in 2015 against 59,500 tons in the same period in 2014. Russian paraxylene producers have traditionally been successful exporters on the global market, but in recent years the addition of new global capacity in the Middle East and Asia has affected margin and volume possibilities. Thus whilst exports have been higher this year they still remain lower than in the past.

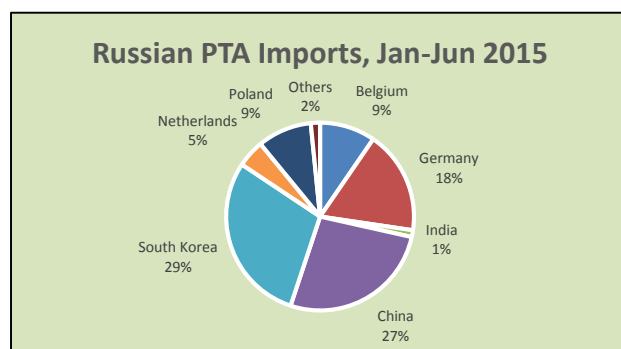
Domestic sales totalled 131,524 tons against 123,423 tons in January to August, significantly outstripping exports. Higher PTA production by Polief has provided the main factor behind increasing paraxylene demand this year.

Russian PTA duties to remain at 0%

The zero rate of import duty on PTA for Russia will be extended for a period up to 31 December 2017, as decided by the Eurasian Customs Union. PTA duties will continue at 0% from the start of January 2016 until 31 December 2017, aimed at meeting the growing needs of the domestic market.

The import duty of 0% for PTA was established by the Eurasian Economic Union for the period from 2 September 2014 to 31 December 2015 inclusive, coming down from 5%. Other members of the Eurasian Customs Union include Belarus (which also imports PTA), Kazakhstan and Armenia.

The sole producer of PTA in Russia is Polief with a capacity of 250,000 tpa, and having increased its PET production in the past two years has created more need for Russian consumers to import. As there currently no plans in place to expand Russian PTA capacity.



At the same new PET projects are under construction by Etana and Ivregionsintez, and the Russian government has been keen to support zero duties for PTA. In the first half of 2015 Russian imports of PTA totalled 124,000 tons with the leading suppliers including South Korea and China.

Russian PET, Jan-Jul 2015

Russian PET consumption amounted to 316,500 tons for the first seven months in 2015, 17% down

on 2014. All main sectors saw a decline, including beer by 8%, non-alcoholic beverages by 2.5% and mineral water by 6.7%. PET production totalled 295,000 tons in the period January to July 2015, 13% up on 2014. Imports of PET totalled 49,500 tons which is 65% down on last year. Exports by contrast rose by 57% to 16,750 tons.

Consumption for the short term looks to be further affected by the voluntary decision by the Union of Russian producers of beer and soft drinks to restrict the use of plastic containers for bottling alcohol. Members of the Union are willing to voluntarily stop production of beer and drink beer in consumer packaging volumes from

1.5 litres by 1 July 2016. From 1 January 2014 the Union voluntarily renounced the production of beer products in plastic bottles larger than 2.5 litres, as well as beer and beer beverages with an ethyl alcohol content of more than 6% in the use of polymer package of more than 2 litres.

Russian PET imports, Jan-Aug 2015

Russian PET imports totalled 57,000 tons in January to August 2015, 64% down on the same period in 2014. In January-August this year imports from China fell by 4.4 times and amounted to only 27,000 tons.

Deliveries from South Korea fell by 45% and amounted to 9,300 tons. Imports from the United Arab Emirates has not changed this year and for the first eight months amounted to 4,700 tons, whilst shipments from Lithuania rose 3% to 5,300 tons. The reason for lower imports is largely due to higher production from Russian producers coupled with the currency factor.

The position of the Ministry of Energy in the Ministry of Economic Development of the Russian Federation share and FAS Russia, noting that even a partial ban on PET bottles will close plants and reduce the tens of thousands of jobs, not to mention the loss of tax revenue.

Aromatics & derivatives

Russian benzene, Jan-Aug 2015

Russian benzene merchant sales, including domestic shipments and exports, increased in the first eight months in 2015 to 515,100 tons against 506,500 tons in 2014. In the first eight months in 2015 Russian benzene sales on the domestic market totalled 469,100 tons, 3% up on 2014.

| <i>Company</i> | <i>Jan-Aug 15</i> | <i>Jan-Aug 14</i> |
|----------------------|-------------------|-------------------|
| Kuibyshevazot | 98.2 | 86.6 |
| Azot Kemerovo | 68.6 | 59.0 |
| Shchekinoazot | 32.3 | 35.2 |
| Kazanorgsintez | 44.9 | 40.6 |
| Nizhnekamskneftekhim | 43.7 | 22.9 |
| Samaraorgsintez | 34.3 | 28.9 |
| SIBUR-Khimprom | 43.3 | 56.3 |
| Exports | 46.0 | 49.6 |
| Others | 103.8 | 127.4 |
| Total | 515.1 | 506.5 |

The increase in activity this year has resulted partly from renewed production and availability at Stavrolen and partly due to increased demand from the main domestic consumers Kuibyshevazot, Azot Kemerovo and Nizhnekamskneftekhim. Caprolactam remains the main merchant product sector for Russian domestic market sales followed by styrene and phenol. Russian benzene imports from Kazakhstan in the first eight months in 2015 totalled 2,800 tons, 11% up on 2004. Kazanorgsintez was the sole buyer in August of imported benzene from ArcelorMittal Temirtau, importing 407 tons.

Maintenance at Angarsk Polymer Plant and Gazprom Neft at Omsk affected supply in August, whilst West Siberian MK and SIBUR-Kstovo both reduced shipments. By contrast Stavrolen increased shipments by 2.7 times to 6,500 tons. Domestic sales amounted to 43,200 tons

in August, 11% down on July. Other maintenance shutdowns took place at Russian benzene plants at Ryazan and Salavat took place in July.

Russian aromatic duties

The rate of Russian export duty on aromatic hydrocarbons in September fell by 18% relative to August to \$44 per ton. Export duties for benzene, xylenes and toluene dropped to \$52.4 per ton in August, against \$63.8 per ton in July and \$68.6 in June. By comparison, the rate in January 2015 stood at \$81.6 per ton. In



2015 the rate of excise duty for benzene, paraxylene and orthoxylene is set at 2,300 roubles per ton, rising to 3,000 rouble in 2016 and 3,500 roubles in 2017.

Russian toluene, Jan-Aug 2015

Toluene sales on the Russian domestic market amounted to 11,425 tons in August against 14,046 tons in July. Gazprom Neft shipped 5,695 tons (37%), followed by Kirishinefteorgsintez at Kirishi with 3,550 tons (25%) and Slavneft-Yanos with 2,880 tons (21%). Manufacturers of

explosives reduced toluene purchases by 5% in August compared with July to 1,050 tons (9% of Russia's total purchases). Paint manufacturers reduced purchases of by 10% to 3,200 tons.

| Russian Toluene Domestic Sales (unit-kilo tons) | | |
|--|------------|------------|
| Producer | Jan-Aug 15 | Jan-Aug 14 |
| Novopiletsk MK | 1.297 | 0.824 |
| Slavneft-Yanos | 20.165 | 30.771 |
| Severstal | 4.945 | 4.34 |
| LUKoil-Perm | 10.996 | 21.286 |
| Gazprom Neft | 34.138 | 19.656 |
| Zapsib | 3.147 | 2.463 |
| Kinef, Kirishi | 16.714 | 15.557 |
| Gazprom n Salavat | 0.061 | 0 |
| Others | 0.531 | 0.665 |
| Total | 91.994 | 95.562 |

Manufacturers of fuels and lubricants and additives for motor fuels increased their purchases of toluene 2.2 times to 2,040 tons. Other applications included 1,510 tons to the rubber producers. From January to August 2015 Russian toluene rail shipments totalled 91,994 tons, 3% less than in 2014.

Russian orthoxylene sales, Jan-Jul 2015

Domestic sales of orthoxylene amounted to 10,820 tons in July, 16% lower than in June. Ufaneftekhim shipped 5,310 tons, Gazprom Neft 3,390 tons and Kirishinefteorgsintez 2,110 tons. Kamteks-Khimprom accounted for 42% of shipments in July or 4,560 tons, followed by Russian paint manufacturers which took 35% of 3,740 tons. Other

applications including fuel, agrochemicals and pharmaceuticals accounted for 1,830 tons of shipments. For the period January to July 2015 Russian domestic sales amounted to 86,160 tons which was 15% down in 2014.

| Russian Phenol Sales by Supplier (unit-kilo tons) | | |
|--|-----------|------------|
| Producer | Jan-Aug 1 | Jan-Aug 14 |
| Omsk Kaucuk | 0.0 | 10.9 |
| Samaraorgsintez | 33.8 | 34.5 |
| Kazanorgsintez | 8.2 | 6.8 |
| Ufaorgsintez | 27.5 | 24.8 |
| Borealis | 1.5 | 1.9 |
| Total | 71.1 | 77.0 |

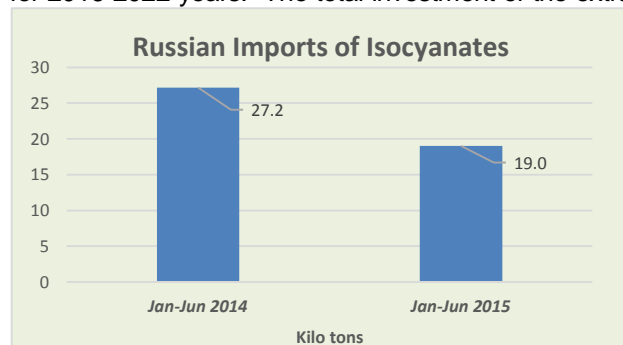
Russian phenol, Jan-Aug 2015

Domestic sales of phenol doubled in August over July to 10,100 tons following the resumption of production after maintenance at Novokuibyshevsk Petrochemical Plant. Over the month, the company delivered 4,800 tons in July, 3.5 times higher than in July. Kazanorgsintez also increased sales in August, 3.3 times over July, to 1,400 tons. Ufaorgsintez shipped 3,900 tons in August, 11% up on July.

Kuibyshevazot was the largest individual buyer in August, taking 1,000 tons, whilst phenol-formaldehyde resins remained the main application area accounting for 8,500 tons or 85% of total shipments. Sterlitamak Petrochemical Plant bought 516 tons in August for antioxidant production whilst Nizhnekamskneftekhim reduced purchases by 95% against August to only 56 tons.

Russian MDI projects

Promsintez together with Bashkir Soda Company is conducting preliminary studies for an MDI project at Chapayevsk with a capacity of up to 60,000 tpa. The implementation of this investment project is designed for 2016-2022 years. The total investment of the extra-budgetary resources should be more than 6 billion



roubles. The main factor in the choice of technological solutions for the production of processed MDI was the presence of nitrobenzene production.

Russia currently imports all of its isocyanates, and whilst in the past demand was growing at a good rate the present trend is negative. Imports declined from 27,200 tons in the first half of 2014 to 19,000 tons in the same period this year.

Promsintez was created in February 1997 on the basis of polymer as an enterprise for the production of explosives. The company has the largest range of industrial explosives in Russia. Nitrobenzene production was started in 1998, thus providing the basis for the production of aniline.

Another potential MDI project in Russia has been under consideration by Group Orgsintez involving the construction of a 100,000 tpa plant at its subsidiary Khimprom at Novocheboksarsk. Project considerations have also included plans for facilities for nitrobenzene (100,000 tpa), aniline (75,000 tpa) and formaldehyde (40,000 tpa). In view of the difficulties in securing finance from banks, the prospects for building an MDI plant in Russia in the medium term are not favourable unless the government deems the product important enough to justify financial support.

Synthetic Rubber

| Russian C4 Supplies (unit-kilo tons) | | |
|---|-------------------|-------------------|
| Supplier | Jan-Aug 15 | Jan-Aug 14 |
| Angarsk Polymer | 45.2 | 41.0 |
| Kazanorgsintez | 22.1 | 21.1 |
| Stavrolen | 35.9 | 47.0 |
| SIBUR-Kstovo | 47.9 | 32.3 |
| Tomskneftekhim | 45.4 | 46.0 |
| Ufaorgsintez | 19.9 | 17.7 |
| Naftan (Belarus) | 34.6 | 31.4 |
| Azerkhiyma | 18.6 | 3.9 |
| Iran | 1.4 | 3.0 |
| Others | 0.8 | 0.6 |
| Total | 278.0 | 242.6 |

Russian C4s, Jan-Aug 2015

C4 shipments from domestic producers to the internal Russian market declined 17% in August against July to 25,600 tons. This was due primarily to downtime undertaken by Angarsk Polymer Plant whilst in addition Stavrolen reduced shipments by 9% to 6,100 tons. Ufaorgsintez increased shipments in August by 19% over July to 2,700 tons and Kazanorgsintez increased by 16% to 3,600 tons.

The return to production by Stavrolen has had a major impact on domestic sales and imports. In the period January to August 2015 sales of C4s on the Russian domestic market totalled 225,100 tons, 26% more than in 2014. At the same time imports dropped 25% to 53,100 tons.

Togliattikaucuk explosion & downtime

Togliattikaucuk has started repair work after the explosion and fire at its site on 14 September. One person was killed in the accident which although took place outside the main territory of the enterprise, has resulted in rubber production being reduced. Togliattikaucuk is a producer of butyl rubber, isoprene rubber and copolymer, monomers and high-octane additives to gasoline.

| Russian Synthetic Rubber Exports | | |
|---|------------------------|-------------------|
| Country | Vol (kilo tons) | \$ million |
| Belgium | 8.5 | 12.1 |
| Brazil | 25.9 | 43.4 |
| Canada | 12.6 | 18.8 |
| China | 56.1 | 76.8 |
| Chile | 2.9 | 5.7 |
| Czech Republic | 13.2 | 21.9 |
| Estonia | 2.4 | 1.4 |
| Finland | 2.2 | 2.8 |
| Germany | 13.2 | 17.8 |
| Hungary | 35.8 | 64.7 |
| India | 45.4 | 66.4 |
| Italy | 5.7 | 6.8 |
| Latvia | 7.1 | 10.8 |
| Lithuania | 7.4 | 10.9 |
| Malaysia | 2.2 | 2.6 |
| Poland | 63.7 | 90.4 |
| Portugal | 3.6 | 6.3 |
| Romania | 18.1 | 25.0 |
| Serbia | 6.9 | 9.4 |
| Slovakia | 14.9 | 24.8 |
| South Africa | 2.4 | 4.8 |
| South Korea | 6.7 | 6.3 |
| Spain | 4.0 | 6.3 |
| Taiwan | 10.3 | 11.7 |
| Thailand | 4.4 | 5.9 |
| USA | 27.5 | 43.3 |
| Vietnam | 4.4 | 5.4 |
| Others | 64.1 | 98.7 |
| Total | 471.5 | 701.1 |

Russian synthetic rubber trade, Jan-Jun 2015

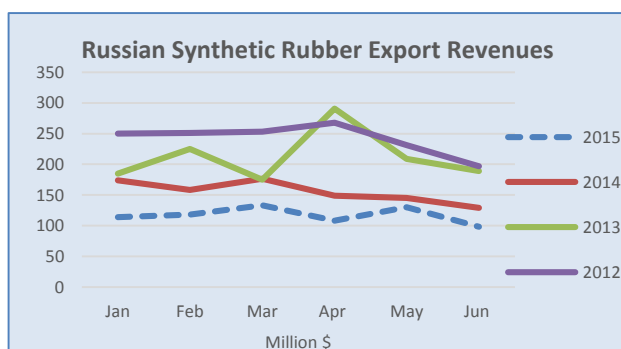
Russian synthetic rubber exports have increased in 2015 due to slightly better market opportunities, particularly in India and China. Even if prices per ton in US dollars are lower than last year, the de facto rouble devaluation has made exports more profitable. Exports to India totalled 45,400 tons in the first half of 2015 whilst China took 56,100 tons. Poland was the largest individual recipient of Russian synthetic rubber in the first half, whilst Central and East Europe accounted for around 35% of total shipments. The geographical range of Russian exports tends to cover most regions.

Regarding imports, Russia purchased 48,073 tons of natural rubber in the first six months this year and 36,560 tons of synthetic rubber in the same period. Indonesia was the largest supplier of natural rubber and Germany for synthetic.

Russian synthetic rubber market, Jan-Jun 2015

Higher exports from Russian synthetic rubber producers this year has compensated for the lack of demand in the domestic market. The Russian synthetic rubber market is estimated to fallen by over 20% in the first half of 2015, although some domestic producers have been able to significantly increase sales of niche products.

Domestic producers have increased market share this year, rising from 75% in 2014 to 88% in the first half in 2015), while the share of Chinese manufacturers, by contrast, have declined from 13% to 5%. At the same time, competition has increased among Russian companies all seeking so-called import-substituting products.



Russian plants for industrial and household rubber products are estimated to be running at low capacity of around 40%, but may be able to increase these rates as import competition fades. However, manufacturers are not only are faced by weak demand but also by disadvantageous pricing for raw materials from the synthetic producers and due to in part to rising energy tariffs.

Due to competition manufacturers have been forced this year to lower prices for products in order to retain their market position. In addition, the depreciation of equipment, outdated technology gradually weakens the competitive position of most Russian manufacturers. Russian rubber product manufacturers are not able to gain access to serious funding that would allow a major overhaul of existing equipment and bring the plants up to current global standards.

The market in Russia for rubber goods manufacturers is populated by around fifty companies of varying sizes. These include large factories such as Kurskrezinotekhnika, Saransk factory RTI, Ural plant RTI

| Nizhnekamskneftekhim Product Sales Q2 2015 (%) | | | |
|--|--------|-----------|--------|
| Product | Russia | Tatarstan | Export |
| Synthetic rubber | 2.2 | 9.3 | 88.5 |
| Plastics | 57.3 | 31.0 | 11.7 |
| Polyethers | 53.5 | 19.0 | 27.5 |
| Glycols | 59.1 | 23.3 | 17.6 |

Volzhskrezinotekhnika, Balakovorezinotekhnika, etc. In recent years, increasing competition from foreign manufacturers has affected domestic producers which find it difficult to compete in both terms of price and quality.

Nizhnekamskneftekhim increased rubber sales, 2015

The heavy focus on export activity for Nizhnekamskneftekhim's synthetic rubber division provided a major factor behind the increase in company profits in the second quarter and first half of 2015. Nizhnekamskneftekhim increased revenue from sales of synthetic rubber by 22.8% in the second quarter. Plastics by comparison, which is focused mostly on the domestic market, increased by a lesser rate of 14.7%.



Synthetic rubber sales totalled 30.6 billion roubles for Nizhnekamskneftekhim in the first half of 2015, increasing the share of the division in total sales for Nizhnekamskneftekhim in the first half of 2015 from 38% to 41.9%. In the first half more than in 2014. Rubber production rose 3.3% to 312,090 tons, whilst plastics grew by 2.7% to 360,940 tons.

Nizhnekamskneftekhim produced 1.193 million tons of commodity products in the first half of 2015, 0.4%

| Russian Chemical Commodity Exports | | | | |
|------------------------------------|------------|------------|------------|------------|
| Product | Jan-Jul 15 | Jan-Jul 15 | Jan-Jul 14 | Jan-Jul 14 |
| | Kilo tons | USD Mil | Kilo tons | USD Mil |
| Ammonia | 1,813 | 741 | 1,948 | 790 |
| Methanol | 728 | 202 | 993 | 402 |
| Nitrogen Fertilisers | 6,208 | 1,512 | 7,168 | 1,938 |
| Potash | 7,938 | 2,129 | 5,710 | 1,477 |
| Mixed Fertilisers | 5,298 | 1,958 | 5,071 | 1,821 |
| Synthetic Rubber | 567 | 844 | 486 | 1,082 |

Omsk Kaucuk, Jan-Jun 2015

Omsk Kaucuk produced 21,000 tons of synthetic rubber in the first half of 2015, 17% down on the same period last year. Omsk Kaucuk reduced its share in the Russian market for styrene-butadiene rubber by 4% in the first half of 2015 to 28%.

The company estimates that consumption of synthetic rubber in Russia decreased by 12% in the first half last year. In the second half of the year, Omsk Kaucuk expects an increase in consumption of MTBE after producing 130,000 tons in the first half of 2015. The company is one the less profitable petrochemical companies in Russia and managed to record only a minor net profit in the first half of 2015 whilst competitors have reported much better results.

Methanol

| Russian Methanol Domestic Sales (unit-kilo tons) | | |
|---|------------|------------|
| Supplier | Jan-Aug 15 | Jan-Aug 14 |
| Azot Nevinnomyssk | 14.8 | 14.5 |
| Azot Novomoskovsk | 67.4 | 70.0 |
| Metafrax | 232.1 | 214.1 |
| Sibmetakhim | 291.2 | 219.7 |
| Togliattiazot | 230.1 | 253.0 |
| Shchekinoazot | 18.0 | 10.4 |
| Others | 25.3 | 12.1 |
| Total | 878.9 | 793.7 |

Russian methanol domestic sales, Jan-Aug 2015

Domestic sales of methanol amounted to 127,000 tons in August, 6% more than in July. The main reason for the increase was the start of deliveries from the new plant Ammonium at Mendelevsk in Tatarstan. Over the month, the company shipped 11,800 tons to domestic consumers, which accounted for almost 10% of the total sold. Overall, Russian methanol sales on the domestic market totalled 793,700 tons in the first eight months against 793,700 tons in 2014.

MTBE producers accounted for 35% of methanol sales in August, followed by gas companies with 22%, producers of formaldehyde and its derivatives 18% and rubber (9%).

The largest fall in purchases of methanol in August stemmed from manufacturers of oils and additives, while the largest increase over July of 32% was recorded from producers of formaldehyde and its derivatives.

Russian methanol plant outages

Metafrax halted production at Gubakha for maintenance in August and thus reduced domestic sales by 45% against July to 16,200 tons. Metafrax will restart production in early October whilst Sibmetakhim stopped production in early September and will resume shortly after Metafrax.

| Russian Methanol Shutdowns 2015 | | |
|---------------------------------|-----------|------|
| Company | Period | Days |
| Metafrax | Aug-Oct | 45 |
| Sibmetakhim | Sept-Oct | 30 |
| Shchekinoazot | May-Jun | 40 |
| Tomet | April-Jun | 42 |

Russian methanol producers have recently been working on measures to ensure production can continue over the winter period without interruptions. Shchekinoazot established a new department to perform the task of maintaining interplant communication in working order and removal of small leaks and the bulk of the preparatory activities for the winter. The company

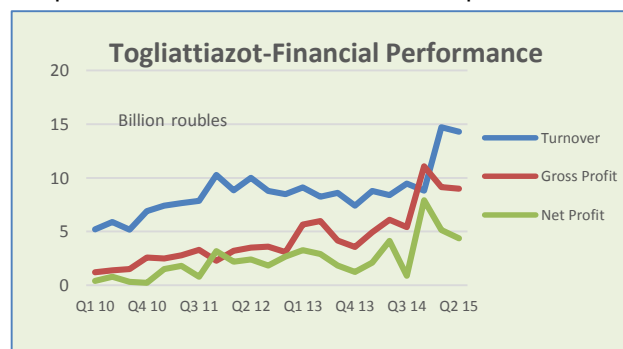
has developed and rigorously a system of training for the autumn-winter period.

Shchekinoazot underwent a major overhaul at its M-450 plant in the second quarter, the fourth planned shutdown since start-up in 2013. This year's shutdown lasted a month, from May, and involved the replacement of catalysts in the primary and secondary reforming in the synthesis reactor. The company changed to another brand of catalyst with a higher content of copper which has helped to increase the production of methanol.

Other features of the shutdown this year included an increase in the number of air coolers which has had a positive effect on the synthesis gas compressor and resulted in significant savings in energy, natural gas and oxygen.

Russian methanol plant profitability

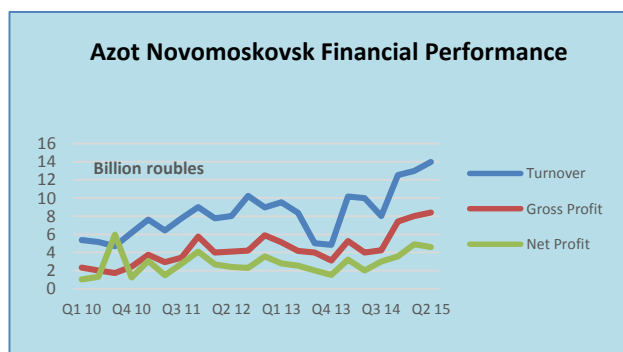
In rouble terms all methanol producers have shown rising trends in revenues, gross and net profits in the past nine months. Most methanol producers are heavily oriented towards fertiliser production and



export activity. Togliattiazot, for example, exports around 70% of its production most of which is shipped via the Odessa terminal. Methanol plays a secondary role to ammonia and urea exports, similarly to Akron and the Evrokhim plants at Nevinnomyssk and Novomoskovsk. In the past two years the low price of gas in the Middle East and other regions has substantially weakened the competitive advantages of Russian fertiliser and methanol producers in the global market. Thus although positive rouble profits are being recorded by the

Russian producers, these profits look less impressive when converted into dollars. Azot at

Novomoskovsk was able to show a 34.29% increase in revenues from the first half of 2015, benefiting from higher prices for urea (14.21%), ammonium nitrate (8.42%), ammonia (3.47%), methanol (3,17%), and despite falls in volume sales such as urea (-0.97%), methanol and (-1.23%), and ammonia (-1.47%). The most long term profitable target for Russian producers is seen in the domestic market where there is no competition from imports.



methanol market is a slow and gradual process. Metafrax sold 256,200 tons of methanol on the domestic market in the first half of 2015, indicating a rising trend and representing a 47% share of production. However, methanol exports for Metafrax still remain an important objective, as for other products such as utropin, pentaerythritol and urea-formaldehyde concentrate.

| Producer | Jan-Aug 15 | Jan-Aug 14 |
|-------------------|--------------|--------------|
| Azot Nevinomyssk | 0.0 | 16.3 |
| Azot Novomoskovsk | 110.3 | 88.2 |
| Akron | 0.1 | 4.9 |
| Metafrax | 155.7 | 223.4 |
| Sibmetakhim | 263.3 | 269.4 |
| Tomet | 122.0 | 141.4 |
| Shchekinoazot | 215.4 | 239.9 |
| Total | 866.8 | 983.6 |

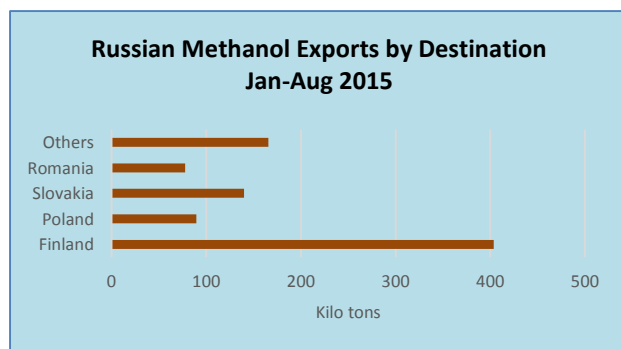
Russian methanol exports, Jul-Aug 2015

Russian methanol exports amounted to 116,000 in July, 10% higher than June. Shchekinoazot exported 31,500 tons, which is almost 5% less than in June, whilst Metafrax exported about 18,200 tons of methanol, which is only 3% less than in the previous month.

The maximum increase in exports in July was recorded by Tomet, rising 60% over June to 18,200 tons. The largest

Russian exporter Sibmetakhim increased volumes by 17% to 38,700 tons.

Finland accounted for 48% of Russian methanol exports in July, or 56,100 tons, followed by Slovakia with 17,500 tons, Poland 11,800 tons and Romania 11,700 tons. Russian methanol producers have restarted exports through the Odessa ICC after suspending deliveries in April. Tomet is the main user of the Odessa terminal shipping product to Romania and Turkey, shipping usually between 10-15,000 tons per month.



Exports dropped by 17% in August against July due mostly to the outage by Metafrax, and amounted to 97,000 tons. Metafrax exported only 127 tons in August against 18,200 tons in July. Main exporters in August were Sibmetakhim which shipped 33,200 tons followed by Shchekinoazot with 29,800 tons and Tomet 18,700 tons. Finland accounted for 37% of Russian methanol exports in August (35,600 tons), followed by Poland (11,500 tons), Romania (22,200 tons), and Slovakia (20,100 tons).

| |
|---|
| Modernisation of methanol synthesis reactor |
| Construction of concentrated formaldehyde plant, 90,000 tpa |
| Construction of paraformaldehyde plant, 30,000 tpa |
| Feasibility study for ammonia and urea plant |

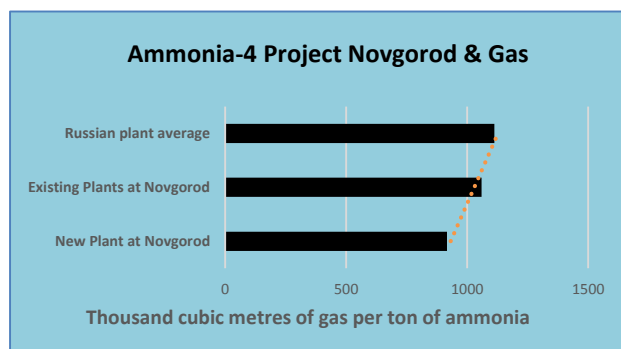
Metafrax, investment projects

Metafrax is elaborating a plan to create its own source of energy supply in order to reduce costs and guarantee plant security. The company is undertaking a feasibility study at present for the construction of a new plant for ammonia, urea and melamine, which it had previously abandoned. Metafrax hopes to increase production volumes and expanding its product

range for methanol and formaldehyde, as well as to reduce raw material and energy costs per unit of output. Two projects where construction is in the early stages include concentrated formaldehyde (capacity 90,000 tpa) and paraformaldehyde (capacity 30,000 tpa). Metafrax reported in its first quarter report for 2015 that it has completed initial work with Bayer regarding the development and modernisation of existing production facilities.

Russian ammonia projects 2015-2020

The recent start-up of the new ammonia plant at Mendeleevsk in Tatarstan was the first significant development in Russian ammonia production for several decades and will be followed by several larger projects over the next few years. Most of the current production plants are based on old and obsolete technology, but major players such as Akron, Evrokhim and Fosagro are all engaged in major projects designed to improve production economics, environmental safety, etc. Akron at Novgorod is close to starting its new 700,000 tpa ammonia-4 plant which will run on much lower gas consumption than the average in the Russian fertiliser industry.



Fosagro is constructing a new plant at Cherepovets, whereby gas consumption per ton of ammonia would equate to 945,000 cubic metres or around 20% lower than the existing facilities. A similar rate of gas consumption is predicted at Evrokhim's new project at Kingisepp in the Leningrad region where construction of a one million tpa plant has recently started. Investment in the new project for Evrokhim has been estimated in the range of \$1 billion. As with all of the new projects Gazprom has guaranteed uninterrupted transit of gas to the production sites.

The largest new ammonia plant is being constructed by National Chemical Holding at Primorsk Kray in the Russian Far East, where gas deliveries from Gazprom will begin in 2019 and by 2021 will amount to 3.15 billion cubic metres per annum. This project involves capacities of 2.1 million tpa of ammonia, 2.0 million tpa of urea and 1.0 million tpa of methanol. In total it will mean that Russian ammonia capacity should reach 21.840 million tons by 2020 against 17.040 million tpa at present. Significantly the new plants will bring down the average amount of gas consumption per ton of ammonia in Russian production.

Organic Chemicals

| Russian Butanol Production (unit-kilo tons) | | |
|--|------------|------------|
| N-Butanol | | |
| Producer | Jan-Aug 15 | Jan-Aug 14 |
| Angarsk Petrochemical | 24.6 | 23.4 |
| Evrokhim | 12.5 | 13.4 |
| Gazprom n Salavat | 35.4 | 37.1 |
| SIBUR-Khimprom | 18.4 | 21.0 |
| Total | 90.9 | 94.8 |
| Isobutanol | | |
| Producer | Jan-Aug 15 | Jan-Aug 14 |
| Angarsk Petrochemical | 8.9 | 11.7 |
| Gazprom n Salavat | 31.1 | 20.4 |
| SIBUR-Khimprom | 29.7 | 33.3 |
| Total | 69.7 | 65.3 |

Russian butanol production, Jan-Aug 2015

Russian butanol production totalled 160,700 tons in the first eight months in 2015, against 160,100 tons in the same period in 2014. Gazprom neftekhim Salavat remains the largest producer, increasing isobutanol production this year at the expense of normal butanol. The proportion of n-butanol in total Russian production for January to August was 63%, and isobutanol 37%.

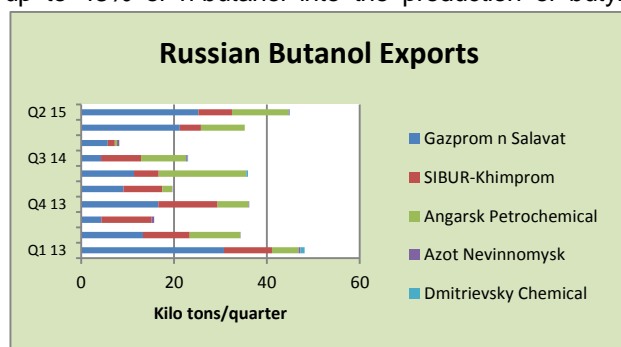
Russian production of butanols is traditionally export-oriented, but it is becoming more difficult to sell the excess butanols in Asia and producers are looking more closely at the domestic market. Thus, Russian producers have been examining possibilities to develop processing of butanols, for instance Gazprom neftekhim Salavat is currently in the planning stages for its acrylic acid and acrylate ester project including 80,000 tpa of butyl acrylate and 35,000 tpa of glacial acrylic acid. The emphasis for the smallest

butanol producer Azot at Nevinomyssk is largely captive, processing around 75% of butanols into butyl acetate, whilst SIBUR-Khimprom is able to ship around 75% of its butanols to its SIBUR group member Akrilat at Dzerzhinsk.

Russian butanol exports declined by 20% in 2014 due in part to lower demand from China where domestic capacity has started to affect inward shipments. At the same time domestic demand in Russia is rising. Aktilat increased purchases of butanols by 12% in 2014 to 24,500 tons whilst Dmitrievsky Chemical Plant increased purchases by 29% to 20,700 tons. Around half of butanols production is now consumed captively by producers. If successful, the acrylates project will allow Gazprom neftekhim Salavat to be able to process up to 43% of n-butanol into the production of butyl acrylate. Normal butanol has a wider range of

applications, but isobutanol is used mostly as a solvent for paints and its possibilities for selling on the domestic market more limited.

Angarsk Petrochemical Company is the only Russian producer dependent purely on the merchant market, particularly exports to China where 98% of production was exported in 2014. If the demand from the Chinese market for imported raw materials continues to decline, the Angarsk plant may be forced to reduce production.



Russian domestic butanols, Jan-Aug 2015

Butanol sales on the domestic market amounted to 6,360 tons in August, 36% less than in July and 30% lower than in August 2014. The proportion of n-butanol in August sales was 84%, and isobutanol 16%.

| Consumer | Jan-Aug 15 | Jan-Aug 14 |
|----------------------|------------|------------|
| Aktilat | 16.2 | 13.3 |
| Dmitrievsky Chemical | 15.5 | 14.0 |
| Kamenskvolokno | 0.0 | 1.4 |
| Volzhskiy Orgsintez | 4.3 | 2.1 |
| Sredneuralsky Copper | 0.0 | 1.1 |
| Others | 14.5 | 14.9 |
| Total | 50.6 | 46.9 |

Supply was reduced due to production downtime by SIBUR-Khimprom which closed in July and restarted at the end of August. Gazprom neftekhim Salavat supplied 3,580 tons, SIBUR-Khimprom from inventory 2,180 tons, Angarsk Petrochemical 330 tons and Azot Nevinnomyssk 270 tons.

Dmitrievsky Chemical Plant was the largest consumer in August, taking 2,870 tons which was 25% down on July. Aktilat at Dzerzhinsk reduced purchases by 48% to 1,670 tons. Other buyers in August included Volzhskiy Orgsintez which bought 450 tons, Plant of Synthetic Alcohol at Orsk 400 tons and Ural Plant of plasticizers 230 tons. For the

period January to August 2015 sales of butanol, on the domestic market totalled 50,580 tons which is 8% up on 2014.

Russian 2-EH market, Jan-Aug 2015

In the first eight months in 2015 sales of 2-ethylhexanol on the Russian market by rail totalled 18,100 tons, 38% less than in the same period last year. The main reason for the reduction in shipments to the domestic market is the stoppage of DOP production by Roshalsky Plant of Plasticizers. Currently, the company produces DINP, which is the raw material for the isononyl alcohol. Deliveries to the domestic market amounted to 1,334 tons in August which was 54% less than in July. The main consumers in August were the Biysk Oleum Plant the Sverdlov plant, whilst Kamteks-Khimprom did not buy.

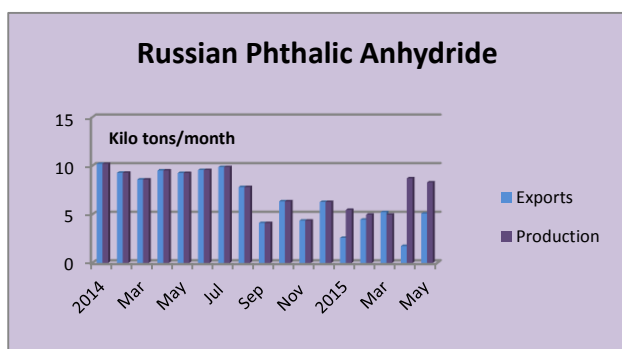
Russian pentaerythritol, Jan-Aug 2015

Metafrax produced 1,700 tons of pentaerythritol in August which is 15% less than in July and 11% lower than in August 2014. Production was reduced in August due to low demand. Production totalled 15,580 tons for the first eight months in 2015 which was 6% up on 2014.

Russian phthalic anhydride market

Russian production of phthalic anhydride amounted to 9,840 tons in July, 15% more than in June. Kamteks-Khimprom produced 8,870 tons and Gazprom neftekhim Salavat 970 tons. Kamteks-Khimprom reduced revenues in the first half of 2015 to 440 million roubles from 510 million roubles in the same period last year. The company achieved a net profit of 50 million roubles against a loss of 8 million roubles in 2014. Kamteks-Khimprom produced 42,740 tons of phthalic anhydride which was 17% less than in the first half of 2014.

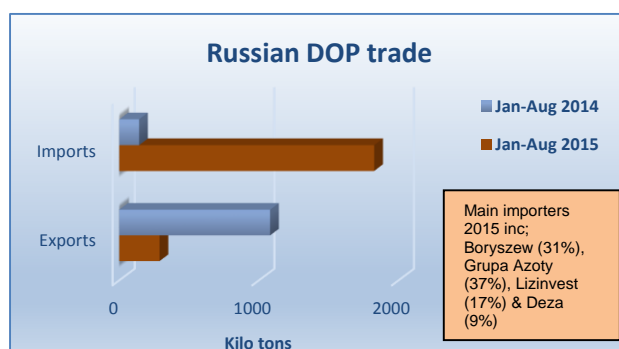
The most notable feature of the phthalic market in the first part of 2015 included the resumption of purchases by Roshalsky Plant of Plasticizers from Kamteks-Khimprom after ceasing in 2012. The owner of Roshalsky Plant of Plasticizers Neftekhimprom could not agree on phthalic supplies from Kamteks-Khimprom between



2012 and 2015 and subsequently purchased phthalic from imports. The changing economic situation in Russia based on the fall in value of the rouble has made imports less profitable and this helped restore relations between Kamteks-Khimprom and Neftekhimprom.

In the first half of 2015 Roshalsky Plant of Plasticizers purchased 2,480 tons of phthalic anhydride from Kamteks-Khimprom compared to 3,200 tons in 2012. Ural Plant of Plasticizers has not resumed purchases of phthalic anhydride after PTA. Due to the resumption of purchases of phthalic anhydride by Roshalsky Plant of Plasticizers exports from Russia declined by 33% in the first half of 2015. It also meant that imports declined in the first half of 2015 from 6,550 tons to 2,050 tons, all of which came from Belarus.

switching in 2013 to the production of DOTP based on



Russian DOP, Jan-Aug 2015

Russian DOP exports amounted to only 288 tons in the first eight months in 2015, against 1,080 tons in the same period in 2014. Imports by contrast increased to 1,945 tons against 130 tons in 2014, driven by the switch in emphasis by the

domestic plasticizer producers. Suppliers to the Russian market in the past two months include the Czech company Deza, Polish companies Boryszew and Grupa Azoty and Korean company Humade Corporation. In June and July Russian DOP availability was affected by the planned outage at Gazprom neftekhim Salavat, with the restart postponed several times.

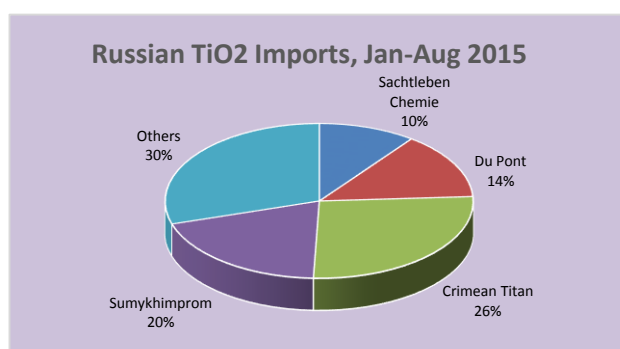
| Russian Paint Production (unit-kilo tons) | | |
|---|------------|------------|
| Sector | Jan-Aug 15 | Jan-Aug 14 |
| Paint Materials on polymers | 584.6 | 645.5 |
| Other Paints | 251.0 | 270.2 |
| Total | 835.6 | 915.6 |

Other Products

Russian paints sector

Russian paint production totalled 835,600 tons in the period January to August 2015 against 915,600 tons in the same period in 2014. Russian imports

of water-soluble paints fell by 31% in the first half of 2015 to 23,140 tons and fell by value 47.3% to \$59.3 million. The biggest importers are companies from Germany (sales volume 6,000 tons or \$13.8 million), Finland (4,200 tons or \$11.7 million) and the UK (3,300 tons by \$7.6 million).



Russian titanium dioxide, Jan-Aug 2015

Consumption of titanium dioxide (TiO₂) in Russia decreased by 13% in January-August 2015 compared to the same period last year and amounted to 49,000 tons.

The decline in processing industries was the main cause behind the fall, accordingly the production of newsprint and printing paper declined by 10% in the first eight months in 2015 whilst in another application area the production of refrigerators and freezers dropped by 22%.

Russia's control of Crimea has resulted in an increase in deliveries to the Russian market in January-August 2015 to 13,000 tons from 9,700 tons in the same period last year. Sumykhimprom, located in north-east Ukraine, increased deliveries to Russia from 7,500 tons in January to August 2014 to 9,600 tons in 2015. However, Du Pont reduced shipments from 11,800 tons to 6,400 tons.

Soda-Chlorate-potassium hydroxide

Soda-Chlorate at Berezniki has started production of potassium hydroxide based new membrane technology. The project has cost around \$100 million which will double production at the plant, and this is expected to result in increased export activity. The first production lot was produced in early September and is running at about 25% of the capacity of the new unit of 100 tons per day. Until now Soda-Chlorate has produced potassium hydroxide using diaphragm technology, with a capacity of 40,000 tpa. The introduction of the new membrane unit will allow sales to new customers and already contracts have been established with biodiesel companies in Europe. The technology was provided by Asahi Kasei Corporation, whilst the raw materials for production will be purchased by Soda-Chlorate from Uralkali. Russia produced around 20,000 tons of potassium hydroxide in 2014.

first half of 2015.

| Azot Grodno Production (unit-kilo tons) | | |
|--|-------------------|-------------------|
| Product | Jan-Aug 15 | Jan-Aug 14 |
| Methanol | 55.1 | 55.0 |
| Caprolactam | 84.3 | 84.0 |
| Polyamide primary | 65.7 | 59.2 |
| Polyamide filled | 6.0 | 7.1 |
| Ammonia | 777.4 | 706.1 |
| Urea | 743.3 | 667.7 |
| Fertilisers | 553.9 | 514.8 |
| Fibres | 18.5 | 26.4 |

all increased at Grodno this year, whilst caprolactam production rose slightly to 84,300 tons against 84,000 tons.

Polymir at Novopolotsk stopped polyethylene production on 21 September due to an accident, no injuries were reported. Polymir, which is part of Naftan, produced 68,300 tons of LDPE in the first seven months in 2015 against 74,200 tons in 2014. Polymir was founded in 1968 and uses technology from Courtaulds, Asahi Chemical Co. Ltd, Kanematsu Goshu, SNIA BPD, etc.). LDPE capacity at Polymir is 130,000 tpa which was exceeded in 2014 when the company produced a total of 136,000 tons. Naftan itself produced 78,700 tons of benzene in the period January to July 2015, against 79,800 tons in 2014.

Belarussian Organic Chemical Exports (unit-kilo tons)

| Product | Jan-Jun 15 | Jan-Jun 14 |
|--------------------|-------------------|-------------------|
| Acrylonitrile | 15.8 | 15.6 |
| Caprolactam | 14.7 | 20.9 |
| Phthalic anhydride | 15.0 | 10.4 |
| Methanol | 33.6 | 32.9 |

Caprolactam exports from Belarus declined from 20,900 tons in the period January to June 2014 against 14,700 tons this year, due largely to the fall in shipments to Taiwan from 13,600 tons to 8,800 tons. For acrylonitrile exports, the largest destination for Belarussian product in the first half of 2015 was the Netherlands, accounting for 7,000 tons. Phthalic anhydride exports from Belarus increased to 15,000 tons in the first half of 2015 from 10,400 tons, due largely to shipments to India (5,266 tons) which did not take place in 2014.

Khimprom, Jan-Jun 2015

Khimprom at Novocheboksarsk increased profits three-fold in the first half of 2015, driven primarily by the falling value in the rouble. Revenues for Khimprom for the six months amounted to 3.28 billion roubles against 2.79 billion roubles in 2014. Cost of sales increased by only 7.5% to 2.19 billion roubles and thus profits increased from 142.3 million roubles to 438.48 million roubles.

During the first half of 2015 Khimprom's sales of acetanilide rose 16%, and diphenylguanidine by 14%. Shipments of chlorine increased by 18% and chlorinated paraffin 15%. Trichlorosilane and phenyltrichlorosilane sales increased due to higher demand from silicone chemistry. Khimprom's subsidiary Pekarbonat, which produces sodium percarbonate, increased its sales volumes by 6% in the

The main project for Khimprom is hydrogen peroxide, where the company aims to increase capacity by 40% after completion of the new plant in October, rising to 78,000 tpa before rising to 100,000 tpa in November. The additional capacity in November depends on the acquisition of the catalyst for the hydrogenation of acetone to isopropanol.

Belarus

Belarussian chemical production, Jan-Aug 2015

Azot at Grodno produced 55,100 tons of methanol in the first eight months in 2015, against 55,000 tons in the same period last year. Fertiliser, ammonia and urea production

Belarussian chemical trade, Jan-Jun 2015

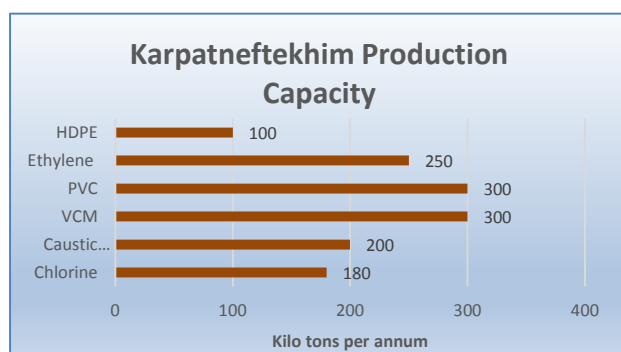
Methanol exports from Belarus in the first half year totalled 33,600 tons against 32,900 tons in the same period last year. The significant change took place in export destination, shifting from Poland to Ukraine. Whilst methanol exports to Poland dropped from 21,300 tons in the first half of 2014 to 7,700 tons in 2015, volumes to Ukraine increased from 1,000 tons to 15,200 tons.

Belarussian exports of potash fertilisers grew by 0.2% in the first half of 2015 to 2.966 million tons, the bulk of which went to non-CIS countries. In January-June 2015 the average contract prices of exports of potash were \$490 per ton, which is 7.2% more than the corresponding period of 2014. Belaruskali is the only producer of potash in Belarus and one of the largest suppliers of potash fertilizers in the world market. In January-June 2015 Belarus exported 144,500 tons of nitrogen fertilisers, which is 2.5 times more than the same period last year.

Ukraine

Karpatneftekhim possible restart

Karpatneftekhim may be able to start partially in the near future after Lukoil received assurances from the government of Ukraine on VAT refunds. As soon as raw materials are delivered to the plant production could restart at Kalush, although this similar statements have been issued before without materialising.



Kalush is located in western Ukraine which is traditionally a non-Russian region, but both Lukoil and the Ukrainian government possess an invested interest in restarting the plant. Although the plant is idle Lukoil still has to pay wages for maintaining the facilities and there have been no large-scale dismissals.

Lukoil's dispute with the Ukrainian government was based on VAT refunds from feedstock deliveries and progress has appeared to have been made on this issue. The delivery of raw

materials would allow the PVC plant to restart, although this would not be at full capacity of 300,000 tpa and would be more likely 80,000 tpa maximum.

| Ukrainian Polymer Imports (unit-kilo tons) | | |
|---|------------|------------|
| Product | Jan-Aug 15 | Jan-Aug 14 |
| PVC | 51.2 | 76.1 |
| Polypropylene | 58.8 | 71.7 |
| Polycarbonate | 1.9 | 4.1 |

Ukrainian polymer imports, Jan-Aug 2015

Declining trends in polymer consumption in the Ukrainian economy continue to impact on polymer imports. Polypropylene imports into Ukraine totalled 58,800 tons in January to August 2015, 19% lower than in 2014. PVC imports totalled 51,200 tons in January to August 2015, 33% down on 2014 when the volume was 76,800 tons. The largest source of imports this year has

been Europe, supplying 26,000 tons, followed by the US with 18,900 tons and Russia with 6,000 tons.

Ukrainian methanol, Jan-Aug 2015

Ukrainian methanol imports totalled 26,055 tons in the first eight months in 2015, of which slightly less than half came from Belarus. Supplies from Russia declined by 60% in the first eight months in 2015. At the end of July the average price of imported methanol amounted to \$407 dollars per ton DAF border of Ukraine, against \$418 in June. In July supplies from Russia became more expensive than imports from Belarus, which dropped to \$369 per ton.

In the first eight months of 2015 consumption of polycarbonate in Ukraine decreased by 37% to 1,900 tons. The leading supplier to the Ukrainian market in January to August 2015 has been Bayer, shipping 797 tons which was 10% down on 2014. SABIC Innovative Plastics shipped 721 tons in January to August, 27% down on last year.

Ukrainian plasticizer alcohols, Jan-Jul 2015

DOP imports into Ukraine amounted to 737 tons in January to July 2015, 3.3 times lower than in the same period in 2014. Polish company Boryszew has provided over half of imports, followed by Czech company DEZA. Imports of phthalic anhydride amounted to 3,330 tons, 18% down on last year.

Central Asia

Kazakh polymer imports, Jan-Jul 2015

In the first seven months of this year, imports of polypropylene into Kazakhstan increased by 2% compared to the same period of 2014 and amounted to about 9,600 tons. Exports grew by 16% to 16,300 tons against 14,100 tons in January to July 2014. Neftekhim at Pavlodar stopped polypropylene

production on 9 September for maintenance, to last for around six weeks. The company is able to produce 30,000 tpa of polypropylene 47,800 tpa of granulated polypropylene. Most of the granulated polypropylene is exported from Kazakhstan to China.

| Navoiyazot-PVC & Methanol Complex Costs | |
|--|-----------------|
| Source | Amount |
| Fund for Recon & Dev'tment of Uzbekistan | \$66 million |
| Navoiyazot funds | \$11.2 million |
| Uzbek banks | \$50.2 million |
| Foreign loans | \$373.8 million |
| Total | \$501.1 million |

Uzbek PVC project

Uzbekistan's construction of the complex production of PVC, caustic soda and methanol is being undertaken by the Chinese company CAMCE Engineering at the Navoiyazot site. Under the contract, the Chinese company will build a turnkey manufacturing capacity of 100,000 tpa of PVC, 71,800 tpa of caustic soda and

295,400 tpa of methanol. The project costs total \$501.1 million. The first phase of the PVC plant (40,800 tpa) is expected to be started in 2018.

| Ustyurt Gas Chemical Complex Costs | |
|--|---------------|
| Source | Amount |
| Fund for Recon & Dev'tment of Uzbekistan | \$200 million |
| Joint venture partners | \$1.4 billion |
| Asian & Korean banks | \$2.5 billion |
| Total | \$4.1 billion |

Ustyurt Gas Chemical Complex

Ustyurt Gas Chemical Complex is to be commissioned in the middle of October, with the construction process completed. The Uzbek petrochemical industry will be significantly enhanced by the introduction of the Ustyurt Gas Chemical Complex which has been designed to

process 4.5 billion cubic metres of gas per annum, and 387,000 tpa of polyethylene and 83,000 tpa of polypropylene. It will also produce 102,000 tpa of pyrolyzed petroleum and other products.

Turkmenistan-GTL plant

Turkmenistan will construct a large plant to produce liquid fuel from natural gas (GTL) in the Derweze District in the Ahal Province. The facility will be designed to process 3.5 billion cubic metres of natural gas along with 1.691 million tpa of liquid fuel. The development of the gas chemical complex is designed to increase the volume of high-quality gas processing products as well as boost exports to world markets.

The jv UzKorGasChemical selected 90 hectares at Ustyurt for the construction of the complex, located near Akchalak Kyrkkyz and 115 km from Surgil field. The gas-chemical complex is being designed to produce 3.2 billion cubic metres of gas per annum, of which 3 billion cubic metres will be used by UzKorGasChemical. The complex gas will be processed into the production of ethane, liquefied gases and marketable natural gas (3.8 billion cubic metres), from which ethane and LPG will be sent for pyrolysis.

Gazprom Export-AzMeCo

Gazprom Export signed a contract for the sale of up to 2 billion cubic metres of gas to AzMeCo to enable full capacity utilisation of the methanol plant at Garadag in Azerbaijan. This replaces the supply arrangement with SOCAR which was suspended in May this year due to debts owed by AzMeCo. Deliveries of Russian gas to Azerbaijan is planned to begin in the near future. AzMeCo was founded in 2007 to invest in petrochemical projects. Investments in the construction of AzMeCo amounted to about \$500 million.

Relevant Currencies

Czech crown. Kc. \$1= 20.852. €1 = 27.444; Hungarian Forint. Ft. \$1 = 229.253. €1 = 310.141; Polish zloty. zł. \$1=3.016. €1 =4.14 Ukrainian hryvnia. \$1 = 15.89. €1 = 19.05; Rus rouble. \$1= 64. €1= 68

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