

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-Sep 15 | Jan-Sep 14 |
|-----------------|------------|------------|
| INA | 2.8 | 2.5 |
| Lotos | 7.7 | 6.8 |
| Lukoil Bourgas | 4.8 | 4.3 |
| Lukoil Ploiesti | 1.5 | 1.5 |
| MOL | 6.3 | 7.5 |
| NIS | 2.4 | 2.2 |
| Orlen-Lietuva | 6.2 | 5.3 |
| Orlen-Plock | 11.9 | 10.8 |
| Petrom | 3.1 | 2.9 |
| Rompetrol | 3.4 | 3.4 |
| Slovnaft | 4.5 | 3.8 |
| Unipetrol | 4.9 | 3.8 |
| Total | 59.4 | 54.8 |

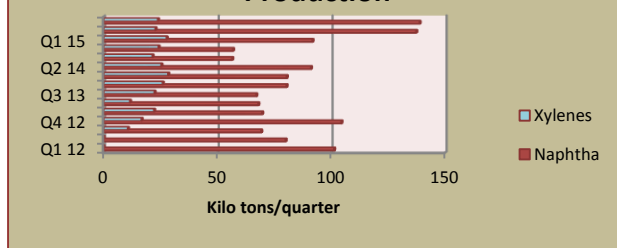
Central European refining, Jan-Sep 2015

Refining volumes in Central and South East Europe totalled 59.4 million tons in the first three quarters in 2015 against 54.8 million tons in the same period in 2014. The largest rise was recorded by Unipetrol followed by Slovnaft and Orlen Lietuva, whilst MOL recorded the largest drop.

In the first three quarters this year the Orlen group in Poland, Czech Republic and Lithuania processed 21.9 million tons, against 19.9 million in 2014. PKN Orlen Group manages six refineries in Poland, the Czech Republic and Lithuania. Orlen has set a target of 29.9 million tons for 2017, which would represent a rise of 7.5% over 2013 volumes. Reducing energy consumption in refinery and petrochemical production forms an important ongoing target for the Orlen group.

Serbian refining company NIS reported a 48% fall in nine-month net profit to 10.9 billion dinars (\$100.24 million), hit by low oil prices and economic stagnation. The company refined 2.4 million tons in January to September 2015, against 2.2 million tons in 2014. HIP Petrohemija accounted for 8% of revenues (\$20.2 million) from NIS in the first three quarters this year, whilst Gazprom Neft accounted for 64% of raw material inputs.

**Lotos Petrochemical Feedstock
Production**

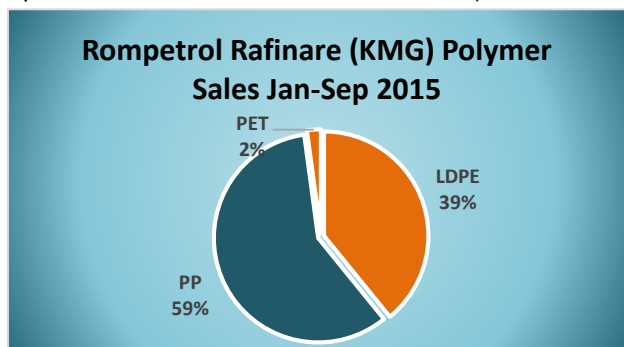


Grupa Lotos reported a larger loss than expected of zł 249 million (\$63.50 million) for the third quarter, mainly due to the revaluation of inventories and tax claims. In the downstream sector, naphtha production totalled 138,900 tons for the third quarter, a record for Lotos, whilst xylene production remained stable.

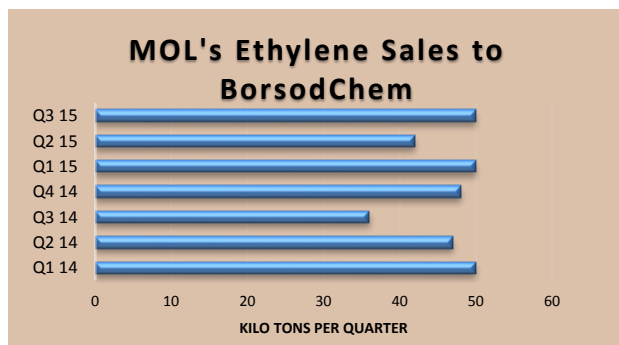
The amount of processed crude at the three production units of KMG International (Petromidia Năvodari, Vega refinery and petrochemical division)

in January-September totalled 4.5 million tons, up 11% compared to the first nine months in 2014. Activity at the Petromidia refinery and petrochemical division was closed between 11 October to 20 November, in order to conduct scheduled overhaul, which takes place every five years. With a processing capacity of 5 million tpa, Petromidia Năvodari is the main asset of the Rompetrol Rafinare and KMG International, the largest refinery in Romania.

**Rompetrol Rafinare (KMG) Polymer
Sales Jan-Sep 2015**



Regarding polymer sales Rompetrol Rafinare produces its own propylene for polypropylene production, but needs to import ethylene. KMG International, controlled by Kazakh state company KazMunaiGaz achieved a net profit in the first nine months in 2015 of \$11.4 million versus a loss of \$30 million in the same period in 2014. This was despite the company's turnover decreasing by 25% to \$7.7 billion, due to lower international prices of crude oil and petroleum products. The group recorded an operational result of \$136.1 million in the first nine months of this year, up 11% from 2014. In the period July-September, operating profit amounted to \$54.1 million.



MOL, Jan-Sep 2015

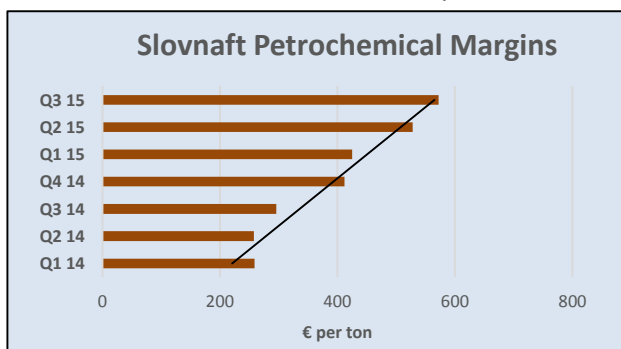
For the first three quarters in 2015, MOL delivered an operating profit (EBITDA) of \$1.92 billion, indicating that the group is on track to meet the 2015 target of \$2.2 billion. Organic CAPEX spending amounted to \$879 million in the first three quarters hence operating cash flow (excluding working capital adjustments) considerably exceeds organic investments.

The third quarter performance was supported by peaking refining margins, while petrochemical margins just started to weaken from the historic highs of the second quarter. In the petrochemical business MOL's butadiene and LDPE-4 plants, at Tiszaújváros and Bratislava respectively, are both nearing completion.

| MOL's Olefin & Polyolefin Production (unit-kilo tons) | | |
|---|------------|------------|
| Product | Jan-Sep 15 | Jan-Sep 14 |
| Ethylene | 556 | 499 |
| Propylene | 286 | 247 |
| Product | Jan-Sep 15 | Jan-Sep 14 |
| LDPE | 141 | 135 |
| HDPE | 290 | 248 |
| PP | 374 | 339 |

Ethylene sales to BorsodChem remain a key part of MOL's TVK subsidiary's business, on average amounting to around 50,000 tons per quarter delivered by pipeline to Kazincbarcika. In the first three quarters this year the MOL Group (including TVK and Slovnaft) produced 556,000 tons of ethylene against 499,000 tons in the same period last year. Propylene and polyolefins all witnessed growth in production in 2015 over 2014.

The 130,000 tpa butadiene extraction unit was commissioned during Q3 2015, and commercial operations are expected to start in Q4 2015. The construction of the new 220,000 tpa capacity LDPE4 unit at Slovnaft completed its mechanical activities during the quarter, and commercial production is expected to begin in Q1 2016. The new unit, which will replace the current three out-of-date units with a combined capacity of 180,000 tpa, will increase production flexibility, improve product qualities and ensure higher naphtha off-take from the refinery.



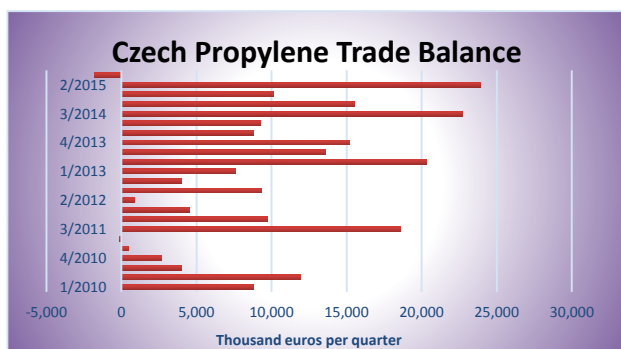
Slovnaft, Jan-Sep 2015

Despite an 8% fall in revenues in the first three quarters in 2015, Slovnaft still managed to achieve a net profit of €179 million against a loss of €1 million in the same period last year. Rising profit margins, particularly for petrochemicals, were the main reason for the improved results. In the third quarter alone this year Slovnaft managed to

generate a profit of €55 million. In the same period last year, while the company reported a profit of €17 million. In Q3 2015, the average value of petrochemicals margin increased by 93% in comparison with Q3 2014. The margin of €572/ton was mainly due to high LDPE and PP quotation prices and stable virgin naphtha quotation prices.

Slovnaft processed 4.510 million tons of crude in the first three quarters this year, 18% up on 2014, whilst polymer production rose 22% to 298,000 tons. Slovnaft invested €72 million in the period January to

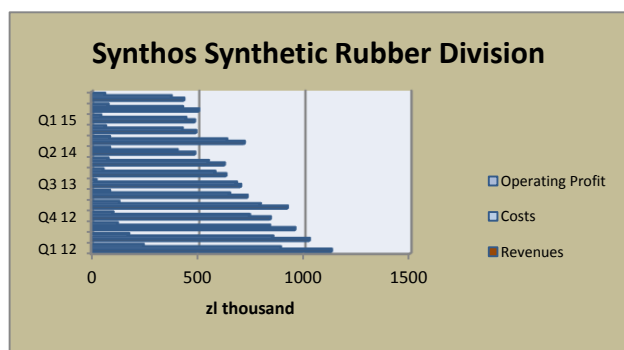
September 2015, most of which was used for construction of a new line for production of polyethylene LDPE 4 and projects aimed at increasing the efficiency and quality of production.



Czech-Slovak cracker issues

Following an enforced outage on 9 November at Slovnaft's cracker supplies of LDPE and polypropylene were affected. Production may not restart until late November. Regarding Unipetrol, the cracker outage in August impacted directly on propylene exports in the third quarter this year,

causing a Czech supply deficit rather than the normal surplus. Spolana's VCM plant was affected by the Unipetrol outage in August, and from mid-October has been down for maintenance. After modified repairs the cracker at Litvinov is expected to operate at around 65% until the full repairs have been completed in July 2016. Full utilisation is not expected prior to October 2016.



Synthos, Jan-Sep 2015

Synthos achieved zloty 3.135 billion in total revenues in the first three quarters in 2015, down by zloty 439.5 billion in the same period in 2014 due to lower product and feedstock businesses. Net profits amounted to zloty 381.6 million against zloty 290 million in January to September 2014. Despite declining revenues from synthetic rubber sales Synthos has continued to remain profitable in the sector.

The extended shutdown at Unipetrol's Litvinov cracker presents problems for Synthos Kralupy in relation to C4s, ethylene and benzene. As a result of the accident the group was temporarily cut off supplies of raw materials and had to rely on accumulated inventories. Synthos Group has since launched alternative sources of supply whilst Unipetrol undergoes repairs. Raw materials accounted for 65% of the total costs of Synthos in January-September 2015. The main raw materials include butadiene, styrene, ethylbenzene, butyl acrylate, VAM, ethylene, and benzene and C4s.

| Oltchim Sales Revenues (€ mil) | | |
|--------------------------------|--------------|-------------|
| Product Group | Jan-Sep 15 | Jan-Sep 14 |
| Petrochemicals | 86.8 | 68.2 |
| Chlorine division | 23.5 | 20.3 |
| Finished Products | 3.8 | 4.3 |
| Materials for construction | 0.5 | 1.1 |
| Sales to Pitesti | 0.0 | 0.0 |
| Oxo alcohols | 11.9 | 1.7 |
| Other | 1.4 | 2.1 |
| Total | 127.9 | 97.8 |

Oltchim, Jan-Sep 2015

As part of its gradual recovery Oltchim increased revenues by 31% in the first nine months in 2015 to 571 million lei, while the operating result (EBITDA) turned positive at 34 million lei. The increase in turnover was driven partly by the increase in sales of polyols, revenues rising 33% in the first three quarters, whilst caustic soda sales rose by 7%. Total export sales were valued at €96 million in the first three quarters in 2015.

This year Oltchim has invested 7.4 million lei for the rehabilitation of the two membrane plants, one of which was undertaken in September 2015. Other investments have included 2.0 million lei for the overhaul of the lime kiln in the propylene oxide plant, 1.7 million lei on overhauling wagons for the delivery of raw materials and shipment of finished products, and 1.5 million lei on a new heat exchanger for the propylene oxide plant. The company hopes to continue its gradual improvement with the aim of attracting a potential buyer.

Solvay-Chorzow

Solvay intends to create a unit at Gorzow Wielkopolski that will handle the recycling of technical textiles from industrial sources. The aim of the project is to develop and implement innovative processes for the recycling of waste, allowing for the processing of technical textiles for high-quality polyamide 6.6 (PA6.6) with reduced environmental impact.

Synthos-Grupa Azoty

Synthos and Grupa Azoty have signed agreements for chemicals, to be delivered from Chorzow. The first agreement concerns the supply of stearic acid from Chorzow and the second magnesium sulphate.

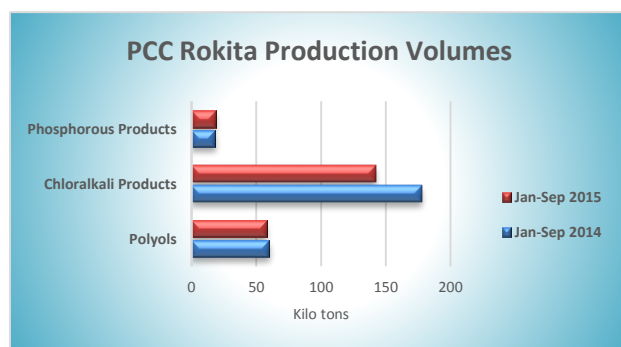
Chemicals

Spolchemie-new chlorine plant in 2016

Spolchemie is in the process of completing construction of its new membrane electrolysis plant at Usti nad Labem to replace the existing mercury unit. After commissioning of the membrane plant and start-up in the second half of 2016 it will result in higher production of chlorine, potassium hydroxide and sodium hydroxide. In addition Spolchemie will be able to operate without the same negative environmental impact.

The nominal annual capacity of the new plant will be 60.000 tpa of KOH and 43.000 tpa of NaOH. Construction began in 2014 at Usti nad Labem, and will substitute the current mercury electrolysis, which is to be phased out in accordance with EU legislation. Spolchemie expects a profit of around €50 million for the whole of 2015. In the past few years Spolchemie has undergone significant

restructuring, including some harsh austerity measures. The company has significantly changed the structure and number of suppliers in the past few years, whilst increasing resin sales and gradually increasing the overall profit margin.



PCC Rokita, Jan-Sep 2015

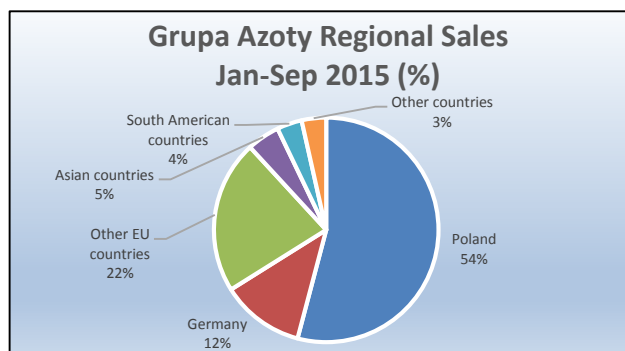
For the first three quarters in 2015 PCC Rokita recorded a net profit of zł 45.1 million against zł 43.290 million in the same period in 2014, whilst sales fell from zł 818.870 million to zł 778.870 million. Revenues were affected in 2015 by stoppages at a number of installations in the first half of the year, associated with the conversion of chlorine production at the new membrane plant.

The most important product areas for the group in the first three quarters in 2015 were polyols, accounting for zł 434.2 million in revenues and 58,000 tons in production. Alkalis, chlorine and chlorine derivatives accounted for zł 175 million, 22% of total revenues, and phosphorus products zł 50.7 million. In terms of sales of chlorine, almost 80% of the production was used for its own production facilities of the company. The remaining amounts of chlorine were sold mostly in the domestic merchant market.

PCC Rokita aims to exceed 160,000 tpa of chlorine production at the electrolysis plant by 2017, against 135,000 tpa from the old mercury plant. Following further investment in membrane electrolysis, the company has a savings target of around zł 20 million per annum. Increased amounts of chlorine by 2017 will be consumed part of the company's internal needs, and in particular to the new monochloroacetic acid plant (MCAA) which has been constructed at Brzeg Dolny. Industrial Development Agency and Alior Bank signed an agreement with PCC MCAA for loans and credit to finance the construction of the monochloroacetic acid plant.

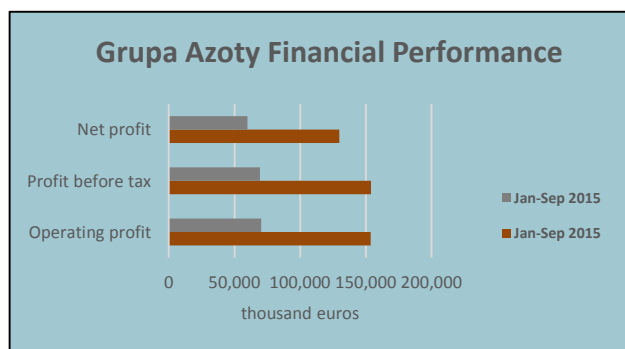
Grupa Azoty, Jan-Sep 2015

Grupa Azoty's revenue increased by 5.8% in the period January to September 2015 to zł 7.52 billion, whilst costs rose only 0.9%. This resulted in an increase in net profit by two times over 2014 to zł 540 million. The group also doubled operating profit. In the period January-September to just over zł 639 million against zł 300 million in January to September 2014.



Over half of Azoty's sales in the first three quarters were sold in the domestic Polish market, with the majority of exports targeted on Germany and the other EU countries.

In the third quarter this year revenue in the fertiliser division totalled zł 1.468 billion accounting for 61.1% of the group's total quarterly revenue. The domestic market accounted for approximately 68.6% of the fertiliser sales. Plastics accounted for 12.2% of group revenues, of which 89.6% of the plastics sales was from exports. The chemicals division accounted for 22.2% of Grupa Azoty's sales in the third quarter, exports accounting for 61.8% of sales. The net profit for Grupa Azoty totalled zł 539.690 million in January to September 2015 against zł 250.180 million in the same period last year. The higher net profits have resulted from improved margins, helped particularly in the fertiliser sector by natural gas prices.



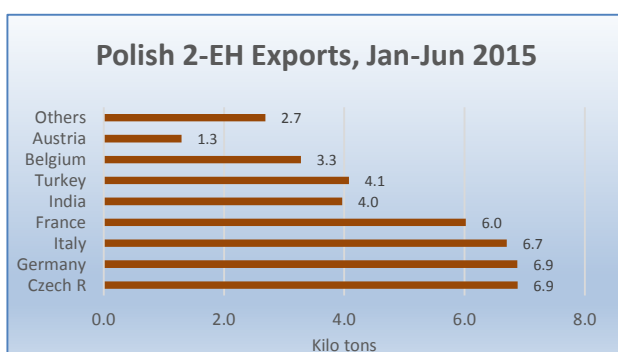
Grupa Azoty, natural gas & production costs

Grupa Azoty continues to benefit from lower gas prices, which show no sign of rising in the near-term. Throughout Q3 2015, the prices of natural gas on western markets were slowly but steadily falling from €21.0/MWh at the start of the quarter to approximately €18.5/MWh at its end. The prices of energy in Poland went down from €28.07/MWh in Q3 2014 to €17.29/MWh in Q3 2015. Other key costs for Azoty include electricity and coal, whilst in the raw material sector the main products include propylene, benzene and phenol.

Grupa Azoty Police reported a very successful three quarters of 2015, with revenues rising by zł 286 million over the same period in 2014 and totalling zł 2.04 billion. The company more than doubled its operating profit to zł 153.750 million from zł 66.65 million last year, whilst net profit rose zł 54.31 million to zł 122.250 million. Profits have risen not only due to lower gas prices but also the benefits from investments in Africa into primarily phosphorous deposits.

Grupa Azoty Zakłady Azotowe Kedzierzyn recorded a net profit of zł 87 million and revenues zł 1,375 million in the first three quarters in 2015. The net profit generated by the company in the third quarter

amounted to zł 14 million, while revenues in the period reached zł 435 million. The oxo sector still is struggling in regard to margins and the prices of propylene.



Grupa Azoty-export activity

Grupa Azoty exported 41,800 tons of 2-ethylhexanol in the first half of 2015, slightly down on the same period last year. The largest destinations included the Czech Republic, Germany, Italy and France.

| Polish Chemical Production (unit-kilo tons) | | |
|--|------------|------------|
| Product | Jan-Oct 15 | Jan-Oct 14 |
| Caustic Soda Liquid | 270.9 | 241.9 |
| Caustic Soda Solid | 52.6 | 66.8 |
| Soda Ash | 895.0 | 884.9 |
| Ethylene | 450.8 | 385.1 |
| Propylene | 324.4 | 277.1 |
| Butadiene | 51.3 | 46.1 |
| Toluene | 10.1 | 11.0 |
| Phenol | 30.2 | 26.6 |
| Caprolactam | 136.5 | 140.2 |
| Acetic Acid | 9.7 | 8.0 |
| Polyethylene | 309.4 | 266.0 |
| Polystyrene | 43.3 | 52.3 |
| EPS | 68.5 | 60.3 |
| PVC | 272.9 | 224.9 |
| Polypropylene | 212.0 | 189.0 |
| Synthetic Rubber | 168.7 | 164.0 |
| Ammonia (Gaseous) | 1088.5 | 1099.9 |
| Ammonia (Liquid) | 1080.0 | 1084.6 |
| Pesticides | 23.2 | 28.8 |
| Nitric Acid | 1956.0 | 1958.0 |
| Nitrogen Fertilisers | 1628.0 | 1589.0 |
| Phosphate Fertilisers | 392.0 | 335.4 |
| Potassium Fertilisers | 307.2 | 260.7 |

DOP exports from Kedzierzyn totalled 5,024 tons in the first six months in 2015, similar to 2014, but much lower than in previous years. Most of the DOP exports are shipped to European destinations.

Poland-polyamide market

Polish polyamide exports and imports both increased in the first half of 2015, continuing the trend in recent years. Exports amounted to 77,783 tons in the first six months in 2015 against imports of 45,961 tons. Rising production and consumption in the period 2010-2014 has resulted from the rapid development of the polyamide market in Poland.

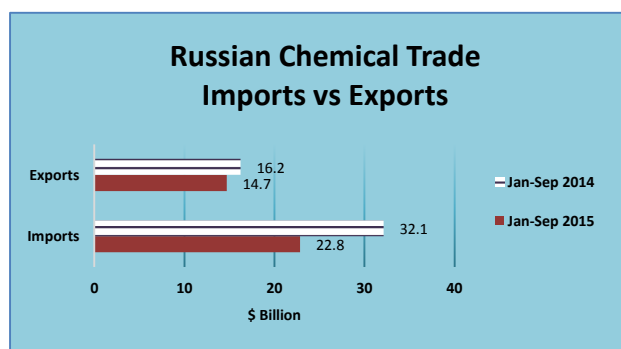
Partly to meet demand and partly to reduce the need to export caprolactam Grupa Azoty officially commenced construction of its polyamide project at Tarnow on 21 September, costs of which have been estimated at around \$77 million. The new 80,000 tpa plant will provide an important outlet for caprolactam production and reduce the need to sell to markets such as China where export opportunities have been in decline. The installation will also allow Grupa Azoty to become a more important player in the market for engineering plastics.

Ciech, Jan-Sep 2015

Ciech reported a five-fold increase in net profits in the first three quarters in 2015, totalling zł 255.250 million against zł 56.110 million in the same period in 2014. Long-term

liabilities decreased by nearly zł 6 million and at the end of the third quarter amounted to zł 1.46 billion. An important factor affecting the company's results was also the reduction in the price of energy resources, whilst at the same time maintaining decent profit margins. Over the past few years Ciech has undergone significant restructuring and divestment which has helped in reviving profits.

RUSSIA



Russian chemical trade, Jan-Sep 2015

Russian chemical trade has undergone significant changes in 2015, both in relation to exports and imports. The share of chemical products in the commodity structure of imports in January-September 2015 amounted to 19.3% against 16.8% in January-September 2014. The cost of import of chemical products decreased in comparison with January-September 2014 by 28.8%, from \$32.1 billion to \$22.1 billion, while the physical volume fell by 15.7%. In particular, the physical supply of cosmetic products decreased

by 14.6%, plastics by 28.9%, and (natural and synthetic) rubber by 24.9%.

The share of exports of chemical products in January-September 2015 has risen to 6.4% against 4.9% in January-September 2014. Even though the value of exports of decreased by 9.5% in January-September, mainly due to lower product prices, in physical terms exports have increased by 6.8%. Some of the product areas where exports have risen sharply include inorganic chemistry products grew by 9.2%, whereby physical shipments rose 9.2%, fertilisers rising by 6.5%, plastics by 16.4%, and synthetic rubber by 19.9%. The primary reasons for the rise in export activity this year concentrate on the value of the rouble, dropping by roughly half in value, declining domestic GDP, and at least for bulk plastics the introduction of new production capacity.

Russian Chemical Production (unit-kilo tons)

| Product | Jan-Oct 15 | Jan-Oct 14 |
|-----------------------|------------|------------|
| Caustic Soda | 924.8 | 875.0 |
| Soda Ash | 2,546.0 | 2,090.6 |
| Ethylene | 2,250.0 | 1,950.8 |
| Propylene | 1,385.7 | 1,201.8 |
| Benzene | 995.7 | 940.5 |
| Xylenes | 451.5 | 419.2 |
| Styrene | 550.5 | 528.6 |
| Phenol | 205.2 | 210.5 |
| Ammonia | 12,200.0 | 12,151.7 |
| Nitrogen Fertilisers | 7,027.0 | 6,788.8 |
| Phosphate Fertilisers | 2,661.0 | 2,577.3 |
| Potash Fertilisers | 6,714.0 | 7,034.5 |
| Plastics in Bulk | 5,950.0 | 5,199.9 |
| Polyethylene | 1,457.0 | 1,296.2 |
| Polystyrene | 441.2 | 445.4 |
| PVC | 642.1 | 552.7 |
| Polypropylene | 1,101.7 | 834.2 |
| Polyamide | 238.3 | 120.7 |
| Synthetic Rubber | 1,213.1 | 1,069.7 |
| Synthetic Fibres | 107.1 | 109.1 |

Russian chemical industry performance 2015

Despite the fall in GDP this year and rising economic difficulties for the general population, the Russian chemical industry has recorded very positive financial results for the first three quarters in 2015. Low oil prices may have created problems for the government's budget, but the petrochemical industry has benefited from lower feedstock costs whilst also reaping advantages from the weak rouble.

Overall the chemical and petrochemical sectors have shown the best financial results from aggregate Russian industry. Companies on average have posted a three-fold increase in net profits for the first three quarters, whilst physical production has been boosted by new polymer capacity. Increased profits have not only meant better operational economics, but have also allowed producers to repay part of their long term outstanding debts.

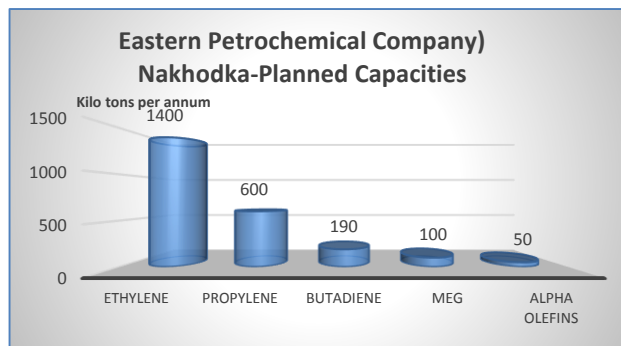
The reasons for the success of the chemical industry in 2015 are primarily linked to the rouble's value, which in addition to improving the profitability from exports has simultaneously allowed producers to replace imported products in the domestic market.

Thus despite falls in demand in some product sectors, such as most polymer areas, producers have been able to increase domestic market share. Methanol has been one of the most successful bulk chemicals this year, whereby domestic sales have increased at the expense of export sales largely due to price economics. In the chemical derivative industries pharmaceuticals has seen an almost inevitable bounce of 10.7% in the first three quarters, and offers considerable scope for investment.

Russian petrochemical projects

Rosneft project update-Eastern Petrochemical Company (VNHK)

The Federal Antimonopoly Service (FAS) of Russia has started the analysis of the sale of shares in Eastern Petrochemical Company (VNHK) from Rosneft to Chinese corporation ChemChina. A memorandum of understanding was signed by ChemChina and Rosneft in September regarding a stake in VNHK's project at Nakhodka, which is being constructed by another Rosneft subsidiary Far East Petrochemical Company (FEPCO).



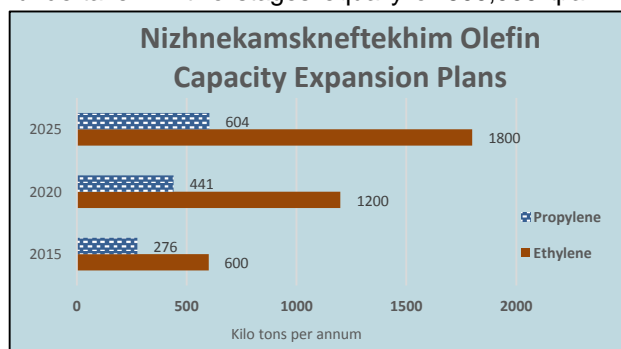
The project is included among the five priority areas of development for the Primorsk region and is aimed at boosting Russian production of petrochemical products principally for Asia-Pacific markets. Furthermore, the Eastern Petrochemical Company project has been given support from the government and it has been clarified that the investments will be undertaken into two stages. The first phase involves the processing of 12 million tpa, and the second comprising the launch of the petrochemical industry in the amount of 3.4 million tpa. Completion dates for these projects are too hard to call, and it may be well into the next decade before the petrochemical project is up and running.



Rosneft has been confronted by immense difficulties in building the necessary infrastructure, and in particular the pipeline connections with the East Siberia Pacific Ocean (ESPO) which is managed by Transneft. Rosneft has stated that it is prepared to build a connection with the ESPO pipeline to the oil and petrochemical complex. In addition to pipeline supplies, Rosneft has also been examining the possibility of supplying raw materials by sea.

Nizhnekamskneftekhim new ethylene project

Nizhnekamskneftekhim has started the first phase of detailed design olefin complex, which is planned to be undertaken in two stages equally of 600,000 tpa. The company has identified some of the equipment required for the new complex and aims to sign an agreement on 1 December for a contract to supply the pyrolysis furnace. Some contracts for the manufacture of non-expendable equipment will be concluded before March 2016.



The cost of the olefin complex after the last revaluation of investment is at least 500 billion roubles. However, construction of the complex may need government support according to Nizhnekamskneftekhim. The Federal government has to date shown little enthusiasm for providing

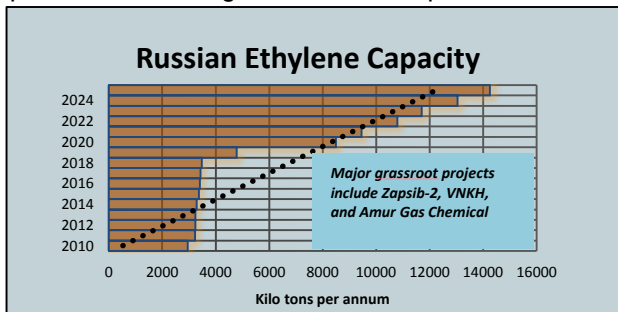
such support. There is also no government interest in providing financial support for the construction of the Yamal-Volga NGL pipeline, which is considered important for the long term profitability of ethylene plants in the Volga-Urals region in addition to justifying investments in new projects.

At this stage Nizhnekamskneftekhim plans to introduce the first 600,000 tpa ethylene unit in 2020 and the second in 2025. The first phase is planned to produce 300,000 tpa of polyethylene, 180,000 tpa of polypropylene and 200,000 tpa of polystyrene. Other petrochemicals besides ethylene include 163,000 tpa

of propylene and 110,000 tpa of derivatives. Although the second cracker is only provisional at present, plans include 180,000 tpa of polyethylene, 200,000 tpa of polypropylene, 93,000 tpa of polystyrene in addition to other new products such as MDI.

Other Russian ethylene project news

Russian company Cinvek (Chemical Investment Company) has signed an agreement with its Chinese partners to build a gas chemical complex in the Tver region. Sinopec and CPEIC could provide up to 85% funding for the project in the Tver region to establish production of polyolefins with primary processing of natural gas. Investment in the project is estimated at \$4 billion.

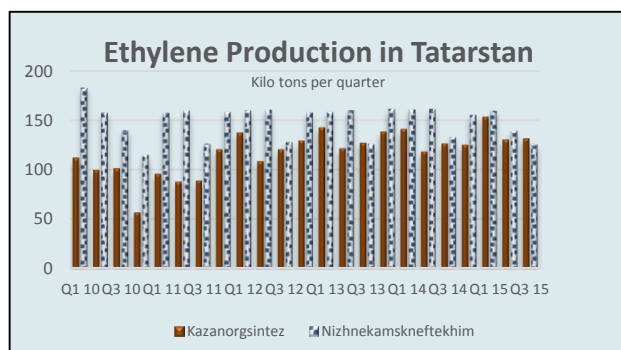


In February 2015 Cinvek concluded an agreement with the regional government in Tver on cooperation in the project to create a polyolefin plant based on natural gas feedstocks. The project could take 3-4 years to construct, if it does go ahead. In principle at least, unlike the

petrochemical projects under planning in the Russian Far East the Tver project would be of direct value to the European parts of Russia and processing industries.

Following the planned maintenance outage in September Gazprom neftekhim Salavat has increased ethylene capacity by 13% to 340,000 tpa. Gazprom neftekhim Salavat has increased ethylene production to more than 1,000 tons per day after technical re-equipment and the reduction in the loss of methane-ethane fraction. New reactors will increase the burden of ethane-ethylene fraction in the reactor unit. In addition, through the use of three layers of hydrogenation will be able to increase the selectivity of the hydrogenation process. In the near future the company will optimize the flow of hydrogen-containing gas at the monomer to feed the refinery, which will result in reduced amount of gas sent to the flare.

The million ton project planned by Gazprom neftekhim Salavat has effectively been shelved, as has the million ton project planned for Ufa. Even without these projects, and also discounting provisional project ideas such as at Tver, Russian ethylene capacity should undergo significant rises in the next decade. The huge projects under construction and planning at Tobolsk, Amur and Nakhodka, combined with the new plants planned by Nizhnekamskneftekhim, if all completed should culminate to increase Russian capacity four fold by the mid-2020s.



Tatarstan ethylene plants, Jan-Sep 2015

The two largest ethylene producers at present are both located in Tatarstan, and both reporting impressive results for this year. The gap between the two Tatarstan ethylene producers has been narrowing over the past few years, when going

back to 2010 Nizhnekamskneftekhim was the dominant producer. In the first three quarters in 2015 Kazanorgsintez produced 413,467 tons of ethylene against 423,990 tons produced by Nizhnekamskneftekhim.

Kazanorgsintez increased net profit 3.2 times for the first three quarters to 14.4 billion roubles. Revenue totalled 50.4 billion roubles, an increase over the previous year by 26.9%. Cost of sales grew by only 0.3% to 29.4 billion roubles. The gross profit for Kazanorgsintez totalled 21.1 billion roubles, twice higher than in 2014. At the end of the reporting period, the amount of long-term debt for Kazanorgsintez was reduced by a third to 7.3 billion roubles. Short-term loans as of 30 September, amounted to 6.2 billion roubles.

Nizhnekamskneftekhim increased its revenue in January-September 2015 by 13% to 110 billion roubles compared to the same period last year. Plastics production remained at the same in the first three quarters at 535,000 tons, including increased production of ABS. In the rubber division, polybutadiene lithium production increased by 22%, whilst halobutyl rubber declined by 4% in favour of the production of butyl

rubber. MEG capacity has now been extended to 60,000 tpa after the purchase of the old Petrokam unit at Nizhnekamsk which had previously been idle.

Nizhnekamskneftekhim alpha olefin plant commissioning

Nizhnekamskneftekhim has started commissioning its revamped unit for alpha-olefin production, and the plant should start by the end of 2015. The need for reconstruction of the 1989 oligomer plant was caused by the launch of production of polyethylene and increased demand for butene and hexene. Linde has been responsible for revamping the plant where capacity is 37,500 tpa.

The aim of the modernisation of production technology was the introduction of Alpha-Sablin, co-owned by Linde and SABIC. This technology, with the primary outlet C4-C6 fraction, is highly economical and highly flexible in terms of being able to carry out the reaction both to produce light and heavy hydrocarbons.

| Russian LPG Production (unit-kilo tons) | | |
|---|------------|------------|
| Company | Jan-Sep 15 | Jan-Sep 14 |
| SIBUR | 4241.5 | 2775.4 |
| Rosneft | 712.1 | 285.7 |
| Bashneft | 273.2 | 289.2 |
| Tatneft | 327.0 | 304.4 |
| TAIF | 971.6 | 1022.8 |
| Lukoil | 983.3 | 875.9 |
| Gazprom | 1025.7 | 961.7 |
| Gazprom Processing | 107.9 | 827.2 |
| Gazprom Neft | 352.4 | 550.9 |
| Vostokgazprom | 98.7 | 70.1 |
| Surgutneftegaz | 113.2 | 246.9 |
| Others | 355.8 | 725.5 |
| Total | 9562.4 | 8935.7 |

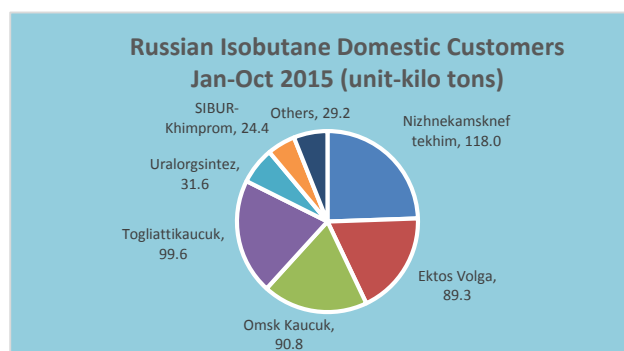
At current production envisaged predominantly (about 39%) release fractions C8-C10, which can be used to produce synthetic oil output fractions C8-C18 was 72%. These fractions have limited sales in the domestic market and the foreign market are sold at a low price.

Russian petrochemical producers & markets

Russian cracker feedstocks, Jan-Sep 2015

Russian LPG production totalled 9.562 million tons in the first three quarters in 2015, against 8.936 million tons in the same period in 2014. Some producers reduced production in 2015, but the rise in volumes processed by Tobolsk-Neftekhim meant that overall production increased by 616,000 tons. In terms of consumption only around a quarter of LPG sales from Russian companies is sold on the

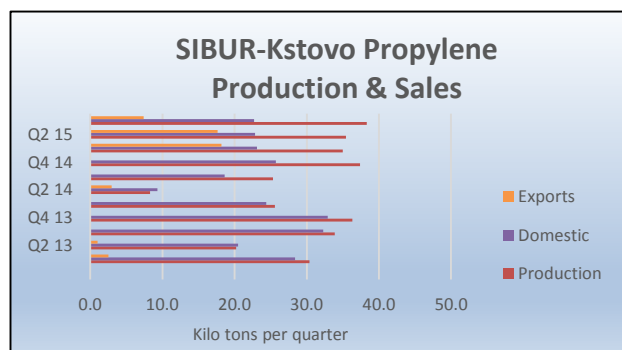
domestic market, with fuel providing the largest outlet.



The largest buyers of gas liquids in the petrochemical sector, including LPGs and NGLs, includes Nizhnekamskneftekhim, SIBUR-Kstovo and Tomsneftekhim. Kazanorgsintez is the main buyer for merchant propane in the Russian market.

Isobutane sales on the domestic market amounted to 482,780 tons in the period January to October 2015, 33% up on 2014. Isobutane was sold on the domestic market almost exclusively to MTBE producers, shown in the graphic opposite.

Russian propylene market, Jan-Oct 2015

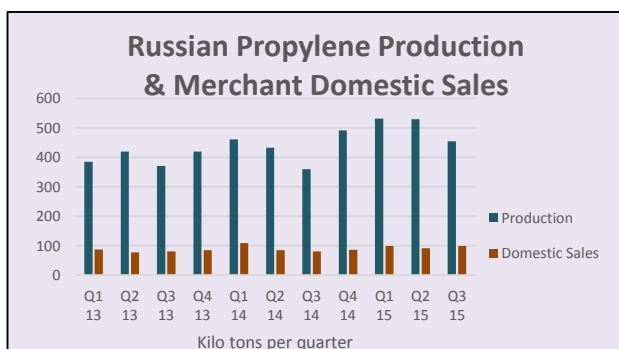


Russian propylene consumption has been bolstered this year largely due to increased polypropylene production, not only at the relatively new plants at Tobolsk and Omsk but also by Stavrolen. Despite the slowdown in the Russian economy domestic market sales for propylene have risen slightly in 2015, fuelled partly by demand from Stavrolen for polypropylene production prior to the start-up of the cracker at Budyennovsk. The major sellers of merchant propylene in the Russian market consist of Lukoil-NNOS at Kstovo and SIBUR-Kstovo, both of

which do not use propylene internally for further processing. The restart of the Stavrolen cracker has allowed greater export activity from Russia this year, led mostly by SIBUR-Kstovo which shipped over 42,000 tons

in the first three quarters against less than 3,000 tons in the same period in 2014. The only other non-captive propylene producer in Russia is Angarsk Polymer Plant which sells mostly on the domestic market and occasionally exports small volumes to China.

The introduction of Tobolsk-Polymer in 2013 has had a major impact on Russian propylene production, rising 9% in 2014. Even so, the Russian propylene market was affected last year by the Stavrolen outage, but since the restart of the Budyennovsk cracker the market has moved to a position of surplus allowing greater export activity.



The free market for propylene comprised 362,400 tons in 2014, of which Lukoil accounted for 38% and SIBUR 22%. The free market's main application is acrylonitrile which is produced by Lukoil subsidiary Saratovorgsintez, but the largest share of consumption is undertaken internally by the propylene producers.

Propylene consumption in the free market is not projected to undergo significant change upwards, and thus any increase in production at the non-integrated plants is likely to be channelled into

exports.

Lukoil's start of the second line for the catalytic cracking unit at Kstovo could lead to another 150,000 tpa of propylene being made available. In addition to a probable increase in exports oversupply in the domestic

market could result in lower prices. In terms of export destinations Poland would provide the most likely target in the short term, but that position could change after the start-up of the 400,000 tpa propylene plant at Grupa Azoty Police in 2019.

Russian propylene sales, October 2015

Propylene sales on the domestic market amounted to 30,000 tons in October, 22% down on September. Due to an outage SIBUR-Kstovo reduced sales by 35% to 3,500 tons, whilst Lukoil-NNOS reduced shipments by 16% to 18,600 tons. For the period January to October sales on the domestic market totalled 320,800 tons which was 8% up 2014.

Propylene exports amounted to 5,600 tons in October, 2.2 times higher than in September. Stavrolen exported 1,400 tons, the first shipment abroad since November 2013, all of which went to Poland. Other exporters in October included SIBUR-Kstovo with 3,000 tons and Lukoil-NNOS with 1,200 tons. Exports increased 3.3 times in the first ten months in 2015. Exports of propane-propylene fractions totalled 52,900 tons in the first ten months in 2015, 79% of which went to Poland.

Domestic sales of propane-propylene fractions amounted to 13,500 tons in October, 29% less than in September. The main reason for the reduction was due the Gazprom Neft refinery reducing shipments to 5,300 tons. At the same time the Ryazan Oil Refinery increased sales volumes by 29% to 7,100 tons. For the period January to October sales of propane-propylene fractions totalled 129,700 tons on the domestic market, almost the same as in 2014.

Russian styrene, Jan-Sep 2015

Russian styrene production totalled 489,300 tons in the first three quarters in 2015, against 476,600 tons in the same period in 2014. Captively around 70% of styrene production is consumed internally, mainly for the production of polystyrene but also for SBR which is produced by Nizhnekamskneftekhim. Gazprom neftekhim Salavat is the main exporter of styrene from Russia, whilst also producing polystyrene and supplying some volumes to the domestic merchant market.

Nizhnekamskneftekhim remains the largest Russian producer. Russian exports of styrene decreased by 30% in October on September to 8,000 tons.

Gazprom neftekhim Salavat was responsible for 99% of shipments in October. Exports totalled 92,200 tons in January to October 2015, 9% down on 2014. Finland accounted for 71% of Russian exports. Styrene sales on the domestic market amounted to 11,400 tons in October, 20% up on September. Angarsk Polymer Plant increased supplies in October by 33% to 1,700 tons, and Gazprom neftekhim Salavat increased by 24% to 5,500 tons. In the first ten months in 2015 sales of styrene monomer on the domestic market totalled 80,700 tons, 25% more in 2014.

Bulk Polymers

Russian polyethylene market, Jan-Sep 2015

Polyethylene imports totalled 419,900 tons in the first ten months in 2015 against 529,400 tons in 2014. In this period HDPE imports into Russia totalled 158,300 tons which was 37% down on the same period last year. Russian polyethylene consumption fell in all main product groups this year, although some grades recorded some growth at the expense of imports.



The largest decline in HDPE imports occurred in the film and tubular polyethylene sectors. LLDPE imports totalled 159,600 tons in January to October 2015, 11% down on 2014. The largest decrease occurred in demand for rotational moulding grades. The reduction of imports for both HDPE and LLDPE has been due to both the growth of domestic production and reduced demand in certain sectors of processing.

Russian polyethylene production totalled 1.4 million tons in January to October 2015, against 1.3 million tons in 2014. Gazprom neftekhim Salavat temporarily suspended production of HDPE in late October, whilst also Kazanorgsintez was forced to limit HDPE production due to ethylene problems.

| Russian Polypropylene Market (unit-kilo tons) | | |
|---|------------|------------|
| | Jan-Sep 15 | Jan-Sep 14 |
| Production | 927.3 | 724.1 |
| Exports | 260.0 | 140.0 |
| Imports | 49.9 | 134.3 |
| Market Balance | 717.2 | 718.4 |

Russian polypropylene market 2015

Russian polypropylene consumption has performed relatively well against other bulk polymers in the first three quarters in 2015, down slightly against 2014. Despite the lack of demand from the domestic automotive sector, the domestic market has benefited from other applications such as BOPP where production has been rising.

| Russian Polypropylene Imports (unit-kilo tons) | | |
|--|------------|------------|
| Category | Jan-Oct 15 | Jan-Oct 14 |
| Homopolymers | 40.7 | 49.2 |
| Block | 24.4 | 33.4 |
| Random | 29.7 | 29.2 |
| Other | 22.3 | 35.7 |
| Total | 117.1 | 147.5 |

Polypropylene exports have risen this year due largely to the rise in production volumes. The key Russian exporters include Tobolsk-Polymer, Polyom and Stavrolen, which accounted for 49%, 29% and 7% respectively in the first nine 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.

Whilst exports have been rising imports have been simultaneously in decline. In the first ten months of 2015 imports of polypropylene (decreased by 21% to 117,100 tons). The largest decrease occurred in block copolymers of propylene whilst random copolymers showed a small rise.

| Russian PVC Imports (unit-kilo tons) | | |
|--------------------------------------|------------|------------|
| Source | Jan-Oct 15 | Jan-Oct 14 |
| US | 16.7 | 56.0 |
| China | 51.1 | 169.7 |
| Europe | 9.4 | 30.5 |
| Others | 0.0 | 14.5 |
| Total | 77.2 | 270.7 |

Russian PVC market, Jan-Sep 2015

In the first ten months of 2015 Russian PVC imports fell 3.5 times to 77,100 tons against 270,700 tons in the same period in 2014. The peak month for imports in 2015 was in August when most of the Russian producers stopped production for scheduled maintenance.

Imports from China declined for the period January to October from 169,700 tons in 2014 to 51,100 tons in 2015. Imports from the US fell from 56,000 tons to 16,700 tons whilst shipments from Europe fell from 31,000 tons to 9,400 tons.

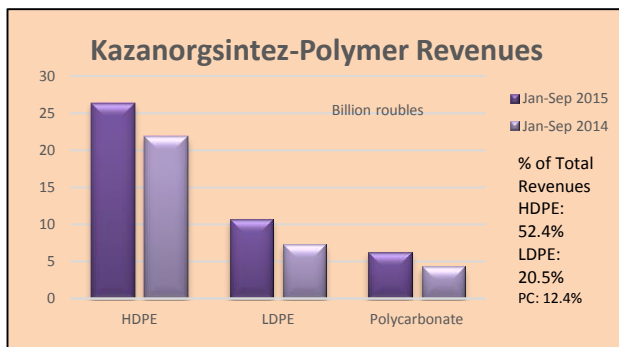
Russian PVC production totalled 642,100 tons in the period January to October 2015, 24% higher than in

| Russian PVC Market Balance (unit-kilo tons) | | |
|--|------------|------------|
| | Jan-Sep 15 | Jan-Sep 14 |
| Production | 578.4 | 471.2 |
| Exports | 32.1 | 2.2 |
| Imports | 47.3 | 236.6 |
| Market Balance | 593.6 | 705.6 |

2014. In October production amounted to 63,300 tons against 55,300 tons in September. Overall Sayanskkhimplast reduced production by 23% in the first ten months to 179,600 tons, whilst Bashkir Soda increased production by 10% to 198,600 tons. In 2016, the company plans to increase its capacity to 240,000 tpa. RusVinyl resumed production on October 8 after a two-week shutdown for repairs. The Kstovo plant produced 184,600 tons in the first ten months in 2015.

Russian polycarbonate imports, Jan-Oct 2015

Whilst Kazanorgsintez has increased sales of polycarbonate on the Russian domestic market this year, imports into Russia declined in the period January to October 2015 by 35% to 19,400 tons. This included a 36% drop in extruding grades to 14,100 tons. Kazanorgsintez has not exported polycarbonate this year, choosing to sell all production on the domestic market.



60% and amounted to about 1,000 tons. Other application areas included injection moulding which saw a fall of 9% to 2,800 tons.

PET Chain

Russian paraxylene market 2015

Paraxylene sales on the domestic market totalled 155,900 tons in the first ten months in 2015 against 144,000 tons in the same period in 2014. Ufaneftekhim, owned by Bashneft, shipped 88,400 tons against 91,200 tons in 2014 whilst Gazprom Neft increased shipments from 52,500 tons to 67,300 tons. SIBUR purchases paraxylene from third parties and utilises it internally for PTA production at Polief.

| Russian Paraxylene Domestic Sales (unit-kilo tons) | | |
|---|------------|------------|
| Producer | Jan-Oct 15 | Jan-Oct 14 |
| Gazprom Neft | 67.3 | 52.5 |
| Ufaneftekhim | 88.4 | 91.2 |
| Kirishinefteorgsintez | 0.2 | 0.2 |
| Total | 155.9 | 144.0 |

The third Russian producer Kirishinefteorgsintez sells virtually all of its paraxylene on the export market. In the first ten months this year Kirishinefteorgsintez exported around 50,000 tons against 40,000 tons in the same period last year.

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.

Russian MEG, Jan-Oct 2015

In early October, Nizhnekamskneftekhim's ethylene oxide plant launched a second plant for the production of glycols with a capacity of 60,000 tpa. The plant was previously owned by Petrokam, which has been idle for the past six years due to raw material shortages. The launch of the 60,000 tpa plant supplements the 110,000 tpa plant run by Nizhnekamskneftekhim.

Domestic sales of MEG amounted to 10,030 tons in October, 25% up on September. SIBUR-Neftekhim supplied 91,000 tons of MEG to the domestic market in January to October 2015 from a total of 122,000 tons, whilst Polief was the largest consumer accounting for 72,000 tons of shipments.

Russian PET project update

SAFPET in Tatarstan has received a soft loan in order to help it develop the PTA-PET project to be located at Nizhnekamsk. Kabardino-Balkaria has established a governmental commission for the construction of the PET project, but there are doubts the project can attract the necessary finance. A decision has been under review regarding whether to carry on with the project or to put it on hold. At the

same talks have been undertaken in November between the administration of Kabardino-Balkaria with the

Chinese company Kunlun Contracting and Engineering Corporation (CKCEC), which may help the Etana project to progress.

The government of the Ivanovo region expects that the financing of the complex *for the production of fibres* from PET for Ivregionsintez will be resolved before the end of 2015. The construction of the plant depends on the solution of the problem with lending. Investments into the project are estimated at 17.7 billion roubles, up to 80% of which is sought in loans from the Russian bank VEB. The remaining costs will cover the private investors, who have confirmed their intention to participate in the project. Ivregionsintez is also holding talks with other banks, in particular Gazprombank.

Evroplast-PET preforms

Evroplast has started production of PET preforms and Plastik covers in the Primorsk region. After the plant reaches full capacity production will be about 500 million pieces of PET preforms and 300 million pieces of Plastik closures a year.

Separately, the company is considering the issue of raw material supply sector. In June it was announced that Ivregionsintez held talks with

Oralneftekhim in Kazakhstan which intends to implement projects for the production of MEG, paraxylene, and PTA. In the case of reaching an agreement in the Ivanovo region will be sent to 155,000 tpa of PTA and 65,000 tpa of MEG from Kazakhstan from 2020.

In parallel, the company is exploring the possibility of working on PTA imported from Southeast Asia, and MEG from SIBUR-Neftekhim and Nizhnekamskneftekhim. The main problem for Ivregionsintez is PTA supply, which under current conditions would need to be imported and would depend on the reliability of supplies and fluctuations of the rouble exchange rate. Although Bashneft is planning to increase paraxylene capacity at Ufa any projected surplus would not be sufficient to support a new PTA plant.

Russian Benzene Domestic Market Sales (unit-kilo tons)

| Producer | Jan-Oct 15 | Jan-Oct 14 |
|-----------------------------|------------|------------|
| Altay-Koks | 3.8 | 21.1 |
| Angarsk Polymer Plant | 34.7 | 44.6 |
| Gazprom Neft | 85.5 | 80.5 |
| Zapsib | 55.6 | 45.9 |
| Kinef, Kirishi | 43.5 | 47.6 |
| Moskoks | 0.7 | 5.9 |
| Stavrolen | 24.3 | 14.3 |
| Koks | 23.5 | 22.5 |
| Magnitogorsk MK | 34.9 | 34.9 |
| Nizhniy Tagil MK | 12.8 | 8.6 |
| Novokuznetsk MK | 0.0 | 1.9 |
| Novolipetsk MK | 22.3 | 16.0 |
| Ryazan NPZ | 21.5 | 19.3 |
| Severstal | 32.6 | 27.9 |
| SIBUR-Kstovo | 30.6 | 20.7 |
| Uralorgsintez | 60.3 | 64.7 |
| Ural Steel | 16.4 | 1.1 |
| Chelyabinsk MK | 10.1 | 9.9 |
| Slavneft-Yaroslavlorgsintez | 32.8 | 44.2 |
| Bashneft | 14.9 | 12.4 |
| Gazprom n Salavat | 5.6 | 11.8 |
| Kuibyshevazot | 3.5 | 0.0 |
| Others | 14.2 | 3.4 |
| Total | 584.4 | 559.4 |

The planned capacity of the Vichuga plant at Ivanovo is aimed at 170,000 tpa of staple fibre and up to 30,000 tpa of granulate for the textile industry. Polyester fibre at the plant will be made by direct melt spinning of PET. The basic design of the complex has been designed to ensure that production could be reconstructed with the production of one type of fibres to another, depending on market conditions.

Aromatics & derivatives

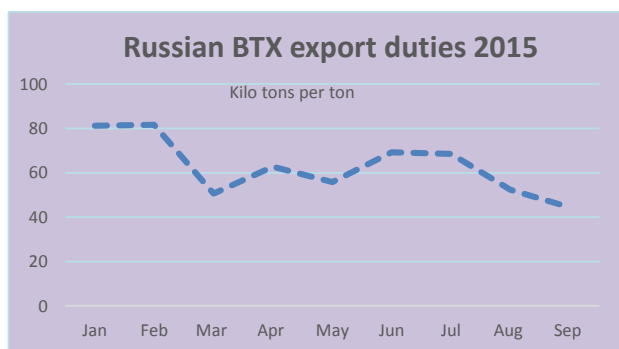
Russian benzene, Jan-Oct 2015

Russian domestic benzene sales for synthesis and nitration amounted to 53,000 tons in October, unchanged from September. The Ryazan refinery increased sales in October after the September outage and shipped 2,500 tons to the domestic market. Also after maintenance the Angarsk Polymer Plant increased shipments by 41% to 4,300 tons and Stavrolen increased by 40% to 6,800 tons.

A shutdown meant that SIBUR-Kstovo reduced shipments by 2.8 times to 1,600 tons. For the first ten months in 2015 sales of benzene on the domestic market totalled 584,400 tons which was 3% more than in 2014. From total sales, volumes of crude benzene amounted to 103,000 tons. Imports of benzene from Kazakhstan totalled 3,100 tons in January to October 2015, 19% down.

The main consumption outlets remained caprolactam, styrene and phenol. Caprolactam producers Kuibyshevazot, SDS Azot Kemerovo and Shchekinoazot

accounted for around 40% of benzene merchant sales in the first ten months. Other important consumers included Kazanorgsintez and Samaraorgsintez for the production of phenol and Nizhnekamskneftekhim for the production of styrene.



Russian aromatic duties, November 2015

The Russian export duty on aromatic hydrocarbons rose by 6% from 1 November to \$46.6 per ton. In October, exports of benzene, xylenes and toluene were carried out under duties of \$43.9 duty per ton. By comparison: in January, the duty rate was \$81.6 per ton. The duty on aromatic hydrocarbons is equal to the duty on diesel fuel and 48% of oil in 2014, it was calculated as 66% of the oil. Due to the fact that the export duty on oil in November rose by 6% to \$97.1 per ton, and increased the rate of duty on aromatics.

In order to avoid an uncontrolled increase in prices for petrochemical raw materials in the domestic market, the Russian Ministry of Finance has approved tax deductions of amounts of excise duty when purchasing certain oil products.

| Russian Toluene Domestic Sales (unit-kilo tons) | | |
|--|------------|------------|
| Producer | Jan-Oct 15 | Jan-Oct 14 |
| Novopiletsk MK | 1.5 | 1.0 |
| Slavneft-Yanos | 22.9 | 33.9 |
| Severstal | 6.1 | 4.9 |
| LUKoil-Perm | 13.8 | 25.2 |
| Gazprom Neft | 38.7 | 21.2 |
| Zapsib | 3.3 | 2.9 |
| Kinef, Kirishi | 24.9 | 18.8 |
| Gazprom n Salavat | 0.1 | 0.0 |
| Others | 5.0 | 12.2 |
| Total | 116.2 | 120.0 |

Russian toluene, Jan-Oct 2015

Sales of toluene on the Russian market amounted to 11,410 tons in October, 37% up on September. Manufacturers of explosives in October 2015 increased the volume of purchases of toluene by 46% and amounted to 1,670 tons. Companies producing paints, increased their purchases of raw materials by 54%, to 4,300 tons (38%).

Manufacturers of lubricants and additives for motor fuels increased purchases of toluene by 67% to 850 tons (7%), whilst another 550 tons was taken by rubber producers. In the first ten months in 2015 sales of domestic toluene totalled 116,200 tons against 120,000 tons in 2014.

Kuibyshevazot, Jan-Sep 2015

Kuibyshevazot increased net profit under 5.5 times for the first three quarters of 2015, whilst revenues grew by 30%. In January-September 2015, the company achieved a net profit of 5.16 billion roubles, whilst revenues amounted to 27.9 billion roubles. Gross profit for Kuibyshevazot increased 2.5 times to 10.12 billion roubles.

| Kuibyshevazot Product Revenues (Billion roubles) | | |
|--|------------|------------|
| Product | Jan-Sep 15 | Jan-Sep 14 |
| Polyamide-6 | 8.8 | 7.8 |
| Caprolactam | 2.7 | 2.5 |
| Urea | 4.2 | 2.2 |
| Ammonium Nitrate | 4.4 | 3.5 |
| Others | 7.9 | 5.3 |
| Total | 27.9 | 21.3 |

About 60% of Kuibyshevazot's sales is derived from exports, mainly in US dollars, while 92% of costs are denominated in roubles. As with most other Russian chemical producers this year has been particularly good in terms of operational economics. The main importers of products

exported by Kuibyshevazot include countries in Asia, Middle East, Europe, South America, CIS, Africa and Oceania. Abroad, the company buys equipment, components, catalysts, etc, and this is where re-investment economics has come under pressure from the declines in rouble valuation.

As of 30 September 2015 the short-term liabilities of Kuibyshevazot amounted to 4.94 billion roubles compared to 4 billion at 31 December 2014. The size of long-term loans at the end September 2015 amounted to 19.45 billion roubles compared to 15.73 billion roubles at the end of 2014.

This year Kuibyshevazot reduced the consumption of natural gas in ammonia production by 4.6%, and benzene consumption in caprolactam production by 0.8%. The company has completed work on improving energy efficiency in the production of cyclohexanone, using technology for supplied by DSM.

Kuibyshevazot and Linde have scheduled the launch of its new plant for the production of ammonia and hydrogen for 2017. The capacity of the installation of ammonia is being designed to produce 1,340 tons per day, coupled with the hydrogen plant with a capacity of 120,000 Nm³/h. The agreement on establishing a JV for the production of ammonia and hydrogen between Kuibyshevazot and the Linde Group was concluded in 2013.

| Russian Orthoxylene Domestic Sales (unit-kilo tons) | | |
|--|-------------------|-------------------|
| Producer | Jan-Oct 15 | Jan-Oct 14 |
| Gazprom Neft | 49.0 | 51.2 |
| Ufaneftkhim | 32.3 | 29.8 |
| Kirishinefteorgsintez | 29.1 | 38.9 |
| Total | 110.4 | 113.3 |

Russian orthoxylene sales, Jan-Oct 2015

Russian orthoxylene producers sold 15,150 tons on the domestic market in October, 66% up on September. Gazprom Neft shipped 7,520 tons, Ufaneftkhim 4,640 tons and Kirishinefteorgsintez 2,990 tons. Kamteks-Khimprom increased orthoxylene purchases 2.2 times in October to 9,330 tons, whilst Gazprom neftekhim Salavat increased its

purchases by 2.7 times to 1,410 tons.

| Russian Phenol Sales by Supplier (unit-kilo tons) | | |
|--|-------------------|-------------------|
| Producer | Jan-Oct 15 | Jan-Oct 14 |
| Omsk Kaucuk | 0.0 | 10.9 |
| Samaraorgsintez | 40.6 | 41.0 |
| Kazanorgsintez | 12.5 | 10.1 |
| Ufaorgsintez | 36.3 | 29.3 |
| LUKoil-VNPZ | 0.5 | 0.1 |
| Borealis | 3.2 | 2.1 |
| Total | 93.1 | 93.5 |

In addition, the Russian paint manufacturers increased the amount of orthoxylene acquired in October by 25% to 2,310 tons. Manufacturers of fuel, agricultural chemistry, pharmaceuticals and other products bought 1,130 tons in October, whilst another 970 tons was taken by trading companies. In the first ten months in 2015 domestic sales of orthoxylene totalled 110,450 tons, 9% lower than in 2014. Kamteks-Khimprom is by far the largest consumer, accounting for around 60% of purchases from the Russian orthoxylene producers.

Russian phenol, Jan-Oct 2015

Russian phenol sales on the domestic market totalled 93,100 in the period January to October 2015, against 93,500 tons in the same period last year. The continued absence of Omsk Kaucuk from the phenol market has resulted in Ufaorgsintez increasing shipments for merchant sale, whilst Novokuibyshevsk Petrochemical Company (Samaraorgsintez) overall remains the largest supplier. Kazanorgsintez sells its surplus phenol on the merchant market, but uses most of its phenol for the production of bisphenol A. Imports are sourced into Russia solely from Borealis in Finland, mostly being delivered to Shchekinoazot and Pigment at Tambov.

The largest application sector for phenol purchases in October was phenol-formaldehyde resins which accounted for 72% of shipments. Other applications included caprolactam and antioxidants.

Although total volumes are virtually unchanged this year Kuibyshevazot has significantly reduced phenol usage as a feedstock for caprolactam, purchasing only 1,000 tons in the first ten months in 2015 against 14,500 tons in 2014. Due to its with Karbolit with MetaDynea has increased its purchases of phenol from 9,300 tons in January to October 2014 to 18,500 tons in 2015. This makes it the largest buyer on the Russian market. Shchekinoazot has been the second largest buyer in 2015, where phenol is used in

| Russian Phenol Consumers (unit-kilo tons) | | |
|--|-------------------|-------------------|
| Consumer | Jan-Oct 15 | Jan-Oct 14 |
| Karbolit | 0.0 | 12.2 |
| Kotlas Chemical Plant | 2.2 | 0.2 |
| Ilim Bratsk DOK | 1.1 | 2.3 |
| Kuibyshevazot | 1.0 | 14.5 |
| LUKoil-VNPZ | 9.9 | 0.8 |
| Metadynea | 18.5 | 9.3 |
| Nizhnekamskneftekhim | 4.2 | 3.6 |
| Perm FE | 4.6 | 3.3 |
| Pigment | 8.5 | 6.9 |
| Shchekinoazot | 10.9 | 11.0 |
| Sterlitamak NPZ | 7.5 | 4.8 |
| Syktyvkar FE | 3.5 | 3.4 |
| Tokem | 1.1 | 2.6 |
| Uralati | 3.5 | 0.1 |
| Uralkhimplast | 9.5 | 11.7 |
| Ya M Sverdlov | 1.6 | 2.1 |
| Others | 5.6 | 4.5 |
| Total | 93.1 | 93.5 |

the production of phenol formaldehyde resins.

Synthetic Rubber

| Russian C4 Supplies (unit-kilo tons) | | |
|--------------------------------------|------------|------------|
| Supplier | Jan-Oct 15 | Jan-Oct 14 |
| Angarsk Polymer | 57.4 | 65.9 |
| Krasnoyarsk Synthetic Rubber | 0.3 | 0.4 |
| Kazanorgsintez | 24.1 | 27.9 |
| Stavrolen | 39.8 | 12.7 |
| SIBUR-Kstovo | 66.7 | 40.7 |
| Gazprom neftekhim Salavat | 0.0 | 6.4 |
| Tomskneftekhim | 59.9 | 69.8 |
| Ufaorgsintez | 23.5 | 24.9 |
| Naftan (Belarus) | 42.6 | 45.4 |
| Azerkhiyma | 22.5 | 20.4 |
| Others | 1.6 | 22.4 |
| Total | 338.5 | 336.9 |

increased shipments by 1.5 times to 7,300 tons. Domestic plants provided 272,200 tons in the period January to October 2015, 26% up on 2014.

Russian C4s, Jan-Oct 2015

C4 shipments from domestic producers to the internal Russian market totalled 337,200 tons in the first ten months in 2015 against 306,100 tons in the same period in 2014. The largest domestic suppliers in 2015 have included Tomskneftekhim and SIBUR-Kstovo, whilst the largest importer was Naftan in Belarus. The return to production by Stavrolen has had a major impact on domestic sales this year, whilst revived synthetic production has stimulated increased demand. Imports of C4s totalled 66,500 tons in the first ten months in 2015, 19% down.

Regarding sales in October, Russian producers increased shipments by 1.5 times over September to 29,000 tons. Tomskneftekhim increased the delivery 12.2 times to 7,900 tons whilst Stavrolen

SIBUR-Reliance rubber project at Jamnagar

Russian company Komsomolets at Tambov region has produced a substantial amount of equipment for the SIBUR-Reliance rubber JV at Jamnagar in India for the production of rubber. Komsomolets received an order for polymerization reactors, which will be installed in the production of butyl rubber in India. As part of the

Krasnoyarsk Synthetic Rubber Plant-FDA approval

NBR brand SKN from Krasnoyarsk Synthetic Rubber Plant (SIBUR) has passed peer review compliance with the requirements of the American National legislation FDA (Food and Drug Administration) in the field of monitoring the safety of products and may be used for the production of rubber products in contact with food. Conformity of production Krasnoyarsk area SIBUR with FDA confirmed the company Keller and Heckman, specializing in the field of conformity assessment polymer products regulatory requirements US and the EU.

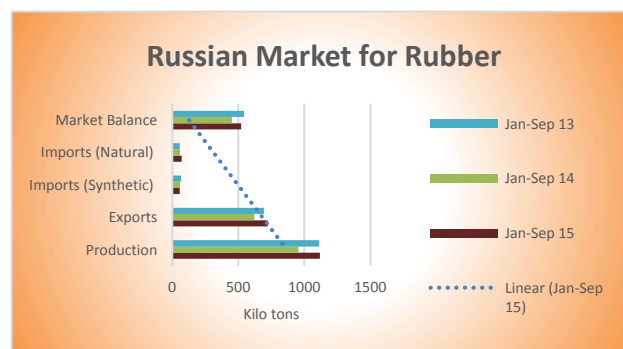
acceptance of the equipment Indo-Russian team of engineers have been carried out tests confirming that the equipment possesses the declared characteristics. Komsomolets has previously sent equipment to Japan, China and neighbouring countries.

In February 2013 SIBUR and Reliance laid the first stone of a JV for the production of butyl rubber in Jamnagar. To implement the project the parties established a JV entitled Reliance SIBUR Elastomers. SIBUR undertook to develop the basic design of the

new complex, whilst Reliance Industries will provide the necessary infrastructure and raw materials.

Russian synthetic rubber market, Jan-Sep 2015

The Russian market for rubber has experienced a mixed 2015, with some application sectors performing better than others. Overall domestic consumption returned to 2013 levels after the falls in 2014, but not many consumers can report an improvement. Devaluation of the rouble has not only made exports of synthetic rubber from Russia more profitable, it has also had the impact of increasing tyre production principally for export activity.



background of a vastly depreciated currency.

Whilst Russian synthetic rubber producer profitability has risen this year the domestic market has been faced with some difficulties. Aside negative economic trends in Russia domestic rubber consumers have struggled to match imports in price and quality, even against the

At the end of 2014 the volume of Russian market of industrial rubber goods totalled 208,000 tons, 18% down on 2013. A further decline of 13% in 2015 has been estimated. The main application area for industrial rubber products is the automotive industry (gaskets, seals), conveyor belts, etc, accounting for 177,000 tons of consumption in 2014 and 16% down on the previous year. The market for rubber for special purposes declined by 23% in 2014 to 31,000 tons.

Despite continued falls in volume some manufacturers have benefited from rouble devaluation. Kurskrezinotekhnika for example increased revenues by almost 820 million roubles (25%) in the first three quarters in 2015. Balakovorezinotekhnika, which occupies around 49% of the automatic market for rubber goods, performed slightly better in terms of profits in 2015 over 2014 but was affected by the downturn in car sales from companies such as Avtovaz. The company is aiming to diversify its sales, particularly in regard to exports to reduce the dependency on sales to the Russian automotive sector.

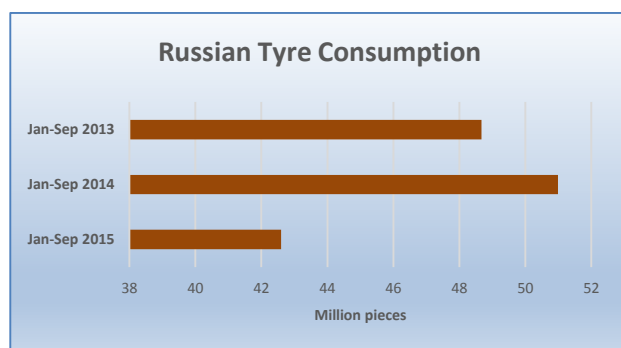
| Russian Rubber Product Manufacturer Revenues (Billion roubles) | | |
|---|------------|------------|
| Manufacturer | Jan-Sep 15 | Jan-Sep 14 |
| Balakovorezinotekhnika | 3.036 | 2.965 |
| Kvart | 1.387 | 1.376 |
| Ural Plant of RTI | 1.264 | 1.525 |

Kvart at Kazan (sometimes known as Quart) is one of the largest Russian manufacturers of rubber and technical products, reported a weaker period for January to September 2015. Turnover slightly increased in roubles, but after converting into dollars or euros sales revenues have fallen in 2015.

The company partly uses imported raw materials and has thus been affected by the currency weakness. Longer term Kvart has not benefited from Russia's accession to the WTO as Russian technical standards differ from other countries, thus limiting export opportunities. Kvart is working intensively on new products to try and expand the business in quite difficult economic conditions.

Russian tyre market, antidumping duties on Chinese imports

The Eurasian Economic Commission (EEC), which includes Russia, Belarus, Kazakhstan and Armenia, has supported the introduction of anti-dumping duties on truck tyres from China. The decision was approved on 17 November and applies to tyres for buses, trucks, trolleys, trucks, trailers and semi-trailers, imported into the territory of the Eurasian Economic Union from China. The size of the anti-dumping duties will range from 14.79 to 35.35% of the customs value of truck tyres.



Russian tyre consumption is expected to decline by 20-25% in 2015 against 2014 due to the fall in car sales and the fact that consumers are delaying tyre replacement because of reduced income. In 2014 the market was served almost equally by domestic suppliers and imports. In 2015 imports have declined significantly whilst

exports have risen, resulting in a declining overall market balance.

| Russian Chemical Commodity Exports | | | | |
|------------------------------------|------------|------------|------------|------------|
| Product | Jan-Sep 15 | Jan-Sep 15 | Jan-Sep 14 | Jan-Sep 14 |
| | Kilo tons | USD Mil | Kilo tons | USD Mil |
| Ammonia | 2,425 | 948 | 3,009 | 1,256 |
| Methanol | 991 | 257 | 1,146 | 480 |
| Nitrogen Fertilisers | 8,188 | 1,947 | 10,088 | 2,687 |
| Potash | 9,378 | 2,503 | 8,213 | 2,138 |
| Mixed Fertilisers | 6,920 | 2,564 | 6,829 | 2,480 |
| Synthetic Rubber | 712 | 1,064 | 690 | 1,515 |

Tyres at Vsevolozhsk currently comprises 15.5 million tyres per annum including thirteen production lines. Importing tyre companies such as Bridgestone, Goodyear, Hankook, and Kumho have been placed in a

Some manufacturers are interpreting the realigned currency factor a solid pretext for examining export opportunities such as Continental at its Kaluga plant. Moreover, Nokian Tyres has recently unveiled plans to invest €100 million in 2016 in the development of the Vsevolozhsk plant in the Leningrad region, despite poor sales on the Russian market. The capacity of the Nokian

quandary due to the rouble's virtual halving in value, whilst domestic players such as Nizhnekamskshina, Michelin, Nokian, Yokohama Rus, Continental AG, etc., have benefited from domestic production bases.

Despite the fall in the Russian car market, Nizhnekamskshina achieved net profits of 207 million roubles in the first half of the year against losses in the same period in 2014. The company produced 250,000 tyres more in the first half of 2015, helping to drive up revenues by 15.5% to 7.6 billion roubles for the first half of the year. The operating profit for the six months increased for Nizhnekamskshina by 3.76 times up to 377.5 million roubles. Imports are expected to decline in the next few years as capacity in Russia is expanded to 60 million pieces. Bridgestone is scheduled for the launch of its enterprise in Ulyanovsk in 2016, which by 2018 should reach full annual capacity of over 4 million units.

Methanol & related products

| Russian Methanol Domestic Sales (unit-kilo tons) | | |
|---|-------------------|-------------------|
| Supplier | Jan-Oct 15 | Jan-Oct 14 |
| Azot Nevinnomyssk | 16.0 | 20.5 |
| Azot Novomoskovsk | 101.0 | 98.9 |
| Metafrax | 287.2 | 315.3 |
| Sibmetakhim | 409.1 | 318.9 |
| Togliattiazot | 353.8 | 341.6 |
| Shchekinoazot | 31.3 | 16.9 |
| Ammoni | 32.3 | 0.0 |
| Others | 27.6 | 23.7 |
| Total | 1258.3 | 1135.8 |

Russian methanol domestic sales, Jan-Oct 2015

Domestic sales of methanol in Russia amounted to 140,248 tons in October against 115,400 tons in September. The main reason for the increase was the start of deliveries from the new plant Ammoni at Mendelevsk in Tatarstan.

In its first three months of operation Ammoni sold 32,300 tons of methanol on the domestic market which has performed much better this year than other processing sectors in the Russian chemical industry.

For the period January to October 2015 sales of methanol on the domestic market totalled 1.258 million tons against 1.136 million tons in the same period last year. The largest supplier on the domestic market is Sibmetakhim, shipping 409,100 tons in the first ten months in 2015, followed by Togliattiazot with 353,800 tons and Metafrax with 287,200 tons. Metafrax reduced merchant sales in 2015 due to increased internal consumption.

| Russian Methanol Consumption (unit-kilo tons) | | |
|--|-------------------|-------------------|
| Consumer | Jan-Oct 15 | Jan-Oct 14 |
| Nizhnekamskneftekhim | 206.2 | 201.6 |
| Togliattikaucuk | 85.5 | 83.0 |
| Uralorgsintez | 54.8 | 56.1 |
| SIBUR-Khimprom | 11.5 | 10.1 |
| Tobolsk-Neftekhim | 36.0 | 41.4 |
| Ektos-Volga | 41.5 | 39.0 |
| Omsk Kaucuk | 76.1 | 58.2 |
| Novokuibyshevsk NPZ | 39.8 | 39.9 |
| Uralkhimplast | 20.0 | 21.4 |
| Slavneft-Yanos | 16.3 | 8.9 |
| Others | 670.5 | 576.3 |
| Total | 1258.3 | 1135.8 |

MTBE producers accounted for 35% of methanol sales in October, followed by gas companies with 22%, producers of formaldehyde and its derivatives 18% and rubber (9%). The largest fall in purchases of methanol in October stemmed from manufacturers of oils and additives, while the largest increase over September of 32% was recorded from producers of formaldehyde and its derivatives.

The largest methanol consumers in Russia mostly comprise of MTBE producers, and related rubber production. Nizhnekamskneftekhim remains the largest individual buyer in Russia, purchasing 206,200 tons in January to October 2015 against 201,600 tons in the same period in 2014.

| Russian Methanol Exports (unit-kilo tons) | | |
|--|-------------------|-------------------|
| Producer | Jan-Sep 15 | Jan-Sep 14 |
| Azot Nevinnomyssk | 0.0 | 16.3 |
| Azot Novomoskovsk | 130.3 | 121.6 |
| Akron | 0.1 | 4.9 |
| Metafrax | 197.6 | 223.4 |
| Sibmetakhim | 274.3 | 324.7 |
| Tomet | 155.0 | 175.2 |
| Shchekinoazot | 233.7 | 279.8 |
| Total | 991.0 | 1146.0 |

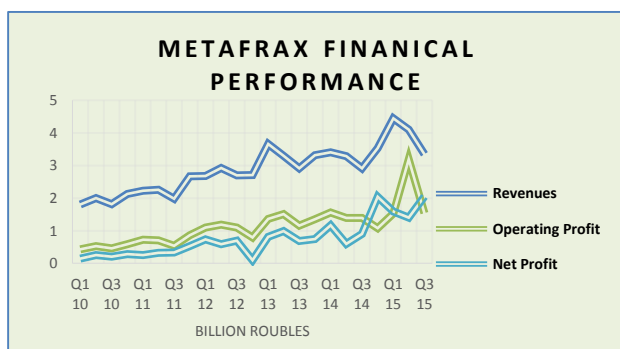
The largest non-MTBE/rubber consumer is Uralkhimplast at Nizhniy Tagil which bought 20,000 tons in the first ten months in 2015 against 21,400 tons in 2014. Uralkhimplast uses methanol for the production of formaldehyde, and had hoped to establish its own methanol plant by now. The company set up a methanol project some years ago entitled UralMetanolGrupp, together with the gas company Itera, but

this project appears to have stalled due to largely financial matters.

Russian methanol exports, Jan-Sep 2015

Russian methanol exports totalled 991,000 tons in the first three quarters in 2015 against 1146,000 tons in the same period in 2014. The leading exporter was Sibmetakhim from Tomsk, which exported 274,300 tons in the first three quarters against 324,700 tons last year.

Azot at Novomoskovsk was the only producer to increase exports in January to September 2015, whilst the majority of producers focused more on the domestic market either through internal processing or merchant sales. Finland remains the main destination for Russian exports, where after it is exported on to other markets, whilst Central Europe comprises one of the main consumption areas. Poland, Romania and Slovakia accounted for around 35% of Russian export shipments in the first three quarters in 2015.



Metafrax, Jan-Sep 2015

Metafrax increased its net profit 1.9 times in January-September 2015 to 5.1 billion roubles. Revenues increased by 23.8% to 11.896 billion roubles. The rise in profits is attributable to higher sales volumes and favourable market conditions in the market.

In rouble terms all methanol producers have all shown rising trends in revenues, gross and net profits in the period January to September 2015.

Although positive rouble profits are being recorded by the Russian producers, these profits look less impressive when converted into dollars.

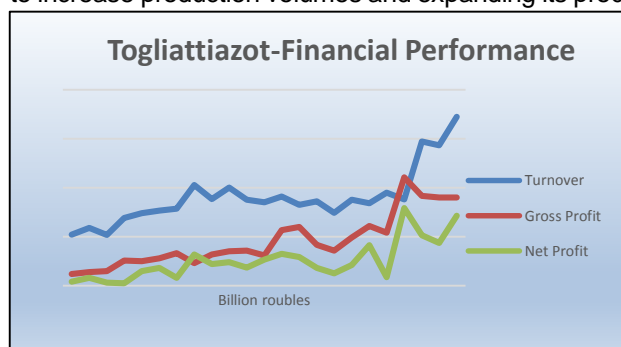
Surprisingly, Russian methanol producers have gained more from the domestic market than the export market this year. Metafrax particularly benefited from this trend, with exports falling to 26% of total sales of in the third quarter against 33% in the second quarter. Methanol was supplied by Metafrax to Kazakhstan, as well to the rest of the world via Finnish ports. Methanol exports declined in the first three quarters to 197,100 tons against 223,400 tons in the same period in 2014.

Some of the smaller tonnage products produced by Metafrax, such as urotropin, were delivered this year to export markets in Europe and the Far East. Pentaerythritol was delivered to the Netherlands, Germany, India, Poland, Turkey and the CIS markets in Belarus, Uzbekistan, and Kazakhstan. Polyamide was sold to Belarus and Ukraine. The main foreign partners of Metafrax include Metadynea Trading SA (Switzerland) and trading company Maritime House Ltd (UK).

Metafrax, tank cars & investments

United Wagon Company and Metafrax signed an agreement in October for the supply new generation tanks, with a life-span of 32 years. Metafrax currently possesses about 900 tank wagons and will receive delivery of the new tanks before the end of 2015.

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 methanol & ammonia producers, Jan-Sep 2015

Togliattiazot reported record results in the third quarter this year, with revenues, gross profits and net profits all rising significantly. Akron increased revenues by 37% in the first three quarters in 2015 to 36.624 billion roubles. The operating profit amounted to 15.701 billion roubles which is 78% higher than in 2014, whilst the net profit totalled 13.952 billion roubles against a net loss of 2.558 billion roubles in the same period last year.

| Fosagro Production (unit-kilo tons) | | |
|-------------------------------------|------------|------------|
| Product | Jan-Sep 15 | Jan-Sep 14 |
| Ammonia | 797.3 | 875.4 |
| Urea | 704.0 | 742.5 |
| Phosphate fertilisers | 4,000.1 | 3,378.4 |
| Ammonium nitrate | 329.6 | 170.9 |
| Aluminium fluoride | 24.9 | 21.8 |
| Phosphoric acid | 1,574.6 | 1,430.6 |
| Sulphuric acid | 3,527.5 | 3,299.8 |
| Sodium Tripolyphosphate | 90.4 | 96.6 |

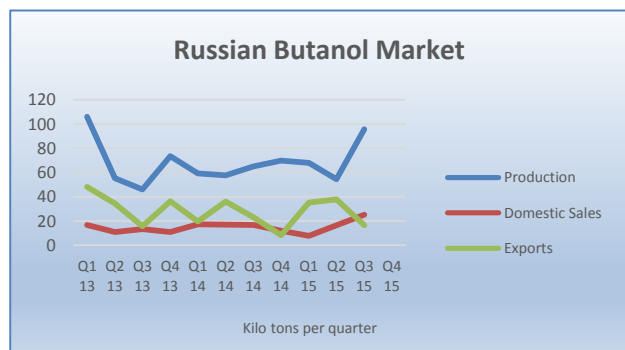
Fosagro increased production and sales of fertilisers for the first nine months 2015 by 9.7% and 10.6% respectively. Production of phosphate fertilisers and feed phosphates increased by 2.5% to 4 million tons, while the output of nitrogen fertilisers remained unchanged at 1 million tons.

Organic Chemicals

| Russian Butanol Domestic Sales (unit-kilo tons) | | |
|---|------------|------------|
| Producer | Jan-Oct 15 | Jan-Oct 14 |
| Gazprom n Salavat | 21.4 | 22.9 |
| SIBUR-Khimprom | 26.1 | 27.1 |
| Angarsk Polymer Plant | 1.3 | 1.9 |
| Azot Nevinnomyssk | 3.3 | 2.4 |
| Others | 5.9 | 2.9 |
| Total | 58.0 | 57.3 |

Russian butanol, Jan-Oct 2015

Butanol sales on the domestic market amounted to 6,540 tons in October, 12% less than in September but 2% higher than in October 2014. The proportion of n-butanol in October comprised 68%, and isobutanol 32%. SIBUR-Khimprom supplied 3,740 tons in October, Gazprom neftekhim Salavat 2,280 tons, Angarsk Petrochemical 330 tons and Azot Nevinnomyssk 200 tons. Dmitrievsky Chemical Plant was the largest buyer in October, purchasing 2,110 tons, followed by Aktilat with 1,860 tons.



Domestic sales of butanols totalled 64,590 tons in January to October 2015, 6% up over 2014. Normal butanol accounted for 76% of sales. In terms of longer term trends butanol sales on the domestic market are slowly increasing but downstream investments are required to reduce the dependency on exports.

Angarsk Petrochemical Company is the only Russian producer dependent purely on the merchant market, particularly exports which it ships mostly to China. If the demand from the Chinese

market for imported raw materials continues to decline, as has been the case recently, the Angarsk plant may be forced to reduce production.

Kazakh company buys Russian butyl & ethyl acetate plant

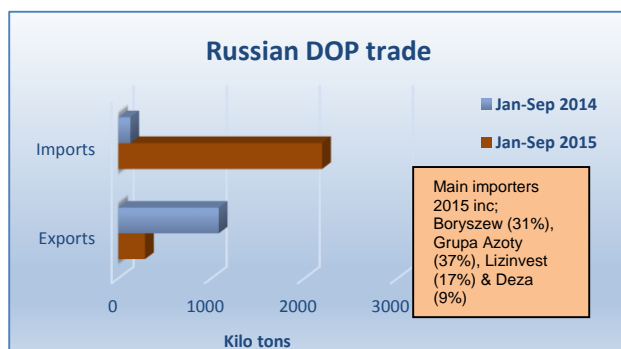
A Kazakh company Assignment has acquired property of the bankrupt Russian enterprise Asha Chemical Plant in the Chelyabinsk region, and has been re-registered as Ashaorgsintez. The idle facilities for acetate and ethyl acetate could possibly restart in 2016. Ashaorgsintez has started negotiations with Rosneft and other suppliers about the possibility of purchasing technical alcohol, butanols and ethanol for the production of esters. The bankruptcy procedure of the Asha Chemical Plant was launched in June 2011, at the request of Gazprom Mezhtregiongaz Chelyabinsk (now Novatek-Chelyabinsk).

Russian phthalic anhydride, Jan-Sep 15

Russian phthalic anhydride production totalled 66,040 tons in the first three quarters in 2015, 15% down on the same period in 2014. The most notable feature of the phthalic market in 2015 comprised the resumption of purchases by Roshalsky Plant of Plasticizers from Kamteks-Khimprom after ceasing in 2012. The owner of Roshalsky Plant of Plasticizers Neftekhimprom was in conflict with

Kamteks-Khimprom over phthalic supplies between 2012 and 2015 and subsequently purchased phthalic from imports from countries such as Belarus. 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.



Russian DOP imports, Jan-Sep 2015

Russia imported 283 tons of DOP in September against 231 tons in August. DOP imports totalled 2,190 tons in the first three quarters in 2015 against 130 tons in the same period in 2014.

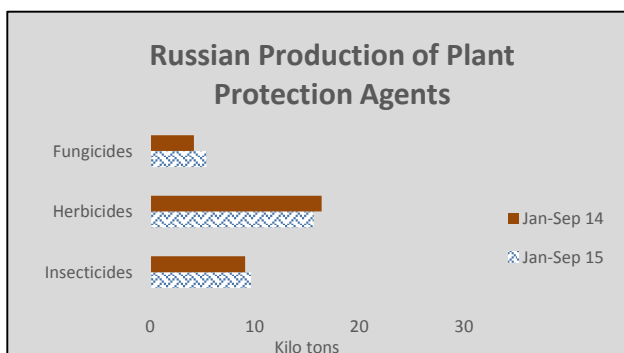
Suppliers to the Russian market in the past two months include the Czech company Deza, Polish companies Boryszew and Grupa Azoty and Korean company Humade Corporation. In June and July Russian DOP availability was affected by the planned outage at Gazprom

neftekhim Salavat, with the restart postponed several times.

Other Products

Ministry of Economic Development approves maleic anhydride project in SEZ Alabuga

The Council for Special Economic Zones at the Ministry of Economic Development approved the draft of three new companies-residents of special economic zone Alabuga in Tatarstan. The maleic anhydride project is one of the three new residents, with the plant being developed by Russian-German JV Kamatex. The planned production capacity of the maleic plant is 40,000 tpa providing for a further increase in future capacity to 60,000 tpa. The plant is aimed to start in the second quarter of 2018.



Khimprom-herbicide project

Khimprom at Novocheboksarsk is investing 500 million roubles, provided by the Industry Development Fund (EDF), for the preparation of a project for the production of glyphosate which is not produced in Russia. Basic engineering is expected to be undertaken by Chinese company Hualu Engineering & Technology. The new plant is being designed to possess a capacity of 30,000 tpa to come onstream by 2020, meeting around 70% of Russian consumption.

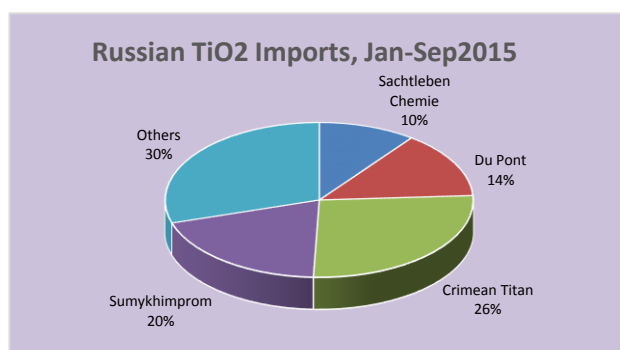
Khimprom, Jan-Sep 2015

Khimprom at Novocheboksarsk increased profits 2.7 times in the first three quarters of 2015, driven primarily by the falling value in the rouble. Revenues for Khimprom for the nine months increased 20% against 2014. In the first nine months of 2015 Khimprom recorded a net profit of more than 235 million roubles. The company's profit in the third quarter amounted to about 90 million roubles. Revenues of Pekarbonat, 100% owned by Khimprom, also increased by 25%.

During the first three quarters there was a steady increase in sales volumes of rubber chemicals used for the production of tyres: sales of acetanilide-N increased by 11%, and diphenylguanidine by 24%. 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.

Khimprom has started commissioning of its unit for phenyltrichlorosilane production, which is used for varnishes and resins. The capacity of the plant is 350 tons per annum, of which around 100 tons per annum could be available for the Russian domestic market. Investment in the project exceeded \$5 million. Khimprom has supplied acetanilide-N and diphenylguanidine to Michelin's plants in Romania, Poland, Germany, France, Italy, USA, and Canada. Khimprom wants to increase the volume of shipments to

Michelin's plants. In addition, the company has conducted a number of other developments, including with a view to import the technology of production of hexamethylene diamine diacetate for use in the production of rubberized fabric for special purposes.



Russian titanium dioxide, Jan-Sep 2015

In the first nine months of this year deliveries of titanium dioxide to the Russian market declined by 12.5% to 55,200 tons. Despite an overall drop in domestic demand, Crimean Titan increased sales by 50% to more than 15,000 tons. Imports from Du Pont and Sumykhimprom have declined in 2015; Du Pont reducing sales by 47% to 7,400 tons and shipments from Ukraine falling 37% in the first three quarters to 10,600 tons. The only foreign supplier to increase sales in 2015 is Sachtleben Chemie, rising by 19% to 5,500 tons.

Ukraine

Ukrainian polymer imports, Jan-Oct 2015

The Ukrainian economy may have turned the corner in that GDP rose 0.7% in the third quarter after a succession of negative quarterly results. In the first ten months of 2015 PVC imports into Ukraine decreased by 29% and amounted to 71,400 tons against 101,000 tons in 2014. Imports from the US totalled 58,400 tons in the first ten months in 2014 against 30,200 tons in the same period in 2015. European sources accounted for 33,700 tons in the period January to October 2015 against 40,600 tons a year earlier. Imports from Russia rose from 380 tons to 6,300 tons in January to October this year.

Polycarbonate imports totalled 2,100 tons in the period January to October 2015, 30% down over the same period last year. Bayer supplies to Ukraine in January-October declined by 11% and amounted to about 1,000 tons. SABIC Innovative Plastics supplied 876 tons in January to October 2015.

| Ukrainian Polymer Imports (unit-kilo tons) | | |
|---|------------|------------|
| Product | Jan-Oct 15 | Jan-Oct 14 |
| PVC | 71.4 | 101.0 |
| PET | 130.5 | 137.6 |
| LDPE | 75.6 | 67.7 |
| LLDPE | 35.9 | 40.9 |
| HDPE | 73.9 | 83.4 |
| PP | 76.4 | 94.4 |
| Polycarbonate | 2.1 | 4.4 |

Polypropylene imports totalled 76,400 tons in January to October 2015, 19% down. The largest drop in demand occurred in propylene homopolymer imports. Polyethylene imports totalled 161,400 tons, 16% down against 192,000 tons in January to October 2015. Whilst imports of HDPE and LLDPE fell, LDPE volumes rose in 2015.

Ukrainian chemical market news

Ukratnafta resumed benzene exports in October, shipping 5,000 tons to Spain. Benzene exports from Ukraine totalled 24,700 tons in the period January to October 2015, 2.2 times lower than in 2014.

Ukrainian organic chemicals, Jan-Sep 2015

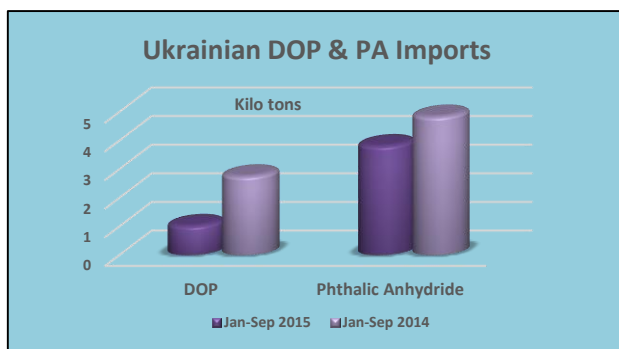
Imports of phthalic anhydride into Ukraine amounted to 233 tons in September, 5% lower than in August and 2.5 times lower than in September 2014. In the first nine months of 2015, total imports of phthalic anhydride in Ukraine totalled 3,810 tons which is 27% lower than in the comparable period last year.

DOP imports totalled 1,020 tons in the first three quarters in 2015, 2.7 times less than in 2014.

Odessa Portside Plant (IPF) has concluded an agreement with the Austrian company Antra GmbH on reverse flow gas from Europe. According to reports, the natural gas will be delivered to the company at a lower price than set for industrial use in Ukraine.

Previously, Odessa Port Plant was forced to terminate the contract with the German company E.On for gas supplies. The agreement envisages the transportation of fuel from Germany through Hungary

reverse. Odessa Portside Plant was commissioned in 1978. The company is a monopolist on the market of Ukraine reception, cooling and transshipment of ammonia by sea. The design capacity for



ammonia production is 450,000 tpa and for urea 330,000 tpa. The capacity of the complex for the transshipment of ammonia is 4.3 million tpa, urea and methanol 5.0 and 1.0 million tpa respectively.

Ukrainian caustic and chemical producer DniproAzot increased net profit by 7.7 times in the first three quarters in 2015 to 104.001 million hryvnia. During this period, the net income of the company increased by 71.66%. For the third

quarter, the company achieved a net profit of 92.911 million hryvnia, 37.17% higher than in Q3 2014. DniproAzot is owned by Privatbank Group and specialises in the production of ammonia, urea, caustic soda, chlorine, hydrochloric acid, and among the six largest chemical companies. DniproAzot has a capacity of 68,000 tpa for caustic soda, but rarely operates higher than 42,000 tpa.

Ukrainian polystyrene market, Jan-Sep 2015

Demand for polystyrene and styrene plastics in Ukraine in the first three quarters declined by 10% and amounted to 42,500 tons. Consumption has declined greatest this year in product areas high-impact polystyrene and general purpose polystyrene, which fell 21% in the first three quarters to 16,000 tons. Nizhnekamskneftekhim accounted for 87% of high-impact polystyrene and general purpose polystyrene imports. ABS imports into Ukraine fell by 20% in the first three quarters and amounted to 2,300 tons. By contrast to other product grades the market for expanded polystyrene in the first three quarters rose by 4% to 23,300 tons. The largest supplier of EPS in Ukraine is SIBUR, accounting for 41% of sales in the first three quarters.

Central Asia

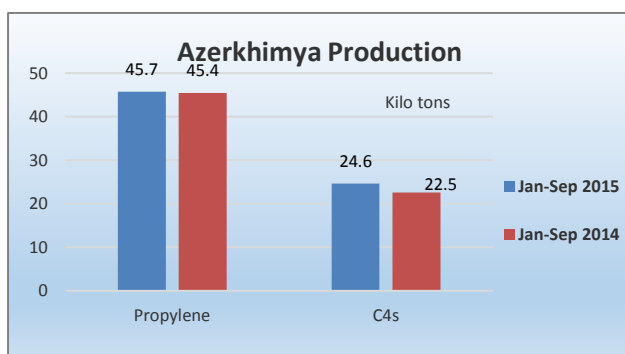
SOCAR-urea project delayed start-up

SOCAR has postponed the start of production of urea at Sumgait at the end of 2017 beginning of 2018. Currently, negotiations are continuing on attracting long-term lending after the Korean Eximbank has negotiated the involvement of the main long-term credit. The plans for the construction of a urea plant were announced in mid-2011. In March 2013 an agreement was concluded (on the results of an open tender) with the Korean company Samsung Engineering Co Ltd for the design, procurement and construction of the plant at Sumgait. The capacity of the plant is 600,000 tpa, which was planned originally to be commissioned in late 2014-early 2015. Investment in the project is estimated at €500 million.

Azerkhimya-olefin plant enhancement

Azerkhimya has introduced two new units at its petrochemical complex at Sumgait. The company commissioned an 87,600 pa unit for the desulfurization of liquefied gas and a 120,000 tpa unit for the hydrogenation of C4s. Azerkhimya also recently commissioned an isopropyl alcohol unit at the petrochemical plant, which produces 260,000 tpa of ethylene and polyethylene.

Located in close proximity to SOCAR's Heydar Aliyev (formerly New Baku) refinery at Baku, the plant also produces 136,000 tpa of propylene, 156,000 tpa of polypropylene, and 25,000 tpa of industrial isopropanol.



The state-owned operator also is moving forward with construction of Azerbaijan's first polypropylene plant, to be built in the Sumgait Chemical Industrial Park. The new plant, which will produce 180,000 tpa of polypropylene and 120,000 tpa of high-density polyethylene on 25 October. Earlier in 2015, SOCAR Polymer awarded a €350 million contract to Maire Tecnimont for construction, and procurement to build a new polypropylene plant, which at the time, was due to be commissioned by late 2016. Start-up of the new plant has now been rescheduled 2018. The polypropylene plant, which SOCAR

purchased from Varennes in Canada, and had been dismantled, reconditioned, and transported to Azerbaijan, will be equipped LyondellBasell's Spheripol process technology.

Chinese financial support for PVC & methanol project in Uzbekistan

The Chinese bank Exim Bank has provided funds for the construction and purchase of equipment for new projects at Navoiyazot, which have been under planning by Uzkhimprom for the past five years. Exim Bank and Uzbek Bank Asaka signed a loan agreement worth \$374 million for the construction of PVC facilities at Navoiyazot. Credit is allocated to finance the contract for the construction of the line of PVC and the purchase of equipment, which will start in December.

Samsung-aromatics complex at Ustyurt in Uzbekistan

Samsung Engineering is assessing whether to participate in construction of a small aromatics plant at the Ustyurt Gas Chemical Complex in Uzbekistan. Samsung and Uzbekneftegaz signed a memorandum in which Samsung will prepare a technical proposal by April 2016. Construction of the plant envisages the construction of capacities for the production of aromatic hydrocarbons including 30,000 tpa of benzene, 20,000 tpa of toluene and 5,000 tpa of xylenes. Ustyurt Gas Chemical Complex will supply raw materials to the plant. The project cost is estimated at \$300 million.

The jv UzKorGasChemical completed construction of Ustyurt Gas Chemical Complex in October 2015. The complex includes capacities of 4.5 billion cubic metres of gas per annum, 387,000 tpa of polyethylene and 83,000 tpa of polypropylene, as well as 102,000 tpa of pyrolyzed petroleum and other products. UzKorGasChemical was founded by Uzbek and Korean companies in May 2008 to develop, finance, construct and exploitation of integrated gas and oil processing project in Ustyurt region of Uzbekistan.

The project involves the construction of production capacity of 100,000 tpa of PVC, 75,000 tpa of caustic soda and 300,000 tpa of methanol. The project is being constructed by the Chinese company CAMC Engineering and is expected to take three years to construct which should mean start-up in 2019. Financing of the project total cost of \$501.1 million in addition to the credit of the Chinese bank will be funded by a loan of the Fund for Reconstruction and Development of Uzbekistan \$65.9 million, as well as its own funds Uzkhimprom \$61.4 million.

Uzkhimprom for the past five years trying to implement the project. Its realization involved the

Russian Caustic, the Korean ISU Corp, and Mubadala Development UAE. Navoiyazot, the largest chemical company in Uzbekistan, was commissioned in 1964. The plant specializes in the production of nitrogen fertilisers, nitron fibre and organic synthesis products.

Navoiyazot-ammonia project

Commercial bank Asaka and Japan Bank for International Cooperation (JBIC) signed a credit agreement worth 338.032 million at the end of October for the construction of the plant on production of ammonia and urea at Navoiyazot. Mitsubishi Heavy Industries and Mitsubishi Corporation have received the right to construct the complex, which will comprise capacities of 660,000 tpa of ammonia and 577,500 tpa of urea. Haldor Topsoe will supply equipment for ammonia production, whilst Saipem and Uhde Fertiliser Technology will deliver equipment for synthesis and granulation of urea.

Kazakh polymer imports, Jan-Sep 2015

Including all grades of polyethylene Kazakh imports totalled 77,500 tons in January to September 2015, 3% own on 2014. LDPE imports declined 23% to 11,600 tons and LLDPE fell to 3,100 tons from 4,100 tons in the same period in 2014.

Kazakh Polymer Imports (unit-kilo tons)

| Product | Jan-Sep 15 | Jan-Sep 14 |
|---------------|------------|------------|
| HDPE | 62.8 | 61.1 |
| LDPE | 11.6 | 16.4 |
| LLDPE | 3.1 | 4.1 |
| PVC | 38.4 | 41.8 |
| PET | 38.0 | 44.4 |
| Polypropylene | 14.2 | 19.6 |

HDPE imports into Kazakhstan totalled 62,800 tons in the first three quarters in 2015, 3% up on 2014. The main increase in foreign supplies polyethylene traditionally took place in the local pipe manufacturers. Around 85% of imports were used for the manufacture of polyethylene pipes which rose by 2.1% in the first three quarters to 87,600 tons. The second largest consumer sector is the film sector, accounting for around 10% of consumption. Production totalled 8,400 tons in January to September, 25% more than in 2014.

Russian imports accounted for 67% of shipments into Kazakhstan in the first nine months, followed by South Korea and Uzbekistan. In recent months, product from Iran has started to arrive, 250 tons in August and 1,250 tons in September.

In the first three quarters of imports of PET granulate in Kazakhstan decreased by 17% and amounted to 37,950 tons. The structure of the share of the Chinese supply of polyethylene terephthalate (PET) is 86%.

Atyrau refinery-aromatics complex

By the end of October the new complex had already produced 100,000 tons of reformat and 1,150 tons of benzene. Full capacity for benzene at 133,000 tpa and paraxylene at 496,000 tpa is aimed for by 2017, with the intention to gradually increase utilisation rates in 2016.

The remaining 14% of imports are from the Korean manufacturers granulate. It is essential imports fell in September. September compared to August delivery PET fell by 2.5 times and amounted to about 2 thousand. Tons. Such a sharp drop in imports is due to the shock devaluation of the Tenge in late August.

Due to the severe devaluation in August many companies were forced to temporarily suspend purchases of raw materials. In the first nine months of this year, imports of PVC in Kazakhstan fell by 30% compared to the same period of 2014 and amounted to 38,400 tons.

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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