Chemical Information Resources for East Europe and CIS

CIREC MONTHLY NEWS

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

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Key pointers from this month's issue

Central Europe

PDH Polska is seeking to finalise bidding for its propylene and polypropylene projects in Poland, whilst Orlen and MOL both concentrate on developing propylene chain products. Polypropylene imports into Poland totalled 372,000 tons in the first half of 2018 against exports of 100,000 tons. Duslo in Slovakia launched a new ammonia plant in September, whilst BorsodChem received EC approval for a Hungarian gov't loan to build an aniline plant at Kazincbarcika. PCC is aiming to expand its capacity for monochloroacetic acid in Poland, conversely Grupa Azoty ZAK has ceased production of the plasticizer DEHP at Kedzierzyn-Kozle. Regarding petrochemical production, both Unipetrol and MOL started maintenance shutdowns in September.

Russian chemical production & domestic sales

Olefin production in Russia rose in the first eight months in 2018, particularly propylene where the Tobolsk plant increased output. Propylene sales on the domestic Russian market changed minimally in the first eight months in 2018, rising to 255,000 tons from 254,300 tons. Paraxylene sales on the Russian domestic market amounted to 120,500 tons in the first eight months in 2018 versus in the same period in 2017. Ufaneftekhim increased sales from 59,900 tons to 79,100 tons in the first eight months in 2018, compensating for Gazprom Neft at Omsk reduced shipments from 62,400 tons to 41,500 tons. Russian production of HDPE totalled 652,500 tons in January-August 2018, 1% up on Jan-Aug 2017 when production totalled 647,100 tons. Overall for the eight months in 2018 merchant sales of phenol in the Russian market declined from 87,100 tons to 77,200 tons, as both Kazanorgsintez and Ufaorgsintez focused more on processing into bisphenol A than commercial shipments.

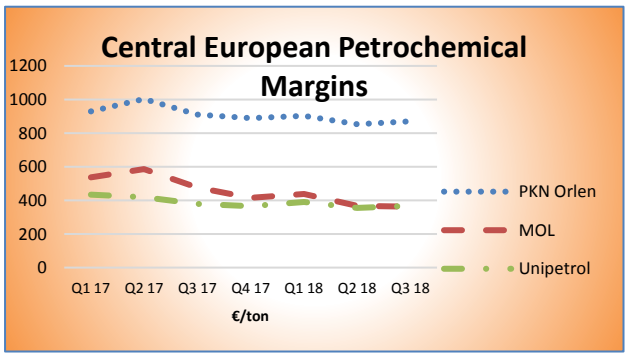
Russian chemical trade

Russian PVC exports rose from 61,300 tons in the first eight months in 2017 to 78,200 tons. Butanol exports from Russia increased in the first seven months this year, although remain lower than the volumes recorded prior to the start-up of the Salavat acrylic acid complex in 2017. Normal butanol export shipments rose to 21,000 tons versus 10,900 tons in the first seven months in 2017, whilst isobutanol volumes increased from 10,800 tons to 22,500 tons. Exports of 2-ethylhexanol (2-EH) amounted to 14,300 tons in the first seven months in 2018, down from 16,600 tons in 2017. New export routes are required by Shchekinoazot following the launch of the new complex for methanol and ammonia production, the first unit of its kind in Russia where the two products are produced using the same facilities and technology. The complex is capable of producing 1,350 tons of methanol and 415 tons of ammonia per day.

Russian chemical projects & competition

SIBUR intends to expand the production of thermoplastic elastomers (TEPs) by 50,000 tpa at the Voronezh industrial site, thus raising total capacity to 135,000 tpa. The final decision by SIBUR on the construction of the Amur Gas-Chemical Complex will be taken by SIBUR shareholders in 2019. Toyo Engineering Corporation and the Irkutsk Oil Company (INK) signed an agreement on cooperation in September regarding the large-scale gas project. Chinese company Wison Engineering presented to Gazprom neftekhim Salavat MTO technology for the production of olefins from natural gas.

CENTRAL & SOUTH-EAST EUROPE



Central European petrochemicals

Petrochemical margins for producers in Central Europe declined in the third quarter continuing the trend from the first half of the year.

Unipetrol started the planned shutdown of its steam cracker unit at Litvínov on 3 September, which lasted until 30 September. The total cost of the maintenance shutdown comprised around Kc 180 million, half of which is intended for new investment projects. One reason for the shutdown was that the construction of a new boiler house needed to be constructed for the steam cracker unit.

Polish Polyethylene Trade Jan-Jun 2018 (unit-kilo tons)		
Product	***Imports***	***Exports***
LDPE	155.3	21.0
LLDPE	161.6	47.7
HDPE	181.3	125.4
EVA	8.8	1.1
Ethylene-alpha-olefin Copolymers	67.1	4.8
Other types of polyethylene	26.6	3.0
Total	600.8	204.0

The most important part of the shutdown of the polyethylene and polypropylene units at Litvinov involved installing a so-called intelligent shutdown system. Thus, in the event of a power outage the system should ensure a controlled shutdown of major electrical equipment. Installing this system to oversee the new PE3 polyethylene unit will further enhance safety in the petrochemical section.

In Hungary, MOL closed its cracker at Tisaujvaros in mid-September for a maintenance outage, with the restarted scheduled for the second half of October. The capacity of the cracker is 290,000 tpa for ethylene and 130,000 tpa for propylene. During the shutdown MOL aimed to apply technology supplied under the agreement with INOVACAT that converts naphtha into propylene, butylene and aromatics (benzene, toluene, and xylene).

Polish Propylene Imports (unit-kilo tons)		
Country	**Q1 18**	**Q2 18**
Azerbaijan	1.9	2.0
Czech Republic	4.3	0.1
Germany	14.7	15.8
Russia	5.8	6.0
Ukraine	21.1	18.8
Hungary	3.1	4.6
Others	0.0	0.0
Total	51.0	47.2

Orlen-Lotos takeover

The takeover of Lotos by Orlen places Poland in the international trend of building a large fuel company that effectively competes with foreign competitors. Orlen has provided the European Commission with a package of preliminary analyses in which the group showed that the concentration of two refiners under one ownership does not threaten market mechanisms or competition. If the Commission's decision is taken in the first half of 2019, the process of taking over Lotos could be closed in the third quarter of 2019. In the first stage Orlen wants to purchase 32.99% of shares to be followed up with the second stage of a 66% offer. A more effective fuel company will emerge, which will more easily meet the challenges faced by the Polish oil industry. The combined Orlen and Lotos also means greater stability and competitiveness of the Polish group on the international market.

Polish Imports of Polypropylene (unit-kilo tons)		
Product	***Imports***	***Exports***
Homopolymers	223.4	64.7
Copolymers	139.7	32.6
Others	9.5	3.6
Total	372.7	100.9

PDH Polska-binding bids for Polymery Police

Grupa Azoty Police expects to submit binding bids in the fourth quarter this year for the construction of the propylene and polypropylene plants managed by PDH Polska for Polymery Police estimated at worth more than zl 5 billion. Binding offers need to be submitted to conclude a contract for comprehensive undertaking of Grupa Azoty's key investment. The project entitled Polimery Police consists of the construction of a propane dehydrogenation plant (PDH) and a polypropylene plant.

Polish PTA Exports		
Country	***Jan-Jun 18***	***Jan-Jun 17***
Austria	1.1	0.9
Belgium	0.1	0.3
Belarus	9.2	7.8
Czech Republic	0.0	0.0
France	1.8	0.3
Spain	0.1	0.0
Netherlands	1.0	2.6
Lithuania	7.9	0.0
Germany	162.1	140.7
Romania	0.1	0.3
Slovenia	0.2	0.2
Switzerland	2.8	2.6
Turkey	0.5	0.0
Italy	1.7	2.5
Total	**188.6**	**158.3**

The documentation outlining conditions, criteria, etc, approved by the supervisory board of PDH Polska, has already been submitted to the tenderers. PDH Polska is in possession of two state-of-the-art licenses for the production of propylene in Oleflex technology from UOP and for the production of polypropylene from W R Grace & Co.

Polish PTA exports, Jan-Jun 2018

Polish PTA exports totalled 188,600 tons in the first half of 2018 against 158,300 tons in the same period in 2017. Exports to Germany increased to 162,100 tons from 140,700 tons, whilst volumes shipped to Belarus rose from 7,800 tons to 9,200 tons. Exports in the first half of 2018 comprised 68% of production undertaken by PKN Orlen at Wloclawek, rising from 62% in the same period last year. Domestic demand for PTA until now has been driven by PET, but Grupa Azoty ZAK is now using PTA for plasticizer production and this could reduce the proportion of sales directed to export. Orlen's EBITDA for PTA sales in 2018 has been forecast at around zl 111 million.

Polish TDI Imports, Jan-Jun 2018		
Country	***Qty (ktons)***	***Price per ton (€)***
Saudi Arabia	0.7	3215.8
Belgium	1.3	2678.1
France	1.0	3445.5
Netherlands	2.1	327.8
South Korea	1.3	3144.1
Germany	10.9	3143.7
Hungary	17.8	3162.5
Italy	0.3	3277.1
Others	0.4	3275.0
Total/Av Price	35.8	3156.2

Polish chemical trade, Jan-Jun 2018

For both polyethylene and polypropylene trade in Poland, exports were outstripped three-fold by imports in the first half of 2018. Polyethylene imports totalled 600,800 tons in the first half of 2018 against 204,000 tons of imports and polypropylene exports totalled 100,900 tons versus 372,700 tons of imports.

Regarding feedstocks, butadiene imports into Poland totalled 48,987 tons in the first half of 2018, including 19,492 tons from Austria, 17,553 tons from Germany and 10,940 tons from Hungary. Propylene imports totalled 98,200 tons of which the largest supplier was Karpatneftekhim in Ukraine which shipped 39,900 tons.

Polish Methanol Imports (unit-kilo tons)		
Country	***Q1 18***	***Q2 18***
Germany	23.9	23.7
Norway	11.6	16.2
Russia	111.7	103.0
Venezuela	0	27.5
Others	39.6	6.8
Total	186.8	177.2

TDI imports into Poland totalled 35,766 tons in the first half of 2018, at an average price of €3156 per ton. Main suppliers included Hungary, which provided 17,800 tons to the Polish market, and Germany which provided 10,900 tons. Methanol imports into Poland amounted to 177,200 tons in the second quarter against 186,800 tons in the first quarter. The noticeable change in the second quarter was the purchase of 27,500 tons from Venezuela.

Czech petrochemical exports,Jan-Aug 2018

Ethylene exports from Unipetrol totalled 59,800 tons in the first eight months months in 2018 from 41,900 tons in the same period in 2017. Almost all of the ethylene this year was shipped to Bohlen in Germany. Propylene exports dropped in the first eight months to 12,400 tons from 17,100 tons, whilst imports of propylene rose from 29,100 tons in January to August 2017 to 37,400 tons in the same period this year. Germany provided 21,347 tons to the Czech Republic in the first eight months, followed by Ukraine with 5,978 tons.

Czech Petrochemical Exports (unit-kilo tons)		
Product	***Jan-Aug 18***	***Jan-Aug 17***
Ethylene	59.8	41.9
Propylene	12.4	17.1
Butadiene	0.4	3.1
Benzene	21.7	13.6
Toluene	9.8	8.0
Ethylbenzene	91.2	83.9

Ethylbenzene exports from the Czech Republic totalled 91,200 tons against 83,900 tons. Exports of phthalic anhydride from the Czech Republic totalled 11,161 tons in the first eight months in 2018 against

11,156 tons in the same period in 2017. Exports of DINP in the first half of 2018 amounted to 25,626 tons versus 23,801 tons.

Czech PVC Chain Trade (unit-kilo tons)		
	Jan-Jun 18	Jan-Jun 17
EDC Imports	62.0	0.5
PVC Imports	90.7	89.1
PVC Exports	79.2	69.8

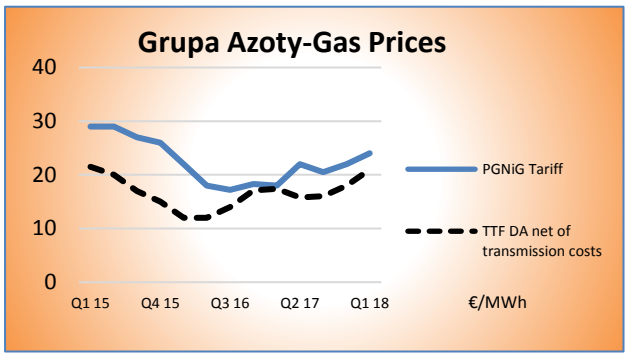
Czech petrochemical imports, Jan-Aug 2018

Spolana has needed to import ethylene dichloride since January this year in order to produce VCM since the close of the mercury chlorine plant at Neratovice in late 2017. In the first eight months Spolana imported 62,000 tons of EDC, mostly from Germany. Due to the imports of EDC Czech PVC trade has remained unaffected by the chlorine plant closure, with exports rising to 79,197 tons in the first eight months in 2018 against 69,791 tons last year.

Benzene imports into the Czech Republic rose slightly to 52,031 tons in the first eight months in 2018 from 51,981 tons in the same period last year. Methanol imports, usually supplied mainly from Germany and Russia, totallled 53,798 tons in January to August 2018 against 63,209 tons in the same period in 2017. TDI imports into the Czech Republic totalled 9,288 tons in the first eight months of 2018 against 11,825 tons in January to August 017. Imports were sourced this year from Germany, the UK, and Hungary.

Grupa Azoty-raw material purchases, gas, propylene, etc

The 36% increase in oil prices affected the prices of most petrochemical commodities for Grupa Azoty in the first half of 2018 although the average prices of benzene and phenol were lower by 10% and 5%. The bulk of the group's purchases of propylene are made under annual contracts.



In the first half of 2018, the prices of caprolactam in Asia achieved €2,098/ton and were 9% higher than in 2017. Caprolactam prices in Europe rose by as little as 1% in the period, to €2,140/ton.

Regarding gas supply, prices have been risen this year, but the rises have not been significant. The price oscillates around €22/MWh and is determined by the high price of coal (and CO2 emission allowances), an alternative fuel in the power mix. High-methane gas and gas from local sources was supplied by PGNiG to Grupa Azoty under long-term contracts. Any additionally required volumes were bought by the group at the Polish Power Exchange.

ZAK makes last deliveries of phthalate based DEHP

At the beginning of September, Grupa Azoty ZAK stopped deliveries of the phthalate-based plasticizer DEHP from Kedzierzyn. The product had been produced since 1963 and plasticizers such as Oxoplast O and Oxoplast Medica have now been taken off the market. ZAK is now focused heavily on Oxoviflex. The withdrawal of phthalate products from world markets is the result of the entry into REACH. Since 2015 Oxoplast O (DEHP) has gradually given way at Kedzierzyn-Kozle to the non-phthalate plasticizer DEHT under the Oxoviflex brand. Currently, an investment is underway to increase the production capacity of Oxoviflex production facilities from 50,000 tpa to 65,000 tpa.

Poland Monochloroacetic Acid Trade (unit-kilo tons)				
	2015	2016	2017	Jan-Jun 18
Exports	0.0	0.0	10.8	15.3
Imports	10.1	11.8	8.2	3.6

PCC-monochloroacetic acid expansion

PCC wants to further expand the monochloroacetic acid plant at Brzeg Dolny, managed by subsidiary PCC MCAA. The aim is to expand capacity to 100,000 tpa from 42,000 tpa at present.

Construction of the MCAA plant completed in 2015. It would be one of the largest projects carried out under European chemical conditions. The MCAA plant at Brzeg Dolny has taken up the connection of electrolysis for chlorine production at PCC Rokita. The capacity is expected to be increased to 52,500 tpa soon before expansion to 100,000 tpa. The company can produce MCCA either as an aqueous solution or in a solid form.

BorsodChem receives approval from EC for Hungarian support for new aniline plant

The European Commission has agreed that the €45 million investment aid granted by Hungary to BorsodChem, complies with EU state aid rules. This aid will contribute to the development of northern Hungary and reduce environmental risks without unduly distorting competition in the single market. The €45 million investment aid granted by Hungary will support BorsodChem's plan to invest a total of €142 million in a new aniline production facility at Kazincbarcika where the company produces MDI.

BorsodChem currently imports aniline produced by its parent company in China. The construction of the new aniline production facility is designed to increase the vertical integration of the current BorsodChem plant at Kazincbarcika.

The effects on competition will be limited as BorsodChem has a limited market position and MDI markets have high growth rates, both globally and globally. The Commission therefore concluded that the positive effects of the project on regional development and on the EU's environmental objectives clearly outweigh any distortion of competition linked to state aid.

Polish Chemical Production (unit-kilo tons)

Product	*Jan-Aug 18*	*Jan-Aug 17*
Caustic Soda Liquid	233.1	237.9
Caustic Soda Solid	40.5	51.4
Ethylene	351.1	323.7
Propylene	215.5	232.1
Butadiene	5257.0	39.3
Toluene	1807.9	14.9
Phenol	4218.6	29.2
Caprolactam	110.0	108.8
Acetic Acid	10.0	14.6
Polyethylene	262.7	226.3
Polystyrene	41.9	37.0
EPS	53.5	64.1
PVC	174.6	204.2
Polypropylene	186.1	179.7
Synthetic Rubber	183.3	159.2

Oltchim Privatisation & Chimcomplex, Summary

- Chimcomplex filed for the purchase of the assets of Oltchim in 2016, after launching the idea of National Chemicals Company (NCC).
- The aim of NCC would be to establish a company that would represent Romania in an effort to restore part of the chemical industry which collapsed in the 1990s.
- Chimcomplex is only procuring part of the Oltchim site. Other Oltchim assets which are up for sale include the Bradu Petrochemical Division (Package 8), the phthalic anhydride plant at Ramnicu Valcea (Package 9) and partially the PVC II plant at Ramnicu Valcea (Package 7).
- Oltchim's problems started in the 1990s when the neighbouring petrochemical complex at Pitesti closed.
- Conflicts amongst shareholders has been a major stumbling block to Oltchim's progress and direction and the company was declared bankrupt six years ago.
- Production did come briefly to a standstill before being revived ad the company is now able to report a profit from much smaller activity than 20 years ago. Capacity utilisation was rated at 32% in first half of 2018.
- Oltchim's future is based around three main product areas, chloralkalis, polyols and oxo alcohols. The latter two products require propylene as a raw material which is out-sourced by Oltchim, mostly from imports.

Duslo Sala-new ammonia plant opened

Duslo Sala opened a new ammonia production plant on 12 September, Ammonia 4, in which €310 million was invested. The Slovak approved a tax incentive for this investment, worth up to a maximum of €58 million over 10 years. The new ammonia production plant at Duslo Sala replaces the older unit which had become obsolete. In 2015 Duslo awarded contracts to Haldor Topsoe and Technip to provide services for its planned ammonia plant at Sala. Under the contract, Technip provided engineering, procurement and construction (EPC) services, while Haldor Topsoe will supply licensing, basic engineering and catalyst and equipment for the project.

The complex incorporates Haldor Topsoe Exchange Reformer (HTER) technology represents the first entirely new ammonia plant to be built in Europe for several decades. The technology makes use of the waste heat available from the secondary reformer, which minimises natural gas fuel consumption by main reformer and lowers steam generation from the plant.

Oltchim-Chimcomplex

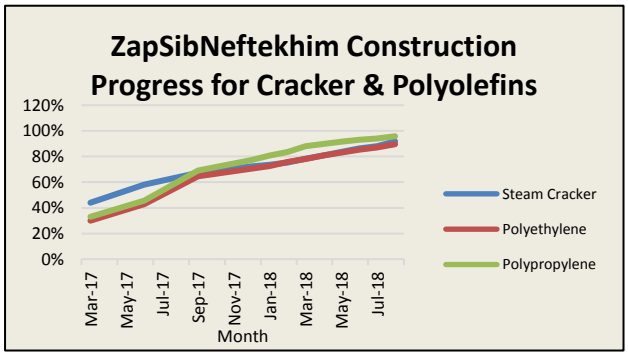
Chimcomplex Borzeşti has started to recruit the personnel it needs to operate installations it has taken over from the Oltchim at the Ramnicu-Valcea plant. The recruitment is being completed in stages until the transaction for Oltchim assets is completed. The company at Borzeşti is in the phase of analysing the final financing offers received. The takeover of Oltchim will mean the establishment of the Romanian Chemical Company (CRC).

RUSSIA

Russian petrochemical projects

ZapSibNeftekhim-October 2018

Overall progress of the project construction in ZapSibNeftekhim amounted to 87.8% by the end of August. The design of the complex has been completed, whilst construction and installation works had risen to 84.2%. Progress in the pyrolysis unit was 91.9% at the end of August, and installation of polyethylene was completed at 89.6%. The installation for the production of polypropylene pre-commissioning works carried out at 32%. The overall progress is 95.8%. As progress move closer towards 100% completion the tasks can become more challenging and thus it may take longer to finish the last final stages.



Irkutsk Oil Company-Toyo, gas-chemical

Toyo Engineering Corporation and the Irkutsk Oil Company (INK) signed an agreement on cooperation in September regarding the large-scale gas chemical project at Ust Kut in the north of the Irkutsk Oblast. In the next few months, the companies expect to sign a contract for the engineering and purchase of equipment for the first block of the plant for the production of polyolefins, using ethane extracted from the INK fields. In addition to the gas-chemical complex INK has also signed contracts to construct a large helium plant.

For ethylene production, INK intends to use Lummus Technology and for the production of polyethylene UNIPOL. The plant will be constructed in the Ust Kut district of the Irkutsk region, with operations scheduled for 2023. The cost of the project is estimated at 175 billion roubles and would represent the first gas-chemical complex East Siberia and the Far East, probably beating the Amur Gas-Chemical Complex by a year. INK hopes to produce 650,000 tpa of polyethylene sales from are to be targeted largely towards Asian markets.

Amur Gas-Chemical Complex-decision pending

The final decision on whether to proceed with the construction of the project Amur Gas-Chemical Complex will be taken by SIBUR shareholders in 2019, and at this stage the decision is expected to be positive. The preliminary cost range of the project is estimated at somewhere between $7-9 billion. If the investment is approved, SIBUR would be in a position to begin construction straight away setting a launch date of 2024.

Construction could take a period of between 40-48 months, following Gazprom's installation of the Amur Gas Processing Plant (GPP) which by 2025 will be able to produce enough ethane for the gas-chemical complex. The land for construction has already been determined for the gas-chemical complex, located next to the Amur GPP.

Although constituting a greenfield project, the construction advantage of the Amur Gas-Chemical Complex is that it will be able to use the exact same logistical routes developed by Gazprom for the gas processing plant. Terminals, quays and railway infrastructure have all been installed to transport equipment to the site

of the Amur GPP near Svobodny in the Amur Oblast. This could be a key factor in assessing whether to go ahead with the gas-chemical complex. Recently, SIBUR and Gazprom signed a preliminary agreement for the supply of ethane in the amount of 2 million tpa from which SIBUR can produce about 1.5 million tpa of polyethylene.

Amur GPP-navigation period for large scale deliveries ended in mid-September

The last batch of large-tonnage cargo destined for the Amur Gas Processing Plant (GPP) in the navigation period for 2018 was delivered in mid-September to a special pier on the Zeya River. The climate only permits deliveries in the period from May to September. After arriving at the Far East port of De- Kastri, the cargo sea crane vessels were loaded on to river-sea barges which were then sent around 280 km north along the Pacific coast to the sea port of Nikolaevsk-on-Amur on the Amur River. From Nikolaevsk-on-Amur the barges transported the large-scale equipment along the Amur River which then adjoins the Zeya River, until the loading terminal close to Svobodny. Even during the navigation period delivery can be complicated; low water levels on the Zeya River mean that dredging is necessary.

Russian Chemical Production (unit-kilo tons)		
Product	***Jan-Aug 18***	***Jan-Aug 17***
Caustic Soda	844.5	801.1
Soda Ash	2,288.0	2,279.0
Ethylene	2,002.0	1,964.0
Propylene	1,527.1	1,336.2
Benzene	957.8	912.4
Xylenes	313.4	334.8
Styrene	489.6	448.2
Phenol	129.1	141.5
Ammonia	12,000.0	10,900.0
Nitrogen Fertilisers	7,107.0	6,572.0
Phosphate Fertilisers	2,656.0	2,345.0
Potash Fertilisers	5,701.0	5,684.0
Plastics in Bulk	5,474.0	5,172.0
Polyethylene	1,484.0	1,367.0
Polystyrene	362.1	360.6
PVC	659.5	604.1
Polypropylene	1,012.0	988.0
Polyamide	113.5	104.6
Synthetic Rubber	1,105.0	1,042.0
Synthetic Fibres	112.0	111.6

In total, in the navigation of 2018, 79 units of large-sized cargoes with a total volume of 63,000 tons were to be delivered to the site of the Amur Gas Processing Plant. Most deliveries have been made through the De-Kastri port, whether starting from South Korea or West Europe.

At the end of August 2018, Gazprom had achieved 19% of the project schedule for the Amur Gas Processing Plant. The first stage of the plant (two production lines) will be commissioned in April 2021, and full operational capacity from 1 January 2025. The launch of the enterprise will allow to produce up to 2.6 million tpa of ethane, 1.6 million tpa of liquefied petroleum gases, up to 60 million cubic metres of helium and up to 38 billion cubic metres of commercial gas per annum. Russian electricity company UES will connect the transmission lines to the Power of Siberia energy plant, connecting it together with the gas processing plant with the largest substation in the Far East.

Gazprom neftekhim Salavat-MTO project

Further negotiations between Chinese company Wison Engineering and Gazprom neftekhim Salavat have involved a presentation on MTO technology for the production of olefins from natural gas. A memorandum of cooperation has been signed between the parties, and it will be depending on assessments whether the project is viable.

Capacity options for the Salavat project concept vary from 300,000 to 900,000 tpa of natural gas processing, using Honeywell UOP technology. According to preliminary data, Gazprom neftekhim Salavat is considering plans to build a plant to process about 2.5 billion cubic metres of natural gas per annum. Gazprom neftekhim Salavat has stated that it wants to produce 416,000 tpa of polyethylene and 617,000 tpa of polypropylene from the MTO technology.

Nizhnekamskneftekhim installs two new cracker furnaces

Nizhnekamskneftekhim introduced two new pyrolysis furnaces in early October. The furnaces were both of the SRT-VI type which offer improved efficiency and environmental safety. The installation of these furnaces will also help to reduce the consumption of fuel gas at the Nizhnekamsk complex and reduce the emission of harmful substances into the atmosphere.

In total, eighteen pyrolysis furnaces are installed at Nizhnekamskneftekhim's ethylene plant: eleven of the furnaces are in operation, and the rest remain in reserve. The two new type SRT-VI furnaces will be able to replace four old ones, as they have higher capacity and selectivity. Following their launch, the company will be able to increase the output of targeted products, critically improve environmental performance and at the same time allow the decommissioning obsolete SRT-II furnaces. Nizhnekamskneftekhim's existing cracker has an aggregate capacity of 600,000 tpa.

Russian petrochemical production & sales

Russian Ethylene Production (unit-kilo tons)		
Producer	***Jan-Aug 18***	***Jan-Aug 17***
Angarsk Polymer Plant	117.2	123.6
Kazanorgsintez	409.1	407.1
Stavrolen	213.7	209.4
Nizhnekamskneftekhim	427.8	431.5
Novokuibyshevsk Petrochemical	34.3	36.3
Gazprom n Salavat	253.9	190.9
SIBUR-Kstovo	246.3	269.3
SIBUR-Khimprom	37.1	32.3
Tomskneftekhim	169.1	184.7
Ufaorgsintez	80.5	85.1
Total	1989.0	1970.1

Russian olefin production, Jan-Aug 2018

Russian ethylene production totalled 1.989 million tons in the first eight months in 2018 against 1.970 million tons in the same period in 2017. The major change took place at Salavat where production rose from 190,900 tons to 253,900 tons, this increase helping to reduce the impact of slightly lower production at Ufa, Tomsk, Kstovo and Angarsk.

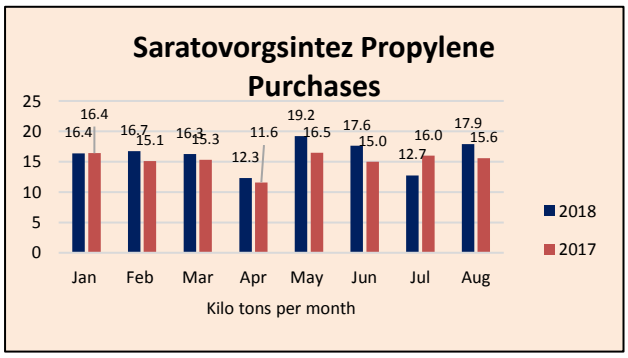
In the second half of September, Kazanorgsintez began scheduled repairs on the ethylene plant, in addition to ethanolamine plant. The stoppage started officially on 23 September running through to late October.

Russian Propylene Domestic Sales (unit-kilo tons)		
Company	***Jan-Aug 18***	***Jan-Aug 17***
Angarsk Polymer Plant	47.6	43.9
Omsk Kaucuk	1.3	2.1
SIBUR-Kstovo	81.0	65.5
Akrilat	5.0	1.4
Lukoil-NNOS	148.7	136.7
Tomskneftekhim	0.2	1.8
Gazprom neftekhim Salavat	4.9	0.0
Nizhnekamksneftekhim	0.0	0.0
SIBUR-Khimprom	0.2	0.0
Stavrolen	0.0	2.0
Tobolsk-Polymer	0.3	0.8
Total	255.0	254.3

Russian plants produced 1.527 million tons of propylene in the first eight months in 2018 versus 1.440 million tons in the same period in 2017. SIBUR Tobolsk increased production from 246,000 tons in January to August 2017 to 286,000 tons in the same period this year, whilst Gazprom neftekhim Salavat increased production from 79,000 tons to 110,000 tons.

Russian propylene sales Jan-Aug 2018

Propylene sales on the domestic Russian market changed minimally in the first eight months in 2018, rising to 255,000 tons from 254,300 tons. In August, 3,200 tons of propylene were shipped from Angarsk Polymer Plant to the domestic market, 2.5 times more than in July following a planned maintenance. Lukoil-NNOS increased shipments of propylene to the domestic market in August by 3.5% to 18,400 tons.



Russian acrylonitrile outage from Sept 2018

The largest Russian domestic consumer of propylene Saratovorgsintez started scheduled repairs on its acrylonitrile plant at Saratov on 24 September, expected to last for around 30 days. In the first eight months in 2018 propylene purchases made by Saratovorgsintez totalled 129,200 tons of which the main supplier is Lukoil-NNOS which had started maintenance earlier in September.

Russian Styrene Production (unit-kilo tons)		
Producer	***Jan-Aug 18***	***Jan-Aug 17***
Nizhnekamskneftekhim	206.2	206.9
Angarsk Polymer Plant	21.4	22.4
SIBUR-Khimprom	91.7	74.2
Gazprom n Salavat	131.5	102.0
Plastik, Uzlovaya	40.0	42.7
Total	490.7	448.2

Russian styrene production & exports Jan-Aug 2018

In the first eight months in 2018, Russia produced 490,700 tons of styrene which is 3% more than in the same period of 2017. Gazprom neftekhim Salavat increased styrene production by 9% to 131,530 tons in the first eight months in 2018, facilitating a rise in both domestic merchant market sales and export activity. Gazprom neftekhim Salavat has been the main producer to increase both domestic and export sales, followed by SIBUR-Khimprom at Perm where production increased from 74,200 tons to 91,700 tons.

Bulk Polymers

Russian polyethylene, Jan-Aug 2018

Russian production of HDPE totalled 652,500 tons in January-August 2018, 1% up on 2017 when production totalled 647,100 tons. Kazanorgsintez was the largest producer, amounting to 357,400 tons down 2% against the same period in 2017. Stavrolen at Budyennovsk increased production by 2% to 197,400 tons, which is 2% more than the same indicator in 2017, whilst Gazprom neftekhim Salavat increased production by 51% to 79,900 tons. The increase was due to continued operations against extended downtime in July and August 2017. Kazanorgsintez stopped the production of HDPE for maintenance on 26 September lasting until 11 October. From 1 October Stavrolen stopped its HDPE capacity for 10 days.

Russian HDPE Production (unit-kilo tons)		
Producer	***Jan-Aug 18***	***Jan-Aug 17***
Kazanorgsintez	357.4	363.3
Stavrolen	197.4	193.6
Nizhnekamskneftekhim	17.7	37.1
Gazprom n Salavat	79.9	52.9
Total	652.4	646.9

Russian polypropylene production, Jan-Aug 2018

Polyom at Omsk stopped polypropylene production for routine maintenance from 1 October for around ten days. Polyom increased production by 3% in the eight months in 2018 to 148,000 tons. Also, SIBUR Tobolsk and Stavrolen are preparing for a stoppage, whilst Ufaorgsintez stopped the production of polypropylene in early October for maintenance. As a result of these planned outages, import volumes are expected to rise during October and November.

Russian Polypropylene Production (unit-kilo tons)		
Producer	***Jan-Aug 18***	***Jan-Aug 17***
Ufaorgsintez	88.5	85.1
Stavrolen	74.1	80.7
Neftekhimya	89.7	63.7
Nizhnekamskneftekhim	142.4	145.1
Polyom	148.0	142.4
Tomskneftekhim	91.8	94.8
SIBUR-Tobolsk	319.5	345.5
Total	954.0	957.3

Russia's production of polypropylene fell slightly in January-August 2018 to 954,100 tons compared to 957,300 tons in the same period in 2017. SIBUR Tobolsk decreased production in August to 45,700 tons against 49,000 tons in July. The Tobolsk plant's production totalled 319,500 tons in the first eight months of 2018, down by 8% due to an early shutdown this year.

Nizhnekamskneftekhim produced 18,800 tons of polypropylene in August versus 18,600 tons a month earlier. Production in January-August at Nizhnekamskneftekhim decreased by 2% to 142,400 tons. Tomskneftekhim produced about 8,300 tons of propylene polymers in August against 9,800 tons in July, the fall was caused by the shutdown for scheduled maintenance works, which started on 19 July and lasted just under a month. The Tomsk plant's output exceeded 91,800 tons in the first eight months of 2018, compared to 94,800 tons a year earlier. Ufaorgsintez produced 88,500 tons in the period January to August 2018, against 85,100 tons in the same period last year, Neftekhimya at Kapotnya increased production by 40% to 89,700 tons and Stavrolen reduced volumes by 10% to 74,100 tons.

Russian Polypropylene Imports (unit-kilo tons)		
	Jan-Aug 18	***Jan-Aug 17***
Homopolymers	47.9	37.1
Block	32.2	28.9
Random	24.2	19.3
Other	26.9	23.4
Total	131.2	108.7

Russian PVC Production (unit-kilo tons)		
Producer	***Jan-Aug 18***	***Jan-Aug 17***
Bashkir Soda	173.5	152.9
Kaustik	62.3	61.3
RusVinyl	213.6	203.8
Sayanskkhimplast	173.1	159.2
Total	622.5	577.2

Russian polypropylene exports totalled 230,000 tons in the first eight months in 2018, unchanged from last year. Revenues from polypropylene exports rose to $275 million I the period January to August this year against $249 million in the same period in 2017. The three largest export destinations consisted of Belarus, China and Ukraine. In the first eight months in 2018 Russian polypropylene imports rose 21% to 131,800 tons. The import of homopolymers has grown by 29% to 47,900 tons whilst block copolymer imports rose 11.4% to 32,200 tons. Stat copolymer imports increased to 24,200 tons from

19,300 tons. External supplies of other propylene polymers for eight months amounted to 27,100 tons which is 16.3% higher than in 2017.

Russian PVC, Jan-Aug 2018

Russia's production of PVC rose in the first eight months of 2018 by 8% to 622,500 tons versus 577,400 tons in the same period last year. August production of unmixed PVC rose to 70,600 tons from 67,200 tons a month earlier. All plants raised their production, with Bashkir Soda Company accounting for the greatest increase.

Kazanorgsintez polycarbonate

Kazanorgsintez increased production of polycarbonates by 17% in January-July to 44,900 tons from 38,500 tons in 2017. The output of injection moulded grades doubled to 10,800 tons. At the same time, extrusion grades (34,100 tons) still remain the most important.

Kazanorgsintez produced 69,000 tons of polycarbonate in 2017 and is the sole Russian producer. Revenues from polycarbonate sales amounted to 6.98 billion roubles for Kazanorgsintez, which was 30% up on the same period in 2017. The share in the revenue of polycarbonate increased for Kazanorgsintez from 14.2% in the first half last year to 17.8%.

RusVinyl's output of resin reached 213,500 tons in the first eight months of 2018, up 5% whilst Sayanskkhimplast produced over 173,100 tons of resin compared to 159,400 tons a year earlier. Baskhir Soda Company increased production by 14% in the first eight months to production of resin exceeded 173,500 tons in January-August 2018, up by 14% year on year. Kaustik at Volgograd produced 62,300 tons versus 61,300 tons.

Imports of PVC into Russia dropped to 13,500 tons in the first eight months of the year, which is almost three times less than in 2017 when it totalled 42,000 tons. At the same time, Russian producers increased exports by 28%. Chinese producers shipped 11,500 tons in the first eight months versus 39,400 tons in the same period in 2017. Lower domestic demand and the weakening of the rouble against the dollar helped Russian producers to increase PVC export sales. Overall PVC exports from Russia rose from 61,300 tons in the first eight months in 2017 to 78,200 tons.

PX-PTA chain

Russian paraxylene & PTA imports

Paraxylene sales on the Russian domestic market amounted to 120,500 tons in the first eight months in 2018 versus 122,200 tons in the same period in 2017. Ufaneftekhim increased sales from 59,900 tons to 79,100 tons in the first eight months in 2018, whilst Gazprom Neft at Omsk reduced shipments from 62,400 tons to 41,500 tons. Gazprom Neft has concentrated more on export activity this year, helping to increase Russian exports of paraxylene by 26,000 tons in the first seven months. Ufaneftekhim sells most of its paraxylene to Polief, Kirishi exports almost all of its production and Gazprom Neft does both. Regarding future supply, Taneko at Nizhnekamsk started construction of the aromatics complex earlier this year, which will eventually result in the construction of a 147,000 tpa plant for paraxylene which is intended to be integrated into PTA and PET production.

Russian Paraxylene Domestic Sales (unit-kilo tons)		
Producer	***Jan-Aug 18***	***Jan-Aug 17***
Gazprom Neft	41.5	62.4
Ufaneftekhim	79.1	59.9
Kinef, Kirishi	0.0	0.0
Total	120.5	122.2

Russian PTA Imports (unit-kilo tons)		
Country	***Jan-Jul 18***	***Jan-Jul 17***
Belgium	2.1	24.5
India	4.8	23.7
China	75.6	58.7
South Korea	44.4	39.0
Poland	6.6	6.3
Thailand	12.0	17.0
Turkey	0.0	2.0
Total	145.4	145.6

Russian exports of paraxylene amounted to 92,000 tons in the first seven months in 2018 against 66,600 tons in the same period in 2017. Finland increased its share of Russian paraxylene exports in the first seven months, rising from 83% to 98%. Belarus reduced purchases of paraxylene from Russia in January to July 2018, falling from 12% to 1.5%.

Russian PTA imports, Jan-Jul 2018

Russian PTA imports totalled 145,400 tons in the first seven months in 2018 against 145,600 tons in the same period in 2017. China supplied 75,600 tons in the first seven months against 58,700 tons last year, whilst India reduced shipments from 23,700 to 4,800 tons. Thailand reduced exports to 12,000 tons from

17,000 tons. Russian importers include Alko-Naphtha at Kaliningrad and the Senezh PET plant near Moscow.

Russian Benzene Production (unit-kilo tons)		
Producer	***Jan-Aug 18***	***Jan-Aug 17***
Rosneft	96.6	82.2
Gazprom Neft	69.4	51.6
Lukoil	81.6	87.4
Magnitogorsk MK	37.8	39.1
Nizhnekamskneftekhim	156.0	135.2
Novolipetsk MK	5.3	26.7
Gazprom n Salavat	118.6	106.8
Kirishinefteorgsintez	44.1	46.5
Slavneft	48.8	47.8
Severstal	24.6	21.1
Bashneft	63.6	41.3
Ural Steel	5.9	8.8
Uralorgsintez	60.0	57.8
Zapsib	49.1	34.7
SIBUR	51.7	55.1
Total	913.1	842.1

Aromatics

Russian benzene production, Jan-Aug 2018

Russian benzene production rose to 913,100 tons in the first eight months in in 2018 against 842,100 tons in 2017. Rosneft plants at Angarsk and Novokuibyshevsk reported a rise in production in January to August whilst SIBUR and Lukoil both reduced volumes. Nizhnekamskneftekhim achieved a rise from 135,200 tons to 156,000 tons after modernisation, whilst Bashneft reported the largest percentage rise of 45% to 63,600 tons.

Russian benzene exports & domestic sales, Jan-Aug 2018

Gazprom neftekhim Salavat reduced the supply of benzene to domestic consumers 2.5 times in August to 3,000 tons. The reduction in shipments was due to the end of routine maintenance at the styrene plant, which meant that the Salavat plant required the benzene feedstock to be used captively rather than sold on the merchant market. In addition, the West Siberian MK reduced shipments by 29% in August to 4,400 tons due to an emergency stop of one of the coke batteries. At the same time Angarsk Plant of Polymers sold 1,900 tons of benzene on the domestic market in August after the planned repair, which is five times more than in July.

Russian toluene & orthoxylene, Jan-Aug 2018

In the first eight months in 2018 sales of toluene on the domestic market totalled 105,800 tons which is 14% less than in the same period last year. Gazprom Neft and Kirishinefteorgsintez were the two largest suppliers, with the main consumers distributed amongst the producers of fuels, paints and explosives.

Russian Toluene Domestic Sales (unit-kilo tons)		
Producer	***Jan-Aug 18***	***Jan-Aug 17***
Novopiletsk MK	0.0	0.1
Slavneft-Yanos	12.3	11.3
Severstal	3.0	3.3
Lukoil-Perm	16.3	12.2
Gazprom Neft	49.5	58.9
Zapsib	1.6	11.8
Kinef, Kirishi	21.9	21.6
Gazprom n Salavat	0.1	1.7
Others	1.1	2.6
Total	105.8	123.4

By contrast to the fall in toluene domestic sales, orthoxylene domestic sales rose from 82,800 tons in the first eight months in 2017 to 96,800 tons in the same period this year. Kamteks-Khimprom has increased purchases of orthoxylene this year to support the rise in phthalic anhydride production, which is the main factor behind orthoxylene purchases on the domestic market. Kamteks-Khimprom purchases orthoxylene from all three Russian producers, at Omsk, Kirishi and Ufa. Other consumers include Gazprom neftekhim Salavat followed by smaller purchasers such as Dmitrievsky Chemical Plant and Russian Paints.

Russian Orthoxylene Domestic Sales (unit-kilo tons)		
Producer	***Jan-Aug 18***	***Jan-Aug 17***
Gazprom Neft	52.8	53.5
Ufaneftekhim	19.8	37.7
Kinef, Kirishi	24.1	15.1
Total	96.8	82.8

Russian phenol, Jan-Aug 2018

Russian phenol production totalled 129,100 tons in the first eight months in 2018 against 121,700 tons in the same period in 2017. Kazanorgsintez made the largest increase in production, rising from 39,200 tons in January to August 2017 to 45,500 tons in the same months in 2018. Kazanorgsintez uses most of its phenol in the production of bisphenol A, where production has risen 17% this year, leaving only small volumes of phenol for merchant sales. Overall for the eight months in 2018 merchant market phenol sales in Russia declined from 87,100 tons to 77,200 tons, as both

Kazanorgsintez and Ufaorgsintez have focused more on internal processing into bisphenol A than commercial shipments. Novokuybyshevsk Petrochemical Company is the only phenol producer of the three in Russia that has no internal processing, and thus sells product to either to domestic or export markets. Novokuybyshevsk Petrochemical Company, owned by Rosneft, resumed shipment of phenol to the domestic market in September after the completion of planned repairs.

Omsk Kaucuk-cumene & phenol investments

Omsk Kaucuk has started preparatory work on the site for the construction of a new hydrogen production unit, which will be integrated into the cumene production chain. The capacity of the new installation will comprise 4,500 cubic metres per hour, and the resulting hydrogen will be sent for the production of isopropanol which is under planning by Omsk Kaucuk.

Russian Market Phenol Sales by Supplier (unit-kilo tons)

Producer	*Jan-Aug 18*	*Jan-Aug 17*
Novokuibyshevsk Petrochemical	29.3	33.8
Kazanorgsintez	4.0	7.5
Ufaorgsintez	36.9	41.8
Borealis	7.0	4.1
Total	77.2	87.1

The company has identified investment projects worth around 30 billion roubles, including the first stage of the technical re-equipment of phenol-acetone plants. This will be followed by the second stage involving the processing of acetone into isopropanol where the capacity of the new production unit will be 30,000 tpa. The third stage of the project is attached to the construction of a bisphenol production unit with a capacity of 118,000 tpa. The final stage will be the construction of a new unit for epichlorohydrin, in which it is planned to use waste glycerine as a raw material, thus comprising a renewable resource. After the launch of the new phenol-acetone units at Omsk Kaucuk Russian phenol exports are expected to rise. Omsk Kaucuk plans to put into operation an updated plant for phenol with the capacity of 90,000 tpa by 2019.

Synthetic Rubber

SIBUR-butyl rubber project with Reliance in India to be completed in December 2018

SIBUR is confident that it can complete the construction of butyl rubber plant in India by December 2018, followed by the halobutyl rubber project in 2019. The plant is located at Jamnagar and SIBUR has 25% in the joint venture in which the total cost is valued at around $330 million.

SIBUR and Reliance Industries Limited established the jv Reliance SIBUR Elastomers in 2012 for the construction of a butyl rubber production facility Reliance's site at Jamnagar. The project was originally intended for completion in 2014 but has faced numerous delays. The butyl rubber plant will be the first butyl rubber plant in India, possessing a capacity of 100,000 tpa when utilisation is maximised.

Nizhnekamskneftekhim-rubber project assessments

Nizhnekamskneftekhim has started public hearings on preliminary materials for environmental impact assessment of the new production of divinyl-styrene rubber. Divinyl styrene rubber for tyres is a new product currently being developed at Nizhnekamskneftekhim and plans to start producing about 60,000 tpa in 2020.

The company's plans include the production of five grades of divinyl styrene rubber, which will cover the needs of tyre consumers of all types and produce rubber of a new, fifth generation. Also, Nizhnekamskneftekhim is increasing capacities for isoprene rubbers from 270,000 tpa to 420,000 tpa, and halobutyl and butyl rubbers from 200,000 tpa to 220,000 tpa.

SIBUR to expand thermoplastic elastomer capacity at Voronezh

SIBUR has detailed a project schedule to expand the production of thermoplastic elastomers (TEPs) by 50,000 tpa at the Voronezh site, thus raising total capacity for Voronezhsintezkaucuk to a total of 135,000 tpa. The project has already been approved by Russian government safety body Glavgosexpertiza and approved by the investment committee of SIBUR. The current capacity of Voronezhsintezkaucuk for the production of TEPs is 85,000 tpa.

Preparations for the project are underway at Voronezh, where NIPIGAZ has been selected as the designer whilst the general contractor's role was allocated to Promstroy. Both of those contracts were awarded without tender. SIBUR's plans also include the expansion of the assortment line produced by TEP: including new brands for roofing and road construction, for compounds and adhesives. After the introduction of additional capacity for TEPs, SIBUR expects to be able to fully meet the long-term needs of the Russian

market by providing quality products and services to customers in various fields. The company also aims to continue to develop its presence in the European TEP market.

Russian Chemical Commodity Exports				
	Jan-Jul 18	Jan-Jul 18	Jan-Jul 17	Jan-Jul 17
Product	Kilo tons	USD Mil	Kilo tons	USD Mil
Ammonia	2,482	652	1,046	236
Methanol	1,081	346	686	189
Nitrogen Fertilisers	7,451	1,430	4,996	927
Potash	4,684	1,011	3,461	641
Mixed Fertilisers	6,909	1,964	4,354	1,124
Synthetic Rubber	596	995	590	1,075

SIBUR continues to undertake systematic work on decommissioning of equipment and industries that have exhausted their resources at Voronezh. As an illustration, in recent years the production of latex has been closed at Voronezh, and some rubber production lines has been cut. The freed-up areas are being used to install new equipment and create modern production facilities. In 2017 Voronezhsintezkaucuk increased rubber production by 14% to 186,000 tons. The plant produced 77,800 tons of thermoplastic elastomers in 2017), which was 6% up on 2016.

Russian Synthetic Rubber Exports (unit-kilo tons)		
Product	Jan-Jul 18	Jan-Jul 17
E-SBR	17.6	21.6
Block	18.5	22.4
SSBR	5.5	5.7
SBR	55.9	42.8
Polybutadiene	141.0	138.6
BR	72.2	62.5
HBR	75.7	65.6
NBR	18.5	12.2
Isoprene	170.4	153.8
Others	20.5	64.9
Total	595.9	590.0

Russian synthetic rubber exports, Jan-Jul 2018

Export volumes for Russian synthetic rubber in the first seven months in 2018 totalled 595,900 tons against 590,000 tons in the same period in 2017. Average product prices dropped in the first seven months from $1821 per ton to $1670 per ton. By product category, isoprene rubber exports totalled 170,400 tons in January to July 2018 against 153,800 tons. Isoprene rubber prices fell to $1436 per ton from $1492 in January to July 2017.

Export sales of both butyl rubber and halogenated butyl rubber from Russia rose in the first seven months from 62,500 tons in 2017 to 72,500 tons in the same period this year. Export prices of butyl rubber jumped in June and July, which meant that prices just surpassed levels in January to July 2017, rising from $1764 per ton to $1766 per ton.

Average prices for halogenated butyl rubber rose to $2290 per ton in the first seven months from $2046 per ton in the same period in 2017. Regarding export destinations, China was the largest recipient of Russian rubber shipments in the first seven months this year accounting for 10.2%, followed by Poland with 10.1% and India with 9.9%. Other leading markets included India, Hungary, Poland, and Mexico. Russian exports to Hungary could be affected later this year after the start-up of the new plant at Tiszaujvaros and the expected reduction in rubber imports.

Russian Methanol Production (unit-kilo tons)		
Producer	Jan-Aug 18	Jan-Aug 17
Shchekinoazot	319.7	335.5
Sibmetakhim	623.7	559.6
Metafrax	761.5	700.5
Akron	71.7	66.2
Azot, Novomoskovsk	194.1	156.4
Angarsk Petrochemical	2.2	2.1
Azot, Nevinnomyssk	73.6	80.3
Tomet	572.1	520.3
Ammoni	142.5	140.4
Totals	2761.1	2561.2

Methanol & related products

Russian methanol production, Jan-Aug 2018

Methanol production in Russia increased by 10% in the first eight months in 2018 to 2.761 million tons. The largest rise was recorded by Azot at Novomoskovsk which increased by 24% to 194,100 tons, followed by Sibmetakhim which increased production from 559,600 tons to 623,700 tons and Tomet which increased from 520,300 tons to 572,100 tons.

Demand for methanol on the Russian domestic market has strengthened slightly this year, with domestic sales totalling 1.035 million tons in the first eight months versus 0.990 million tons in the same period in 2017. Ammoni at Mendeleevsk increased domestic sales in January to August from 75,100 tons to 108,600 tons, Azot at Novomoskovsk increased from 55,900 tons to 92,100 tons and Tomet increased shipments

from 320,900 tons to 355,000 tons. These increases overrode the fall in sales by Metafrax, dropping from 244,900 tons in the first eight months to 190,800 tons.

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	***Jan-Aug 18***	***Jan-Aug 17***
Azot Nevinnomyssk	11.1	19.8
Azot Novomoskovsk	92.1	55.9
Metafrax	190.8	244.9
Sibmetakhim	240.2	231.2
Tomet	355.0	320.9
Shchekinoazot	34.6	38.7
Ammoni (Mendeleevsk)	108.6	75.1
Others	2.8	3.0
Total	1035.3	989.7

Nizhnekamskneftekhim remains the largest individual buyer of merchant methanol on the Russian market, even if it reduced purchases from 162,400 tons to 152,300 tons in the first eight months in 2018. SIBUR Togliatti increased purchases from 83,000 tons to 97,000 tons, whilst Novokuibyshevsk Petrochemical Company reduced inward shipments from 51,400 tons to 30.500 tons.

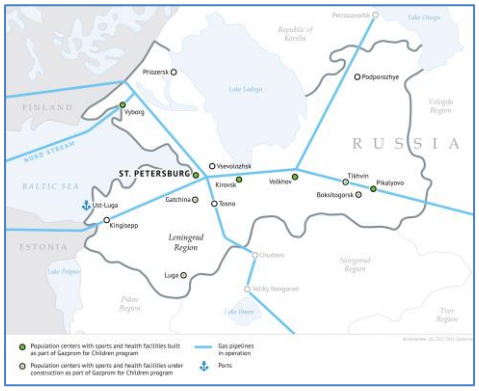
Shchekinoazot new methanol export routes

In September 2018, Russian Railways developed a new route for the transportation of methanol produced at Shchekinoazot where production has recently been increased to 900,000 tpa. The route options from the Kaznacheevka station of the Moscow Railway consist either to the Caspian Sea port of the North Caucasus Railroad or to the Bruzgi station of the Belarusian Railways. Brzugi is located on the border with Poland. The transportation option has been offered Shchekinoazot which is due to the increase in production volumes and the need to expand the geography of methanol supplies. At the Caucasus station, the cargo is transhipped to water transport for further transportation to Turkey, and through the Belarusian Railways the cargo would be sent to Europe.

In September, three trains were sent by Russian Railways with methanol from Shchekinoazot, each of which consisted of 67 carriages. Currently, the Moscow Territorial Center for Corporate Transport Services (ITFCFT) is working with Shchekinoazot on the development and launch of freight trains on a special schedule for departure and arrival.

Shchekinoazot Main Project Investments		
Product	***Capacity (ktpa)***	***Start-up date***
Methanol	450	2018
Ammonia	135	2018
Dimethyl ether	10	2018-2019
Sulphuric acid	200	2018
Methanol - M-500	500	2022

In addition to the projects to be completed and the commissioning of new facilities, Shchekinoazot has started the strategic development plan to construct the third methanol production unit which will have a capacity of 500,000 tpa (M-500). The design of the basic project has been completed, in addition to the feasibility study and environmental impact. The site is being prepared for future construction, whilst negotiations have been held with suppliers of long-cycle equipment, and companies have been identified to supply the primary reformer and the synthesis gas compressor. The date of the planned launch is the second quarter of 2022.



Gazprom gas prices for methanol project at Ust Luga

The Russian Ministry of Energy has taken the initiative to issue a permit to Gazprom to sell at gas at unregulated prices that will be used for methanol production in the North West Federal District. This will allow Gazprom and its affiliates to sell their gas at unregulated prices to gas consumers who for the first-time signed gas supply contracts after 1 January 2019 in the Northwest Federal Circle. This will entitle the potential consumer to produce methanol from natural gas for further export and to be able to guarantee a profit.

Wholesale gas prices are traditionally indexed on 1 July each year. The Ministry of Economic Development assumes indexation of wholesale gas prices for all consumers by 3.4% in 2018, 3.1% in 2019 and 3% in 2020. Plans exist in the North-West Federal District to build a plant for the production of methanol by Baltic Gas Chemical Company at Ust Luga. The capacity of the future plant will be 1.7 million tpa of methanol, consuming 1.6 billion cubic metres of gas from the Kohtla-Järve-Leningrad gas trunkline. The project, according to current

Russian Ministry of Economic Development, domestic gas price forecast			
Year	***2018***	***2019***	***2020***
Expected rise	3.4%	3.1%	3%

estimates, will require around $1.5 billion in investments and is expected to be put into operation in 2023. In addition to methanol production, the project includes construction of a terminal for methanol transhipment in the Baltic.

Russian ammonia & urea projects

Akron is increasing the capacity of the Ammonia-4 unit at a site in Veliky Novgorod to 2500 tons per day, 21% higher than the initial design capacity. The project for the modernisation of the unit is performed by the Danish company HTAAS costing around $25 million. Completion of the project and start-up operations are scheduled for mid-2020. The launch of the Ammonia-4 unit on the Novgorod platform took place initially in July 2016. With the commissioning of the fourth unit, the aggregate capacities of the ammonia production group increased to 2.6 million tpa and Akron to 1.9 million tpa.

Togliattiazot has decided to resume work on the project for the construction of a third urea unit, which had been idled. The project involves the launch of a new urea production facility on the TOAZ site with a capacity of 2,200 tons per day under license supplied from Casale. Technology for the prilling tower will be provided by the Russian company NIIK. Currently, on the site of Togliattiazot there are two urea units with the capacity of 480.000 tpa each. The plant could come into operation by 2020 raising total capacity to 1.760 million tpa.

For the construction of the enterprise, Baltic Gas Chemical Company acquired the assets of the Baltic Urea Plant project, owned by IST Holding. Legal entities that possessed property rights for land plots for the construction of a plant, a deep-sea terminal and a transport corridor from the plant to the terminal and the gas pipeline, as well as design and initial permits were purchased. Gazprom itself is also considering the possibility of creating a gas chemical production complex at Ust-Luga.

Nakhodka methanol & fertiliser project to receive Asian investment

The Asian Investment Fund Generations Fund (GenFund) has agreed to invest $440 million in the Nakhodka Mineral Fertiliser project (NHC). Nakhodka Fertiliser Plant is undertaking an investment project for the construction of a complex for the production of mineral fertilisers at Kozmino in the Nakhodka urban district of Primorsky Kray. The company will produce methanol and nitrogen fertilisers. It is planned that the plant will be commissioned in 2022. The capacity of the plant for ammonia and methanol will amount to 1.8 million tpa. Significant volumes of products from the Nakhodka complex when constructed are intended to be supplied to consumers in China. At present the project is at the design stage.

Metadynea starts new formalin plant

Metadynea (part of Metafrax) launched the Formalin-2 production plant at Orekhovo-Zuevo, near Moscow, at the start of October. The plant capacity comprises 91,000 tpa of 55% formalin which recalibrates to 54,000 tpa when formalin concentration is adjusted to 100%. New capacities will provide sufficient formalin for the Moscow region plant of the Metadynea, meaning that merchant purchases will not be necessary. The total project budget amounted to 1,205 billion roubles for the formalin plant, with construction starting in 2015. The production equipment for the project was provided by Johnson Matthey Formox AB, whilst the general contractor undertaking construction was a subsidiary of Metafrax LLC MK Himstroy.

Metafrax-AKM project receives further large-scale equipment

Metafrax received a further unit of large-capacity equipment for the Ammonia-Urea-Melamine (AKM) complex in September, consisting of a urea reactor from Italy. The reactor weighing 225 tons, with a length of 29 metres and a width of 4.5 metres was shipped to Gubakha in the Perm region on 18 September, after the cargo ship transported it from the Italian port Chioggia to the Russian port of Rostov. It was then shipped by river to Nizhnekamsk, where the unit was reloaded to the railway platform. In the second half of August an ammonia reactor weighing 230 tons was delivered to the site at Gubakha. Installation was to begin in October, as well as the installation of five compressors. Metafrax has thus far spent €24 million on equipment, in addition to the $30 million outlaid by Casale on the project.

Organic chemicals

Russian butanol production, Jan-Aug 2018

In the first eight months in 2018 Russian normal butanol production amounted to 94,200 tons, slightly higher than last year, whilst isobutanol production rose from 59,800 tons to 69,200 tons. In the first eight months in 2018 Russian sales of butanols on the domestic market amounted to 43,000 tons against 42,500 tons in the same period in 2017. The share of n-butanol in the total supply was 86%, and isobutanol 14%. Akrilat remained the largest consumer of butanols on the domestic market, taking 12,500 which was unchanged

from January to August 2017, whilst Dmitrievsky Chemical reduced inward shipments from 9,900 tons to 9,400 tons. Akrilat purchases most of its butanols from SIBUR-Khimprom, whilst Dmitrievsky Chemical Plant buys largely from Angarsk.

Russian Butanol Consumption (unit-kilo tons)		
Consumer	***Jan-Aug 18***	***Jan-Aug 17***
Akrilat	12.5	12.5
Dmitrievsky Chemical	9.4	9.9
Plant of Synthetic Alcohol	0.8	1.1
Volzhskiy Orgsintez	5.7	5.2
Roshalsky Plant of Plasticizers	2.1	1.0
Others	12.4	12.9
Total	43.0	42.6

Regarding domestic demand for butanols and other organic solvents the Russian market for dispersions has been affected this year by rising monomer prices. Foreign producers have not changed their import prices into the Russian market significantly despite the presence of higher raw material prices which has made competition harder.

Metafrax produced 2,100 tons of pentaerythritol in August which is 1% more than in July. In total, from January to August 2018, pentaerythritol production in Russia amounted to 15,540 tons which is 4% less than in the same period of 2017.

Russian phthalic anhydride production Jan-Aug 2018 & future prospects

Russian production of phthalic anhydride amounted to 70,300 tons in the period January to August 2018 against 65,000 tons in the same period in 2017. Kamteks-Khimprom increased production from 65,000 tons to 70,300 tons whilst Gazprom neftekhim Salavat increased production from 5,700 tons to 8,000 tons.

Russian Phthalic Anhydride Production (unit-kilo tons)		
Producer	***Jan-Aug 18***	***Jan-Aug 17***
Gazprom n Salavat	8.0	5.7
Kamteks	62.4	59.3
Total	70.3	65.0

The Russian market for phthalic anhydride is undergoing changes in regard to both import competition and future consumption patterns, which should affect Kamteks-Khimprom directly. The import competition has emerged from Belarus where a second line for phthalic anhydride production (with a capacity of 29,000 tpa) was opened on 15 September 2017 at Lida. This increased total capacity at Lida to 48,000 tpa, enabling the producer Lakokraska to sell more product into Russia. Depending on geography, it is evident that Lakokraska can compete successfully against Kamteks-Khimprom on both price and delivery.

Russian & Eurasian Organic Chemical Exports (unit-kilo tons)		
Product	***Jan-Jul 18***	***Jan-Jul 17***
N-Butanol	21.0	10.9
Iso-butanol	22.5	10.8
2-EH	14.3	16.6
Pentaerythritol	6.5	6.5
Phenol	11.4	8.9
Ethylene Oxide	6.8	9.9
Formaldehyde	10.7	12.2
DEG	8.6	14.4
MEG	21.3	39.0
Acetone	16.0	22.4
Acetic Acid	22.1	0.0
VAM	18.5	17.5
Butyl Acetate	11.9	23.5
Phthalic Anhydride	39.8	24.5

In the first seven months in 2018, the supplies of phthalic anhydride from Belarus to the Russian market increased by 61% to 8,470 tons which forms almost a quarter of the total product consumed by Russian plants. Russian consumption of domestic phthalic during this period decreased by 19% to 19,800 tons whilst exports increased by 13% to 23,900 tons.

Regarding demand patterns, domestic consumption of phthalic anhydride is expected in 2019 following the launch of the new SIBUR plasticizer production plant, dioctyl terephthalate (DOTP), with a capacity of 100,000 tpa. The introduction of PTA based DOTP at Perm will compete against DOP where declining consumption rates are expected due to safety concerns, and this is expected to impact upon the demand for phthalic anhydride. In addition to the usage of PTA in DOTP production, large volumes of 2-EH are required and both those products can be provided internally by SIBUR.

After commissioning the DOTP project, the processing of phthalic anhydride in Russia is expected to fall significantly. Kamteks-Khimprom may have to increase exports and compete with the Belarussian producer Lakokraska which is already on the European market. Lakokraska has the advantage of location for sales into Europe whilst Kamteks-Khimprom benefits from domestically produced orthoxylene, but generally additional volumes on the market are likely to supress phthalic prices.

Russian organic chemical trade, Jan-Jul 2018

Butanol exports from Russia increased in the first seven months this year, although remain lower than the volumes recorded prior to the start-up of the Salavat acrylic acid complex in 2017. Normal butanol export shipments rose to 21,000 tons versus 10,900 tons in the first seven months in 2017, whilst isobutanol volumes increased from 10,800 tons to 22,500 tons. Exports of 2-ethylhexanol (2-EH) amounted to 14,300 tons in the first seven months in 2018, down from 16,600 tons in 2017. Phthalic anhydride exports totalled 35,800 tons in January to July 2018, up from 30,900 tons, whilst butyl acetate shipments dropped to 11,900 tons from 23,500 tons. Pentaerythritol exports from Russian stayed the same as in 2017 at 6,500 tons.

Other products

Eurasian Imports of MDI 2018 (unit-kilo tons)		
Country	***Jan-Jul 18***	***Jan-Jul 17***
Belgium	10.7	14.8
Hungary	4.0	4.1
Germany	11.9	31.9
Spain	0.2	1.7
Italy	0.1	1.6
China	10.8	11.4
South Korea	0.9	3.7
Netherlands	23.1	21.2
Poland	0.1	0.1
Lithuania	0.1	0.1
Portugal	0.1	0.0
Saudi Arabia	22.2	0.2
UK	0.1	0.1
Turkey	0.3	0.2
Japan	1.4	1.1
Total	86.1	92.2

Russian TDI-MDI imports, Jan-Jul 2018

Russia imported 25,300 tons of TDI in the first seven months in 2018, valued at $98.3 million. Around 40% of supplies came from Germany, followed by Hungary and Saudi Arabia.

MDI imports into the Eurasian Customs Union totalled 86,100 tons in the first seven months in 2018, down from 92,200 tons in the same period in 2017. Most product was delivered to Russia. The major change in supplies in 2018 came from the increase in deliveries from Saudi Arabia, rising to 22,200 tons against only 200 tons in the same period last year. By contrast, Germany reduced deliveries to Russia from 31,900 tons to 11,900 tons.

Epoxy resins & polyurethane projects Tatarstan

At the end of September German company Polychem Systems launched a polyurethane products plant at Naberezhnye Chelny in Tatarstan in which €1 million was invested. The first unit will be followed by two more units, raising capacity to 6,000 tpa. In the future, Polychem Systems plans to build a polyester plant in Chelny.

Production of epoxy resins is being considered in Russia for a site at the Kamsky industrial park at Naberezhnye Chelny in Tatarstan, by the company Russian company Himresurs. Investments in the project will exceed 110 million roubles. The project has contracted the main equipment from Russian and Austrian suppliers, which will lead to a plant with a capacity of 300 tons of resin per month.

Aerosolex-DME production update

Aerosolex has achieved required 99.999% quality standards in the production of dimethyl ether (DME) at its new plant at Dzerzhinsk and has begun shipping to consumers. The capacity of the enterprise is 10,000 tpa which required about two years to construct. The project provides a range of stability of operation from 60 to 120% of the nominal power. According to the plan, by the end of 2018 the plant will attain 50% of capacity, and in 2019 it is planned to fulfill the design targets. Main consumers include manufacturers of various aerosols, manufacturers of building materials (installation foams and thermal insulation). One of the potential consumers of Russian high-purity DME is the corporation TechnoNikol, which could potentially consume up to 5,000 tpa of DME.

Russian Caustic Soda Market (unit-kilo tons)		
	Jan-Jul 18	**Jan-Jul 17**
Production	718.9	698
Exports	162.9	142.9
Imports	12.5	11.1
Market Balance	**568.5**	**566.2**

Russian caustic soda market, Jan-Jul 2018

From January to July 2018, consumption of caustic soda almost corresponded to the same period of 2017 and amounted to 556,080 tons. Imported caustic increased during the first seven months of 2018, 12,500 tons of caustic soda were imported, which is 13% more than in the comparable period of 2017. The main category of imported caustic is solid product, which is imported mainly from China. Liquid caustic soda is imported mainly from Finland, although the import volumes are

insignificant. The share of imported caustic soda in consumption in the Russia increased from January to July 2018 by 3%.

Ukraine

Ukrainian PVC imports, Jan-Aug 2018

Imports of PVC to Ukraine declined by 32% in the first eight months of 2018 compared to the same period of 2017 and amounted to 49,100 tons against 48,000 tons. Imports from the US amounted to 31,300 tons against 32,900 tons in January to August 2017, whilst imports of European PVC to Ukraine amounted to 16,500 tons against 25,600 tons.

Karpatneftekhim-maintenance in November

Karpatneftekhim has scheduled a stoppage for the production of both HDPE and PVC for maintenance in November. The shutdown is scheduled from 5 November and is expected to last until 4 December. This is the first stoppage for maintenance since it restarted operations in July 2017. Capacities at Kalush include 300,000 tpa of PVC, 200,000 tpa of caustic soda, about 180,000 tpa of chlorine, as well as 250,000 of ethylene and 100,000 tpa of polyethylene.

Ukrainian Polypropylene Imports (unit-kilo tons)

Category	*Jan-Aug 18*	*Jan-Aug 17*
Homo	64.7	62.3
Block	8.4	8.9
Random	11.4	8.8
Other	1.5	1.4
Total	86.0	81.4

Ukrainian polypropylene imports, Jan-Aug 2018

Polypropylene imports into Ukraine rose 7% in the first eight months in 2018 to 86,000 tons against 81,100 tons in the same period in 2017. Homopolymer imports rose to 64,700 tons against 62,300 tons, were unchanged at 44,000 tons, whilst block copolymers drooped to 8,400 tons against 8,900 tons. Random copolymer imports rose to 11,400 tons against 8,800 tons.

Ukrainian DOP Imports (unit-tons)

Supplier	*Importer*	*Jun-18*	*Jul-18*	*Aug-18*
Boryszew	Lvivmetalplast	177.7	202.2	203.6
	Ukrainian chemical network	44.2	23.1	45.7
	Albert Kievguma	0.0	0.0	20.7
DEZA	KS Chemtrade	156.4	159.5	0.0
	Nanocable	0.0	24.1	0.0
LG Chem	Ukrainian chemical network	23.1	20.0	0.0
Larex Chemie	KS Chemtrade	0.0	15.0	0.0
Total		401.4	443.8	270.0

Ukrainian chemical news, Jan-Aug 2018

The Ukrainian chemical industry increased by 33.8% in value terms in the first seven months in 2018, helped significantly by the restart of Karpatneftekhim. This has helped reverse a trend of declining significance for the Ukrainian chemical industry, where the share of products in total Ukrainian exports fell from 2012 to 2017 by 6.2% to 4.7%. Moreover, in 2017 compared to 2012, exports of chemical products decreased 3.4 times (from $5 billion to $1.4 billion). Numerous factors lie behind the decline, and thus the government is being pressed to draw up a comprehensive strategy for the development of the chemical industry in Ukraine.

Ammonia transport company Ukrhimtransammiak in January-June 2018 increased its net profit by 44.8% up to 100.72 million hryvnia ($3.6 million), after net income from sales increased by 35.5% to 757.9 million hryvnia. Ukrhimtransammiak manages the Ukrainian part of the Togliatti-Gorlovka-Odessa ammonia pipeline. The total length of the ammonia pipeline is 2418 km, of which 1018 km is located in Ukraine.

Azot at Severodonetsk in east Ukraine restarted urea and ammonia production in August after completing commissioning work, whilst also plans are being set out for the launch of workshops for the production of ammonium nitrate and other auxiliary structural units. This will make it possible to produce up to 36,000 tons of urea, and 10-15,000 tons of ammonia aqueous per month.

Belarus

Belarussian chemical production, Jan-Aug 2018

LDPE production in Belarus amounted to 42,800 tons in the first eight months in 2018, 10% more than in 2017 when it was 38,900 tons. Polymir stopped the second line of the production of LDPE for maintenance at the start of October. The capacity of the second line is 65,000 tpa. The Belarusian producer plans to reach full capacity utilisation by the end of November, after recovering from the accident in 2016. Polymir also produced 24,400 tons of acrylic fibre in the first eight months in 2018. At the end of eight months, Polymir processed 169,000 tons of raw materials. The capacity utilisation rate was higher than planned, 68.9% against 65.9%.

Azot Grodno Production (unit-kilo tons)		
Product	***Jan-Aug 18***	***Jan-Aug 17***
Methanol	51.3	53.3
Caprolactam	83.3	73.3
Polyamide primary	75.8	65.7
Polyamide filled	8.4	8.1
Ammonia	693.4	773.0
Urea	663.6	761.3
Fertilisers	503.4	549.5
Fibres	27.8	25.6

Belarussian petrochemical trade, Jan-Jul 2018

Orthoxylene imports into Belarus have increased significantly in 2018 to support the increase in phthalic anhydride production. For the first seven months imports of orthoxylene, all of which came from Russia, amounted to 15,464 tons against 2,338 tons in the same period last year. At the same time imports of paraxylene dropped from 10,293 tons to 4,457 tons in January to July 2018. Belarus traditionally consumes around 5,000 tons per month of paraxylene, sourced either through domestic production and imports from Russia. Polymir at Novopolotsk needs to import around 100,000 tons per month of naphtha.

Belarussian polymer trade, Jan-Jul 2018

Imports of PVC into Belarus rose in the first seven months of 2018 by 5% to 19,900 tons from 18,900 tons a year earlier. Polyethylene imports totalled 81,887 tons in the first seven months in 2018 against 77,657 tons in the same period in 2017. LDPE imports dropped to 35,029 tons against 46,295, whilst HDPE imports rose to 32,642 tons from 26,158 tons.

Overall imports of propylene polymers amounted to 58,300 tons in January-July 2018, compared to 54,200 tons in the same period in 2017, with propylene copolymers accounting for the largest increase in demand. Homopolymer imports totalled 39,300 tons in the first seven months of 2018, up by 5.6% whilst copolymers rose to 19,000 tons versus 17,000 tons

Regarding export activity, Belarus shipped 46,473 tons of polyethylene in the period January to July 2018 versus 39,918 tons in 2017. Most of the polyethylene exported consisted of LDPE. Polyamide exports totalled 36,530 tons in the first seven months versus 33,010 tons last year. The largest market for Belarussian polyamide exports was China, consuming 11,680 tons against 11,940 tons in the same period in 2017. Russian polyamide imports from Belarus dropped to 3,644 tons in January to July 2018 against 4,014 tons in the same period in 2017.

Belarussian Organic Chemical Exports (unit-kilo tons)		
Product	***Jan-Jul 18***	***Jan-Jul 17***
Acrylonitrile	25.1	28.4
Caprolactam	4.5	6.5
Phthalic anhydride	28.3	10.0
Methanol	13.0	3.3

Belarussian organic chemical trade, Jan-Jul 2018

Belarussian acrylonitrile exports totalled 25,100 tons in the period January to July 2018 against 28,400 tons in the same period in 2017. The largest destination for Belarussian exports was Turkey. Average prices for Belarussian acrylonitrile exports rose to $1620 per ton in the first seven months this year against $1323 per ton in 2017.

Belarussian Methanol Market (unit-kilo tons)		
	Jan-Jul 18	***Jan-Jul 17***
Production	43.3	45.7
Exports	13.3	3.3
Imports	54.8	53.1
Balance	84.8	95.5

Phthalic anhydride exports rose from 10,000 tons in January to July 2017 to 25,100 tons in the same period in 2018, with average prices rising from $887 per ton to $897 per ton. Belarus exported 6,467 tons of phthalic anhydride to Russia in the seven months in 2018 against 4,024 tons in the same period in 2017. Russian consumers paid more than the average price, importing Belarussian phthalic at $913 per ton. The second largest destination in the first quarter this year was India, taking 4,118 tons at $883 per ton.

In other areas of chemical trade, methanol export shipments amounted to 13,000 tons in January to July 2018 against 3,279 tons in the same period in 2017. Average methanol export prices rose to $377 per ton in the first seven months against $318 last year. Methanol imports into Belarus totalled 54,801 tons in the first seven months, at $304 per ton, against 53,100 tons in the same period in 2017 at $301 per ton. Methanol consumption in the first seven months totalled 70,100 tons against 66,400 tons in the first seven months in 2017.

Due to the increase in phthalic anhydride production at Lida, Belarus reduced imports to 2,201 tons in the first seven months against 15,180 tons last year. PTA imports in the first seven months this year dropped sharply against 2017, dropping to 14,040 tons from 40,653 tons last year. Ethylene glycol imports dropped to 34,846 tons from 43,408 tons in the first seven months in 2017.

Mogilevkhimvolokno to launch polyester fibre plant

Mogilevkhimvolokno aims to launch production of polyester fibres before the end of 2018 with a capacity of 50,000 tpa. The production of polyester fibre by direct moulding is to be undertaken as part of the first phase of the project Polyester Production Complex. The new line for the production of chemical fibres is based on the existing chemical shop No. 2 of organic synthesis. Also, the new production will ensure the production of PET in the amount of 35,000 tpa. The total investment in the project exceeded $50 million.

Belarussian PTA Imports (kilo tons)

Country	*Jan-Jul 18*	*Jan-Jul 17*
Russia	1.2	3.2
Belgium	0.5	4.4
South Korea	5.3	23.8
Poland	5.3	23.8
Others	0.1	1.0
Total	13.1	26.3

The second phase of the project is planned for the timeframe 2020-2024, and includes the modernisation of the existing PET production facility and the transfer from DMT to PTA. This will be followed by the production of polyester fibres (including bicomponent fibres) and non-woven materials. Mogilevkhimvolokno is capable of producing 138,250 of DMT, 105,000 tpa of textile PET and 80,000 tpa of food grade PET.

Central Asia/Caucasus

SOCAR Polymer to start polyethylene production by December 2018

SOCAR Polymer has almost completed the construction and installation work on the HDPE unit, attaining 98% of the complete project schedule by the middle of September. The plant's design capacity is 120,000 tpa where 12 types of low-pressure polyethylene will be produced. The launch of the plant is scheduled for December 2018.

SOCAR Polymer-polypropylene plant

SOCAR Polymer has begun exporting polypropylene, the first shipments sent to Turkey. By the end of 2018, the company aims to have exported around 15,000 tons of polypropylene. By the first week of October the polypropylene plant had produced around 6,000 tons. The plant was built by the Italian companies Tecnimont and Kt-Kinetics Technnology, part of the MaireTecnimont under the EPC contract. These same companies are now continuing the construction of polyethylene production.

The capacity of the polypropylene plant is 180,000-184,000 tpa, which will be accompanied soon by the polyethylene plant with a capacity of 120,00 tpa. The start of the production of propylene polymer was carried out in July this year. SOCAR Polymer was established by SOCAR with an authorized capital of $100 million. Currently, the share of SOCAR in the capital of the company is 57%. The total investment in both projects will amount to $816 million of which about 60% of the financing ex is covered by a loan from Gazprombank and the remaining 40% is invested by SOCAR.

SOCAR OGPC Petrochemical Capacities (unit-ktpa)

Product	Capacity (ktpa)
Propylene	130
Benzene	42
Polyethylene	600
Butylene-1	32
Hexene-1	21

SOCAR-OGPC, engineering design completed

SOCAR has completed the initial engineering and design of a new gas processing and polymer complex (OGPC) in the Garadagh district of Baku. The complex is to be located at Sangachal based on a site of 305 hectares, of which 250 hectares will be allocated only for construction. The cost of the project, according to initial estimates, is about $4 billion.

Currently, negotiations are underway with foreign investors on construction. Initial engineering and design (FEED) of the complex has already been completed. The complex will produce 9.1 billion cubic metres of gas, 130,00 tpa of propylene, 42,000 tpa of benzene, and 600,000 tpa of polyethylene. In addition, 32,000 tpa of butylene-1 and 21,000 tpa of hexene-1 obtained will be used for the internal needs of the complex. Technologies from Technip, Axens, Sinopec Tech and Univation will be used.

SOCAR-urea plant to be launched by end of 2018

SOCAR is preparing to launch urea production before the end of 2018. To date, construction and installation work has been completed 100%, and most of the equipment has been installed. The capacity of the plant is 650-660,000 tpa which is enough to meet domestic demand and organise the export of products. Around two-thirds of the production will be sent to Turkey. The needs of the local market of Azerbaijan in urea consumption are estimated at 150,000 tpa. With the commissioning of the enterprise, demand is expected to increase, at least up to 200,000 tpa. Licensors are the Dutch Stamicarbon and Danish Haldor Topsoe, the project management consultant is Finnish Neste Jacobs Oy.

Uzbek chemical investments

Uzbekistan is planning to establish a major gas chemical complex based on the deposits in the Karakalpakstan area, as part of a cluster that intended to supply polymers to local plastics processing plants which are yet to be developed. The country plans to construct the new unit which will have a 1.3-1.5 billion cubic metres of gas processing capacity, using methanol to olefins technology. The cluster, using the methanol to olefins technology, could provisionally include capacities for polypropylene of up to 250,000 tpa of polypropylene, 100,000 tpa of PET and ethylene vinyl acetate, 100,000-150,000 tpa of ethylene glycol, and 100,000 tpa of ethylene-propylene elastomer. The €3.85 billion project, still in the early stages of planning, is being led by Uzbekneftegaz and has already received interest from TAIF in Tatarstan.

Uzbek petrochemical targets

Uzbekistan plans to increase production of polypropylene by 25% in 2019, whilst production of polyethylene by 2020 will grow by 4.1 times. In 2018 Uzbekistan expects to produce 66,000 tons of polypropylene from the capacity of 83,000 tpa. Polyethylene output will grow from 125,000 tons in 2015 to 512,000 tons in 2020. The increase in production is due to the output of the Ustyurt gas chemical complex at the design capacity.

Uzbek petrochemical targets

- Polypropylene production 2018-66,000 tons
- Polyethylene production to rise from 125,000 tons in 2015 to 512,000 tons in 2020
- In addition, new gas-chemical facilities are planned connected to plastics processing

Ustyurt Gas-Chemical is able to process 4.5 billion cubic metres of natural gas annually, followed by polyethylene of various densities (387,000 tpa), polypropylene (83,000 tpa) and naphtha (102,000 tpa). In 2017, more than 1.8 billion cubic metres of ethane and commercial gas were sent to the main gas pipelines from Ustyurt Gas-Chemical, and more than 87,500 megawatts of electricity were transferred to the power system of the Uzbekenergo. Pyrolysis distillate from the Ustyurt Gas-Chemical Complex was sent to produce gasoline at the Bukhara refinery.

Kazakh Neftekhim restarts polypropylene plant

Kazakh Neftekhim, the only polypropylene producer in Kazakhstan, resumed production in September after a scheduled maintenance. The plant had completely resumed production and shipments of polypropylene to consumers by 17 September, after the scheduled turnaround. The plant was shut down on 25 July and was planned to be idle for one month but ended up idle for around seven weeks.

Turkmenbashi polypropylene plant restarts

The Turkmenbashi complex of oil refineries (TKNPZ) resumed production of polypropylene on 8 October after scheduled preventive maintenance was started on 20 September. The plant capacity is 100,000 tpa, which produced 84,100 tons in 2017.

Kiyanly gas-chemical complex in Turkmenistan to be opened officially on 17 October

The gas chemical complex for the production of polyethylene and polypropylene at Kiyanly in Turkmenistan will be officially opened on 17 October. Investment in the project is estimated at more than $3.4 billion. Partners include Toyo Engineering, a consortium of South Korean companies LG International Corporation and Hyundai Engineering Corp. License agreements for the project were made with Toyo, INEOS, Lummus and Grace. At the facilities of the complex it is planned to process 5 billion cubic metres of gas per annum and produce 381,000 tpa of polyethylene and 81,000 tpa of polypropylene.

Relevant Currencies

Czech crown. Kc. $1= 22.4. €1 = 25.4: Hungarian Forint. Ft. $1 = 279.2 €1 = 322.2: Polish zloty. zl. $1=3.70. €1 =4.28; Ukrainian hryvnia. $1 = 31.4 €1 = 26.9: Rus rouble. $1 = 66.3 €1= 76.6

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