

CIREC MONTHLY news

Chemical Industry Reporting for Russia, regional partners, and Central Europe

Edited by Andrew Sparshott CIREC Limited

Telephone: +441202 00319 Email: support@cirec.net Web: www.cirec.net

**Russia-Ukraine-Belarus-Kazakhstan-Uzbekistan-Azerbaijan
Czech Republic-Hungary-Poland-Romania-Serbia-Slovakia**

Issue No: 361, 5 January 2021

Key points from Issue 361

Central European petrochemical markets

- PKN Orlen embarks on ambitious strategy to move towards a more diversified business by 2030
- Unipetrol changes name to Orlen Unipetrol as part of branding
- Spolana replaces lignite with gas in order to improve environmental performance
- MOL achieved 70% of polyol complex construction in December 2020

Russian chemical production

- Chemical production rose 6.3% in Russia in the first ten months in 2020
- Russian ethylene production totalled 3.445 million tons in the first ten months in 2020 against 2.464 million tons in the same period in 2019
- Russian propylene production amounted to 2.195 million tons in the first ten months in 2020 against 1.956 million tons in the same period in 2019
- Russia produced 3.689 million tons of methanol in the first ten months in 2020 against 3.649 million tons in same period in 2019

Russian chemical trade

- Russian paraxylene exports from Russia amounted to 128,300 tons in the first ten months in 2020 against 146,700 tons in the same period in 2019
- PTA imports into Russia totalled 239,900 tons in the first ten months in 2020 against 310,600 tons in the same period in 2019
- Metafrax produced 937,800 tons of methanol against 891,500 tons in January-October 2019 whilst Sibmetakhim at Tomsk reduced production from 714,600 tons to 699,300 tons
- MDI imports into Russia amounted to 129,700 tons in the first ten months in 2020 against 126,200 tons in the same period last year with costs dropping from \$192.8 million to \$174.8 million
- Export shipments of Russian methanol totalled 1.832 million tons in the period January to October 2020 against 1.733 million tons in the same period in 2019

Project news

- Nizhnekamskneftekhim has started the installation of six furnaces at the new EP-600 project
- SIBUR and Gazprom are close to signing a long-term contract to supply 1 million tpa of LPGs from Gazprom's Amur gas processing plant (GPP) to the proposed Amur Gas Chemical Complex
- Caspian Innovation Company is assessing plans for the construction of a gas-chemical complex involving the production of plastics in the Astrakhan region
- Karpatneftekhim has received permission to build a butadiene extraction plant at Kalush with a capacity of 45,000 tpa

CENTRAL & SOUTH EAST EUROPE

PKN Orlen change in strategic direction

PKN Orlen is embarking upon radical transformation from an oil and refinery group to an energy company whereby investments of around zł 140 billion (€31 billion) have been earmarked and analysed

Polish PTA Exports Jan-Oct 2020		
Country	Kilo tons	€ million
Austria	1.9	1.2
Belarus	24.1	12.7
Italy	2.8	1.8
Germany	250.5	128.9
Lithuania	9.3	4.4
Turkey	11.4	4.6
Others	26.2	12.9
Total	326.4	166.4

for new areas of development over the next decade. The diversified business is aimed at providing financial stability and reducing the dependency on refining. The programme Orlen2030 is being designed to create an effective, integrated company based on clean technologies and zero-emission energy sources.

Around zł 85 billion of investment funds is to be allocated for projects related to the construction of renewable energy sources and modern, low-emission petrochemicals. Another zł 55 billion has been identified as increasing the efficiency of current assets over the next decade.

PKN Orlen has identified a provisional target for the petrochemical division that it could comprise for around 50% of group profits by 2030. The intention is to expand capacities in olefins and other base products, as well as to strengthen the company's position in polymers. It will also set up a new business line under the petrochemical division focused on recycling

PKN Orlen Production (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
Ethylene	407.5	412.1
Propylene	375.9	369.6
Butadiene	50.1	52.4
Toluene	8.8	10.3
Phenol	36.0	37.6
Polyethylene	290.8	242.6
PVC	286.9	289.4
Polypropylene	233.1	233.5

and biomaterials. The share of specialised, high-margin products, such as phenol and aromatic derivatives, could increase in the group's portfolio from the current 16% to approximately 25%. Moreover, the Orlen Group hopes to achieve recycling capacities by 2030, primarily of plastics which in volume could rise to 400,000 tpa.

PKN Orlen production, Jan-Oct 2020

The Orlen Group reduced production of ethylene at Plock in the first ten months to 407,500 tons against 412,100 tons in the same period in 2019. Propylene production

rose slightly from 369,600 tons to 375,900 tons. Although naphtha-based propylene production was down the metathesis plant helped compensate for the decline. In other parts of Orlen's Polish assets, polyethylene and polypropylene production under Basell Orlen Polyolefins rose slightly in January to October 2020 whilst PVC production at Anwil's Wloclawek plant dropped slightly.

Unipetrol change of name

Unipetrol changed its name to Orlen Unipetrol from 1 January 2021 as an important element of strengthening the global recognition of the Orlen brand. Orlen Group's revenues come from outside Poland and a single, consistent image or brand is required. Unipetrol is the largest refining and petrochemical concern in the Czech Republic, employing over 4,800 people. The company manages the refineries in Litvinov and Kralupy, the company Spolana, and is also the only producer of PVC and caprolactam on the Czech market.

Regarding PKN Orlen's Olefin 2 installation a basic overhaul will be undertaken during the shutdown period lasting from 12 April 2021 to 10 June 2021. PKN Orlen concluded a contract with Naftoremont-Naftobudowa in July last year, part of the Polimex Mostostal group, for the scheduled repair of the Olefin 2 installation at Plock. The contract is scheduled for completion on 30 September 2021.

Spolana-mercury removal and lignite to gas

Spolana has started removing 160 tons of waste mercury from its site, after chlorine production using mercury was

stopped in 2017. Spolana has also put into operation a new heating plant for the production of steam which is necessary for the operation of the complex at Neratovice. The value of the investment amounted to Kc 200 million (€7.6 million) where the new natural gas boiler room has replaced the existing lignite-fired heating plant. The transition from lignite to natural gas and the installation of modern boilers are intended to significantly reduce the number of substances released by Spolana into the air. Sulphur dioxide emissions

are forecast to decrease by 99%, particulate matter and nitrogen oxides by 90% and carbon monoxide by 60%.

Czech Caprolactam Exports (unit-kilo tons)		
Country	Jan-Oct 20	Jan-Oct 19
Belgium	3.9	2.9
Germany	10.9	6.0
Switzerland	2.5	4.3
Italy	11.5	11.8
Netherlands	1.0	0.8
Poland	1.6	3.4
Slovenia	1.4	2.1
Others	0.1	0.0
Total	32.8	31.6

After switching from lignite to natural gas and installing modern boilers, there has already been a significant decrease in the volume of substances emitted into the atmosphere. Spolana includes capacities of 135,000 tpa of PVC and 150,000 tpa of VCM.

Synthos-production & power resources

Synthos produced 233,100 tons of synthetic rubber in the first three ten months in 2020 against 233,500 tons in the same period in 2019, although demand has been affected by the pandemic. Tyre production in Poland dropped from the equivalent of 383,700 tons in January to September 2019 to 320,800 tons in the same period in 2020. Market

estimates indicate a fall in tyre consumption in Poland by around 20%.

Synthos Production (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
Polystyrene	54.5	53.2
EPS	88.0	92.2
Synthetic Rubber	233.1	233.5

Regarding energy interests Synthos has signed a Memorandum of Understanding with Vattenfall and to explore opportunities within the offshore wind industry in Poland and the Baltic states. Furthermore, Synthos Green Energy (SGE) has announced the completion of a

deployment feasibility study for the implementation of a fleet of GE Hitachi Nuclear Energy BWRX-300 small modular reactors in Poland. The study, which was prepared by Exelon Generation, will help the Synthos Group estimate how many reactors would need to be built to make the most of the cost effect of serial SMR production.

Synthos Green Energy sees SMR technology as an opportunity for the deep decarbonisation of the Polish industry and heating sector, and in 2019 signed a cooperation agreement with GEH for the construction of the BWRX-300 reactor in Poland. Synthos in October began a regulatory dialogue with the Polish National Atomic Energy Agency on the possibility of building the BWRX-300 in Poland, with the support of Exelon Generation, GEH and Finnish Fortum Power and Heat Oy.

Poland has the largest reserves of coal in Europe, and in 2018 coal generated 78% of the country's electricity. The Polish government in September unveiled a plan to build six new nuclear power units by 2040, with the first 1-1.6 GWe unit to be commissioned in 2033, as the country transitions to a clean energy economy.

Serbian Chemical Exports (unit-kilo tons)		
Product	Jan-Sep 20	Jan-Sep 19
Polyethylene	83.2	69.9
Polypropylene	10.3	9.6
Styrene Butadiene Rubber	15.5	13.1
Methanol	87.8	83.1
Acetic Acid	67.0	51.5

Petrohemija-increase in polyethylene exports

HIP Petrohemija increased polyethylene exports from Serbia to 83,200 tons in the first three quarters in 2020 against 69,900 tons in the same period in 2019. Due to the shortages of naphtha feedstock in Serbia HIP Petrohemija halted production last year on a couple of occasions at the ethylene plant at Pancevo and the synthetic rubber plant at Elemir. Butane supplies could increase to the plant after the expansion at the NIS

refinery at Pancevo which could take place in 2021 or 2022.

BorsodChem-new aniline plant start-up and green strategy

BorsodChem is targeting a third-quarter 2021 start-up for its new aniline plant in Hungary. The new plant with a capacity of 300,000 tpa at Kazincbarcika will help to reduce the company's reliance on imports of aniline from parent Wanhua Chemical. The new facility will produce feedstock for company's 300,000 tpa MDI unit. Besides isocyanates BorsodChem's goal is to become a PVC market leader in Central and East Europe developing new and profitable market opportunities across the region. The company looking to expand its production capacity and invest in new plant developments, increasing efficiency while also

addressing environmental concerns. BorsodChem has selected Huawei to provide energy-saving technology with a view to pursuing a green strategy on production.

BorsodChem began constructing a new data center. Huawei, together with Intelligent Power Solutions, provided the company with a best-in-class, state-of-the-art green smart modular data centre. The modular data centre's construction period was substantially shortened, ensuring uninterrupted manufacturing at our plants. By simplifying the data centre's operation, BorsodChem will also drive down operational costs in the future.

PCC Rokita-costs and sales

Despite weak results in the first three quarters in 2020 PCC Rokita was able to benefit from a 12.4%

PCC Rokita's financial performance (zł million)		
<i>Description</i>	<i>Jan-Sep 2020</i>	<i>Jan-Sep 2019</i>
Sales	1045.679	1123.647
Total profits	213.672	282.509
Margins on sales	20.4%	25.1%
Operating profits	96.447	878
EBITDA	206.950	214.759
Net profit	59.412	79.360

reduction in costs down to zł 475.9 million (€106.9 million). Around 53% of group costs were derived from raw materials including the purchase of propylene, benzene, ethylene oxide and propylene oxide.

In terms of sectors, the EBITDA profit of the polyurethanes division for PCC Rokita increased by zł 20.2 million in the

first three quarters in 2020 against the same period in 2019. This increase was due partly to lower prices for propylene oxide where discounts were given during the middle months in 2020. Lower prices meant that the company spent zł 9.5 million less on propylene oxide in the period January to September 2020 than in the preceding year. In terms of geographical distribution, 45% of PCC Rokita's sales in the first three quarters were made in Poland, followed by 31% in the EU and 10% in Germany. PCC Rokita focuses on selling soda lye on the domestic and neighboring markets, primarily in Germany and the Czech Republic.

MOL-progress on polyol complex

The MOL Group's polyol complex was rated at over 70% of the project schedule in December. Despite the low water levels closed borders due to the pandemic, combined with the and the complexity of the project, progress has been possible.

The main part of the complex, in which the final product will be produced, was built in Thailand before being transhipped on a four-month journey to be reassembled on site in Tiszaújváros.

Another challenge was the unloading of the elements transported by sea which required the construction of a temporary port for handling several hundred tons of elements. The polyol plant, intended for the production of plastics, will be able to process 200,000 tpa of propylene oxide. Originally, the company assumed that production would start in May-June 2021 but is more likely to be the end of the year.

The chlorine derivatives segment closed the three quarters of 2020 with an EBITDA profit of zł 92.8 million, 39.8% lower than in the same period in 2019. The results were affected by a 26.4% decrease in the average price of soda lye and a 22.9% decrease in the average price of caustic soda. Due to high margins, the PCC Rokita is taking steps to intensify the sale of chlorine in small packages, whilst on the production side the goal is to expand monochloroacetic acid capacity up to 100,000 tpa.

PCC Exol-increased profits in 2020 due to demand for surfactants

PCC Exol increased its net profit in the third quarter by 52% over the same period in 2019, rising from zł 6.08 million to zł 9.22 million. PCC Exol's improvement in 2020 is attributable to the rise in demand for surfactants used in the production of cosmetics and detergents.

PCC Exol's sales (unit-zł million)		
	<i>Jan-Sep 20</i>	<i>Jan-Sep 19</i>
Surfactants-use in detergents and cosmetics	189.6	174.6
Surfactants-use in industry	22.9	25.0

Due to the pandemic, there was a greater demand for surfactant products for use in cosmetics and detergents. Revenues from sales in terms of value

increased by zł 15.0 million to zł 189.6 million (i.e., a rise of 8.6%). In terms of volume, sales increased by 9.9%, amounting to 45,700 tons. In the first three quarters of 2020, PCC Exol achieved a total net profit of

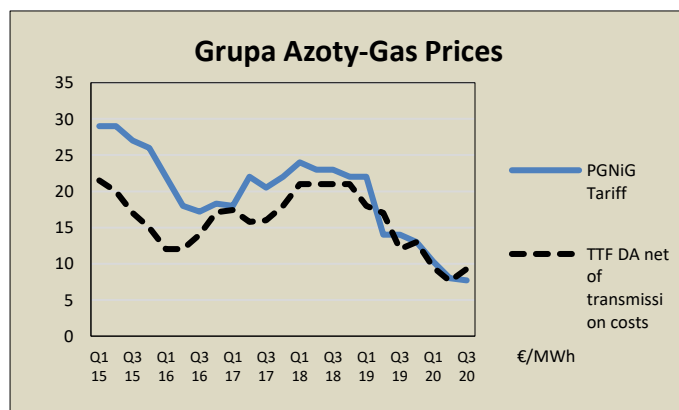
zł 30.93 million compared with zł 23.85 million in January to September 2019. This was despite a slight in sales revenue from zł 487.41 million to zł 477.94 million.

PCC Exol's sales (unit-kilo tons)		
	Jan-Sep 20	Jan-Sep 19
Surfactants-use in detergents and cosmetics	45.7	41.6
Surfactants-use in industry	25	22.9

The total costs of PCC Exol's core operating activities for the three quarters of 2020 amounted to zł 433.9 million, 4.2% lower than in the same period in 2019. PCC Exol incurred operating costs in the amount of zł

376.9 million, which is 5.1% lower than in 2019.

Ethylene oxide costs fell by zł 3.3 million to the level of zł 83.3 million in the first three quarters in 2019. Ethylene oxide is the main raw material used in most of PCC Exol's production processes, accounting for



around 50% of the purchase of raw materials by volume. The company is largely dependent on PKN Orlen for raw materials.

Grupa Azoty-lower gas prices

After a period of low gas prices that helped Grupa Azoty's margins in 2020 prices started to see rises in the fourth quarter which could affect the prospects for profitability of the group in 2021. Due the low prices of gas Grupa Azoty's profitability was supported to an extent even if there was a large fall against 2019. The financial results of Grupa Azoty are largely dependent on the fertiliser

segment and the group will find it difficult to pass on rises in gas prices in the short term.

Based on the first three quarters last year lower gas prices helped Grupa Azoty maintain a positive EBITDA of 26.5%, despite the fall in revenues of around 22%. The fall in gas prices meant that fertiliser margins dropped only slightly from 11.8% to 11.6%.

Chimcomplex Borzesti-polyol expansion

Romanian chemical producer Chimcomplex, which recorded a turnover of €260 million in 2019, will complete an investment of €35 million in 2021 on expanding its polyol capacity to 140,000 tpa. The company invested around €173.2 million in the first three quarters in 2020 which is comparable to the amount of revenues currently earned and thus the investments are likely to increase turnover significantly in the next five years.

Chimcomplex Sales Revenues (€ million)		
Product	Jan-Sep 20	Jan-Sep 19
Polyols	100.0	109.4
Chlor-alkali	58.6	76.1
Oxo alcohols	20.3	24.8

the first three quarters, whilst sales of oxo alcohols declined from €24.8 million to €20.3 million. Total

Ciech's Financial Data (€ million)		
	Jan-Sep 20	Jan-Sep 19
Sales revenues	488.169	582.047
Operating profit/(loss)	39.745	38.526
Profit/(loss) before tax	29.129	29.382
Net profit / (loss) for the period	17.152	18.598
Net profit/(loss)	17.397	18.782
Net profit/(loss)	(0.245)	(.184)

Last year was difficult for Chimcomplex Borzesti which reduced revenues for polyol sales from €109.4 million to €100.0 million in the first three quarters in 2020 while losses increased to €6.8 million. In the same period, total expenditure decreased to 843 million lei, compared to 1.03 billion lei in January-September 2019, and revenues decreased to 816 million lei, from 1.04 billion lei.

Ciech rising profits in 2020 due to high soda ash margins

Polyurethane manufacturer Ciech Pianki at Bydgoszcz started the production of protective masks in December, against European standard EN 149:2001. FFP2 filter half masks are being developed at a newly started plant at Bydgoszcz, with full production capacity of around 50,000 pieces per day. Production is based on Polish raw materials. The nominal

capacity of the production line in Bydgoszcz is more than 10 million units per annum. The product will be packed in multipacks of 25 or 50 pieces. and is intended for the domestic market.

Ciech's Sales Markets (€ million)		
Country	Jan-Sep 20	Jan-Sep 19
Poland	1,071,037	1,042,684
European Union (excluding Poland)	989,996	1,136,610
TOTAL	2,168,446	2,507,806

Ciech record increased profits. Sales to the Polish market accounted for around half of Ciech's sales with the EU accounting for around 45%.

Ciech stated that sales of polyurethane foams posted in the third quarter saw strong rebound, with revenue up 31% against the same period in 2019 and 53% on the second quarter last year. Revenues overall for polyurethanes were down in the first three quarters, but lower costs helped

Czech Petrochemical Exports (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
Ethylene	12.6	65.7
Propylene	5.1	7.1
Butadiene	0.0	3.9
Benzene	20.8	33.9
Toluene	5.8	8.8
Ethylbenzene	77.0	129.1

Czech petrochemical trade, Jan-Oct 2020

Ethylbenzene exports from the Czech Republic totalled 76,979 tons in the first ten months in 2020 against 129,137 tons in the same period in 2019. Deliveries were suspended in the second quarter last year before being resumed in July. Benzene and ethylene exports were both down in the first ten months in 2020, dropping from 33,857 tons to 20,838 tons and from 65,689 tons to 12,590 tons respectively.

Regarding imports, propylene shipments into the Czech Republic increased from 28,728 tons in January to October 2019 to 40,363 tons in the same period last year. For January to October 2020 Germany supplied 23,320 tons of propylene to the Czech market, followed by Poland with 6,000 tons, Romania with 5,180 tons and Ukraine 2,125 tons.

Czech Petrochemical Imports (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
Ethylene	2.6	1.3
Propylene	40.4	28.7
Butadiene	53.0	14.7
Benzene	67.9	78.9
Toluene	5.2	3.7
Styrene	32.4	13.2

Butadiene imports into the Czech Republic increased in the first ten months in 2020 to 53,031 tons from 14,700 tons in January to October 2019. Germany provided 50,249 tons in 2020. Styrene imports increased from

11,500 tons to 25,600 tons this year. The Netherlands was the main supplier to the Czech Republic, providing 23,823 tons for €15.324 million.

Czech chemical trade, Jan-Oct 2020

A total of 74,414 tons of methanol was imported into the Czech Republic in the first ten months in 2020 versus 67,349 tons in the same period in 2019. The largest source of imports was from Russia supplying 31,520 tons against 38,386 tons in January to October 2019, whilst Poland shipped 28,443 tons up from 4,100 tons. Imports of methanol from Poland were mostly redirected from Russian imports. For isopropanol, imports into the Czech Republic rose from 2,938 tons in the first ten months in 2019 to 4,034 tons in the same period in 2020. The two largest suppliers were Germany and the Netherlands. Imports have risen in order to meet the demand for hand sanitizer.

Polish Chemical Production (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
Caustic Soda Liquid	319.0	311.7
Caustic Soda Solid	60.1	55.7
Caprolactam	127.9	139.5
Acetic Acid	4.6	5.2
Ammonia (Gaseous)	1949.2	1997.0
Ammonia (Liquid)	85.3	85.8
Pesticides	55.6	51.3
Nitric Acid	1986.0	1925.0
Nitrogen Fertilisers	1712.0	1627.0
Phosphate Fertilisers	363.0	386.1
Potassium Fertilisers	313.4	350.6

MDI imports into the Czech Republic totalled 28,590 tons for the first ten months in 2020 up slightly from 28,117 tons from the same period in 2019. TDI imports dropped from 7,033 tons in January to October 2019 to 5,304 tons in the

same period in 2020. Regarding DINP plasticizers, imports into the Czech Republic dropped from 10,033 tons in the first ten months in 2019 to 8,593 tons, whilst exports rose to 38,821 tons in January to October 2020 up from 33,208 tons.

RUSSIA

Russian Chemical Production (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
Caustic Soda	1,063.6	1,071.9
Soda Ash	2,760.0	2,692.0
Ethylene	3,444.4	2,465.8
Propylene	2,194.3	1,955.8
Benzene	1,091.9	1,094.5
Xylenes	406.5	293.1
Styrene	605.3	603.6
Phenol	195.4	185.1
Ammonia	16,100.0	15,100.0
Nitrogen Fertilisers	9,075.0	9,317.0
Phosphate Fertilisers	3,604.0	3,465.0
Potash Fertilisers	8,119.0	6,913.0
Plastics in Bulk	8,341.0	7,042.0
Polyethylene	2,817.0	1,797.0
Polystyrene	483.3	450.8
PVC	870.9	862.3
Polypropylene	1,529.5	1,163.7
Polyamide	130.3	136.5
Synthetic Rubber	1,244.0	1,257.0
Synthetic Fibres	108.6	142.0

Russian chemical production, Jan-Oct 2020

Chemical production rose 6.3% in Russia in the first ten months in 2020, largely as a result of the start-up of the huge ZapSibNeftekhim complex at Tobolsk. During the period under review, the total production of polymers in primary form amounted to 8.34 million tons, which is 17% more than a year earlier.

Benzene production amounted to 1.092 million tons in the first ten months whilst caustic production dropped 1.6% to 1.064 million tons. Fertiliser production totalled 20.5 million tons which is 3.5% more than in January to October 2019.

Russian petrochemical projects

SIBUR-Gazprom feedstock contract for Amur Gas Chemical Complex

SIBUR and Gazprom are close to signing a long-term contract to supply 1 million tpa of LPGs from Gazprom's Amur gas processing plant (GPP) to the proposed Amur Gas Chemical Complex. Both companies are discussing the possibility of signing a second contract for the supply of additional ethane of up to 500,000 tpa. Contracts for the supply of LPG and additional ethane will allow SIBUR to increase the design capacity of the Amur Gas Chemical Complex to 2.7 million tpa of polymers.

Amur Gas Chemical Complex main products	
Product	Capacity
Ethylene	2.3 million tpa
Polyethylene	2.3 million tpa
Polypropylene	400,000 tpa

Gazprom plans to process 42 billion cubic metres of natural gas at the Amur GPP which will produce 1.5 million tpa of LPGs (1 million tpa of propane and 500,000 tpa of butane), 2.5 million tpa of ethane, 200,000 tpa of pentane-hexane fraction and 60 million cubic metres of helium. Gazprom is constructing the Amur GPP as part of the infrastructure of the Power of Siberia pipeline, designed to export gas to China.

Under the ownership of SIBUR the gas chemical complex is to be constructed at a site 15 kilometres north-east of Svobodny in the Amur Oblast for which investment costs are estimated provisionally at \$10-11 billion. The extended configuration of the project involves the processing of ethane fraction and LPG from the Amur GPP.

Linde signed an EPC contract with SIBUR (engineering, procurement and site services) in 2020 for the pyrolysis unit of the Amur Gas Chemical Complex. SIBUR's technology partners include Univation

Amur Gas Processing Plant main products	
Product	Capacity
Ethane	2.5 million tpa
Propane	1.0 million tpa
Butane	500,000 tpa
Pentane-hexane	200,000 tpa

Technologies and Chevron Phillips (ethylene polymerisation) and LyondellBasell (propylene polymerisation). NIPIGAZ has been commissioned to manage the design, procurement and construction of off-site facilities. In areas that do not involve the purchase of unique licensed foreign-made equipment, the project involves its localisation up to 80%.

The construction of the complex will be synchronized with the gradual climb towards full capacity utilisation of the Amur GPP. Estimated completion of construction and commissioning works are set provisionally for 2024-2025. It has been assumed that Sinopec will act as SIBUR's partner in the project which is to become a key project in SIBUR's investment programme for the next five years. In mid-December a Russian government commission approved the participation

of Sinopec in the project taking a 40% share. The launch will almost double SIBUR's capacity for the production of base polymers, following the full utilisation of ZapSibNeftekhim at Tobolsk.

Nizhnekamskneftekhim pyrolysis unit main characteristics	
Licensor	Linde
Contract management	Gemont
Capacity	Ethylene 600 ktpa including six furnaces
Capacity	Propylene 272.8 ktpa
Naphtha Processing	1.798,500 million tpa
Equipment deliveries 2020	264 units

Nizhnekamskneftekhim-ethylene project update

The installation of six furnaces has begun at the EP-600 plant under construction of Nizhnekamskneftekhim. The furnaces have two radiant sections and one common conversion part. Five of the high-performance furnaces will be operational with one kept in reserve. The five furnaces will process up to a total of 226 tons of straight-

run gasoline per hour. The installation of pyrolysis furnaces at Nizhnekamsk will take several months. In addition to the 600,000 tpa of ethylene the new cracker will be able to produce 272,800 tpa of propylene.

Russian Ethylene Production (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Angarsk Polymer Plant	168.3	165.6
Kazanorgsintez	484.7	505.7
Stavrolen	285.3	241.1
Nizhnekamskneftekhim	510.1	508.6
Novokuibyshevsk Petrochemical	36.7	50.5
Gazprom N Salavat	313.6	274.3
SIBUR-Kstovo	316.9	341.5
SIBUR-Khimprom	47.5	45.3
Tomskneftekhim	224.8	227.4
Ufaorgsintez	94.4	104.0
ZapSibNeftekhim	962.2	0.0
Total	3444.5	2463.8

Russian petrochemical markets

Russian ethylene production, Jan-Oct 2020

Russian ethylene production totalled 3.445 million tons in the first ten months in 2020 against 2.464 million tons in the same period in 2019. ZapSibNeftekhim produced 724,800 tons in January to October. In the first ten months in 2020 Nizhnekamskneftekhim increased ethylene production from 508,600 tons to 510,100 tons whilst Kazanorgsintez dropped slightly from 505,700 tons to 484,700 tons.

Other important ethylene producers in the first ten months included SIBUR-Kstovo which produced 316,900 tons versus 341,500 tons and Gazprom neftekhim Salavat which produced 313,600 tons against 274,300 tons. In terms of feedstocks, ZapSibNeftekhim relies on LPGs delivered from the gas processing plants in West Siberia, whilst Kazanorgsintez relies heavily on ethane feedstock supplies from the Orenburg and Minnibayevo gas plants but also needs to purchase other hydrocarbons. Propane supplies are purchased by Kazanorgsintez mostly from Uralorgsintez and SIBUR-Novatek at Tobolsk, usually in volumes of 8-10,000 tons per month. ZapSibNeftekhim is according to SIBUR close to achieving full capacity utilisation.

Russian propylene production, sales & exports, Jan-Oct 2020

Russian propylene production amounted to 2.195 million tons in the first ten months in 2020 against 1.956 million tons in the same period in 2019. The increase was due largely to the start-up of the plant at ZapSibNeftekhim at Tobolsk where production amounted to 315,200 tons in the first ten months.

Russian Propylene Production (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Angarsk Polymer Plant	97.0	91.2
Kazanorgsintez	45.1	37.3
Lukoil-NNOS	187.5	249.9
Stavrolen	104.7	97.6
Nizhnekamskneftekhim	243.6	253.2
Novokuibyshevsk Petrochemical	71.9	38.3
Omsk Kaucuk	70.5	38.0
Polyom	138.8	149.9
Gazprom n Salavat	124.9	119.5
SIBUR Kstovo	138.7	147.1
SIBUR-Khimprom	46.1	50.0
Tomskneftekhim	135.7	122.4
SIBUR Tobolsk	330.8	404.3
Ufaorgsintez	144.2	157.2
ZapSibNeftekhim	315.2	0.0
Total	2194.7	1955.8

The aim was for full capacity to be achieved by the end of 2020. Due to maintenance this year SIBUR-Tobolsk reduced propylene production from 404,300 tons in the first ten months in 2019 to 330,800

tons. Nizhnekamskneftekhim reduced propylene production slightly in the first ten months from 253,200 tons to 243,200 tons, whilst Lukoil-NNOS at the Kstovo refinery reduced output from 249,900 tons to 187,500 tons. Gazprom neftekhim Salavat produced 124,900 tons against 119,500 tons.

SIBUR-Kstovo reduced production of propylene from 147,100 tons to 138,200 tons in January to October 2020, with the plant surpassing its millionth ton of production in November. In 2014, the plant underwent a large-scale reconstruction, during which the capacity of the main technological unit for the production of ethylene and propylene was increased. SIBUR-Kstovo hopes to increase propylene capacity to 180,000 tpa together with the expansion of ethylene capacity to 420,000 tpa and benzene 104,000 tpa.

Russian Propylene Exports (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Sep 19
Lukoil-NNOS	24.9	37.3
SIBUR-Kstovo	3.4	6.1
Angarsk Polymer Plant	10.9	0.0
Stavrolen	13.1	12.1
Total	52.2	55.5

Almost all ethylene produced at SIBUR-Kstovo is processed at SIBUR's facilities in the Nizhny Novgorod Region including ethylene oxide and ethylene glycols and VCM-PVC. Propylene is partially processed by SIBUR-Neftekhim into acrylic acid, partially supplied to other plants in the country and abroad. Propylene exports dropped in the first ten months from 55,500 tons last year to 52,200 tons. Lukoil-NNOS reduced export sales from 37,300 tons to 24,900 tons whilst Stavrolen reduced from 13,100

tons to 12,100 tons.

Russian Propylene Domestic Sales (unit-kilo tons)		
company	Jan-Oct 20	Jan-Oct 19
Angarsk Polymer Plant	46.6	63.2
SIBUR-Kstovo	122.6	126.9
Lukoil-NNOS	143.2	198.6
Others	23.3	11.3
Total	335.7	399.0

Russian sales of propylene on the domestic merchant market amounted to 335,700 tons in the first ten months in 2020 against 399,000 tons in the same period last year. Although production was started at ZapSibNeftekhim all volumes were consumed internally in the production of polypropylene. The largest propylene supplier to the domestic market in the first ten months was Lukoil-NNOS, shipping 143,200 tons against 198,600 tons followed by SIBUR-Kstovo which reduced from 126,900 tons to 122,600 tons.

Changes in the market this year have included the sale of merchant propylene by Kazanorgsintez due to excess production. Kazanorgsintez has been using more propane feedstock which has led higher propylene output volumes.

Main Russian Propylene Domestic Purchases (unit-kilo tons)		
Consumer	Jan-Oct 20	Jan-Oct 19
Saratovorgsintez	128.4	152.5
Volzhskiy Orgsintez	8.9	7.5
Akrlit	10.8	6.9
SIBUR-Khimprom	51.1	49.6
Omsk-Kaucuk	15.9	27.8
Tomskneftekhim	9.7	4.2
SIBUR Tobolsk	73.4	107.7
Moscow Refinery	14.2	15.7
Plant of Synthetic Alcohol	16.4	7.9

SIBUR-Tobolsk reduced merchant propylene purchases from 107,700 tons in January to October 2019 to 73,400 tons in the same period this year.

The Plant of Synthetic Alcohol at Orsk has bought more propylene in the past few months due to ramped up production of isopropanol. Propylene purchases rose to 16,400 tons against 7,900 tons in the first ten months last year.

Russian Styrene Production (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Nizhnekamskneftekhim	250.6	253.6
Angarsk Polymer Plant	28.9	30.0
SIBUR-Khimprom	125.1	115.3
Gazprom n Salavat	162.4	162.5
Plastik, Uzlovaya	38.2	42.2
Total	605.3	603.6

7,900 tons in the first ten months last year.

Saratovorgsintez remains the largest merchant consumer of propylene on the Russian domestic market, although down in the first ten months to 152,500 tons against 128,400 tons in the same period in 2019.

Russian styrene production & sales, Jan-Oct 2020

Russia produced 605,300 tons of styrene in the first ten months in 2020 versus 603,600 tons in the same period in 2019. The largest producer

Nizhnekamskneftekhim reduced production from 253,600 tons to 250,600 tons. Gazprom neftekhim Salavat increased production from 162,500 tons to 162,400 tons despite a maintenance shutdown early in the year.

Russian Styrene Exports (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Angarsk Polymer Plant	6.2	6.8
Plastik Uzlovaya	0.0	0.5
Gazprom neftekhim Salavat	68.0	79.5
Nizhnekamskneftekhim	0.4	4.6
SIBUR-Khimprom	5.8	2.4
Total	80.4	93.9

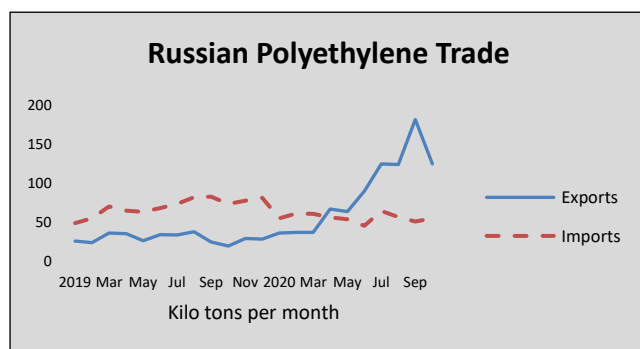
SIBUR-Khimprom at Perm increased production from 115,300 tons to 125,100 tons. In terms of raw materials, four of the five producers are integrated back into ethylbenzene with the exception being Plastik at Uzlovaya. Russian styrene exports dropped in the first ten months to 80,400 tons against 93,900 tons. Gazprom neftekhim reduced shipments from 79,500 tons to 68,000 tons. Finland took 64.7% of Russian styrene exports followed by Turkey with 18.8% and Norway with 5.3%. Revenues from

exports declined from \$98.3 million in January to October 2019 to \$69.4 million in the same period in 2020.

Bulk Polymers

Russian polyethylene production and trade, Jan-Oct 2020

Russian polyethylene production totalled 2.449 million tons in the first ten months in 2020 which was 68% up on the 1.457 million tons in the same period in 2019. The largest increase in production was accounted for by LLDPE which increased from 186,100 tons to 424,200 tons. HDPE production increased by 104% to 1.506 million tons in the first ten months in 2020 whilst LDPE dropped 2% to 519,200 tons.



After the launch of ZapSibNeftekhim SIBUR increased the capacity of polymers threefold, whilst at the same time reducing the amount of LPG exports. About 3 million tpa of LPG can be processed at ZapSibNeftekhim.

Russian polyethylene exports totalled 880,000 tons in the first ten months in 2020, rising from 292,000 tons in January to October 2019. Imports of polyethylene declined from 677,000 tons to 554,000 tons.

Russian Polypropylene Production (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Ufaorgsintez	97.7	106.9
Stavrolen	89.4	85.7
Neftekhimya	124.3	121.3
Nizhnekamskneftekhim	182.5	174.9
Polyom	150.5	174.4
Tomskneftekhim	123.5	121.8
SIBUR-Tobolsk	404.6	378.7
ZapSibNeftekhim	357.0	0.0
Total	1529.5	1163.7

Russian polypropylene trade, Jan-Oct 2020

Russian polypropylene production totalled 1.529 million tons in January to October 2020 which was 31% up on 1.170 million tons in the same period in 2019.

SIBUR Tobolsk increased production by 7% to 404,600 tons, whilst ZapSibNeftekhim produced 357,000 tons in January to October 2020.

Polyom at Omsk, which stopped production in October for maintenance, increased production by 14% to 150,500 tons and Nizhnekamskneftekhim increased production from 174,900 tons to 182,500 tons. Tomskneftekhim increased polypropylene production by 1% to 123,200 tons in the first ten months in 2020 whilst Ufaorgsintez reduced production by 9% to 97,700 tons. Neftekhimya (Kapotnya) NPP increased production by 2% to 124,300 tons and Stavrolen at the Budyennovsk plant increased from 85,000 tons to 89,400 tons.

Russian Polypropylene Imports (unit-kilo tons)		
Category	Jan-Oct 20	Jan-Oct 19
Homopolymers	74.0	48.1
Block	48.9	47.0
Random	31.6	26.9
Other	26.6	30.1
Total	181.1	152.1

Despite the increase in production imports of polypropylene into Russia increased 19% in the first ten months to 181,100 tons against 152,100 tons in January to October 2019. PP-homo imports amounted to 74,400 tons against 48,100 tons whilst imports of block copolymers rose from 47,000 tons to 48,900 tons. Random copolymer imports amounted to 31,600 tons against 26,900 tons a year earlier.

Russian polypropylene exports amounted to 568,000 tons in the period January to October 2020, of which 26.6% of shipments went to China. Exports rose 2.9 times from the 212,000 tons which was shipped in the first ten months in 2019.

Russian PVC Production (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Bashkir Soda	221.3	216.1
Kaustik	62.7	65.3
RusVinyl	276.6	287.8
Sayanskkhimplast	244.5	241.0
Total	805.1	810.2

Russian PVC production & trade, Jan-Oct 2020

Russian PVC production in January-October 2020 totalled 805,100 tons which was unchanged from 2019. RusVinyl produced 30,100 tons in October of which 2,800 tons consisted of emulsion PVC. In January to October 2020 RusVinyl produced 276,600 tons of against 286,600 tons for the same period in 2019. Sayanskkhimplast produced 244,500 tons against 241,000 tons and the Bashkir Soda company (BSK) increased by 2% to 221,300 tons. Kaustik reduced production in the first nine months to 62,700 tons from 65,300 tons in the same period in 2019.

Astrakhan gas-chemical project

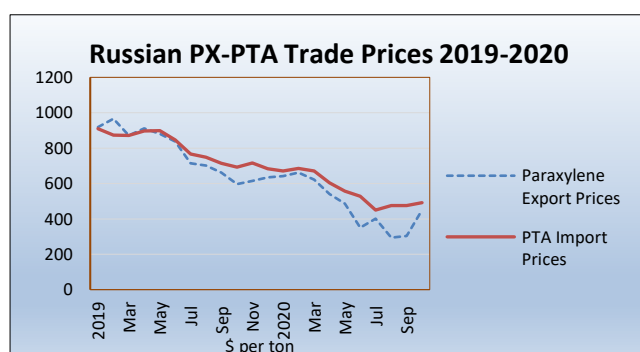
Caspian Innovation Company LLC (CIC) is assessing plans, with the participation of Gazprom, for the construction of a gas-chemical complex involving the production of plastics in the Astrakhan region. The complex is being considered to produce 650,000 tpa of PVC and 430,000 tpa of caustic soda. The cost of the project is estimated at \$1.5 billion. The estimated feedstock ethane requirement of 300,000 tpa will be extracted from natural gas at the Astrakhan Gas Processing Plant (AGPP, owned by Gazprom).

PVC exports from Russia amounted to 211,000 tons in the first ten months against 204,000 tons in the same period in 2019. Imports of PVC to the Russian market grew by 5% in the first ten months of the year to 211,000 tons, measured against 188,000 tons in January to October 2019.

Kazanorgsintez-polycarbonate expansion

Kazanorgsintez completed the modernisation of its polycarbonate plant and increased its

capacity to 100,000 tpa. The modernisation was carried out in two stages: in August-September 2019 and in October-November 2020. As a result of the first stage, more than 88,000 tons of polycarbonates per annum were achieved without loss of quality. As a result of the second stage, the capacity was brought to 100,000 tons. Technical work was carried out during periods of preventive planned repairs, without additional production stops. The increase in capacity affected the company's financial results: in the first nine months of 2020, the volume of revenue from the sale of polycarbonates increased by 22.6% and reached 7.8 billion roubles.



Paraxylene-PTA-PET

Russian paraxylene trade Jan-Oct 2020

Russian paraxylene exports from Russia amounted to 128,300 tons in the first ten months in 2020 against 146,700 tons in the same period in 2019, with revenues from sales dropping from \$115.7 million to \$54.3 million.

In the domestic market the main consumer Polief purchased paraxylene from the Atyrau refinery in November, the first time that Russia has imported this product from Kazakhstan. In the first eleven months in 2020 Polief purchased a total of 133,000 tons of paraxylene which was up by 42,200 tons over the same

Russian Paraxylene Exports (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Gazprom Neft	69.3	94.7
Kirishinefteorgsintez	30.6	39.0
Ufaneftexhim	9.9	13.6
Total	109.8	147.2

period in 2019. The largest volume of 107,200 tons was supplied by the Ufaneftexhim plant (owned by Bashneft), and 25,800 tons by the Omsk refinery (owned by Gazprom Neft).

Russian PTA imports, Jan-Oct 2020

PTA imports into Russia totalled 239,900 tons in the first ten months in 2020 against 310,600 tons in the same period in 2019. China shipped 220,000 tons against 219,700 tons whilst imports from South Korea fell from 58,000 tons to 7,000 tons. Average prices for PTA imports amounted to \$580 per ton in January to October 2020 against \$627 per ton in the same period in 2019.

Russian PTA Imports by Country (unit-kilo tons)		
Country	Jan-Oct 20	Jan-Oct 19
Belgium	8.0	22.0
India	0.0	1.0
China	220.0	219.7
South Korea	7.0	58.0
Poland	3.0	3.0
Thailand	0.0	3.0
Others	1.9	3.1
Total	239.9	310.6

Ekopet at Kaliningrad accounted for 64.6% of imports over the first ten months in 2020, \$92.7 million in value against \$174.2 million in the same period last year.

Regarding the mode of delivery, PTA imports from China to Kaliningrad are now available by rail. The journey from Dalian in China before moving to Zabaykalsk on the Sino-Russian border and then transiting through Russia and Latvia before arriving at the Kaliningrad. This year a new container system has been introduced enabling shipments of up to 2,650 tons of PTA which can be delivered in

shorter time than by sea.

SIBUR signs agreement for recycled PET

SIBUR and Bumatika signed a contract for the supply of raw materials for the project to produce "green" PET pellets at the Polief plant at Blagoveshchensk in Bashkortostan. For the production of "green" PET pellets it is planned to use about 34,000 tpa of recycled materials. Bumatika will provide loading of the facilities under construction at Polief, with raw materials expected to be collected in the Perm region and neighbouring regions.

Russian PTA Imports by Region (unit-kilo tons)		
Location	Jan-Oct 20	Jan-Oct 19
Kaliningrad	168.2	210.0
Moscow	65.8	45.8
Others	5.9	54.2
Total	239.9	310.5

The production of PET with secondary resources has been an important part of SIBUR's sustainable development strategy until 2025.

Ekopet-share sale fails for second time

The National Bank Trust failed in December to sell its ownership in the Kaliningrad group of companies Ekopet, which is the successor to Alko-Naphtha. This second effort for 4.9 billion roubles followed the attempt in September to sell Ekopet for 5.5 billion roubles.

The bank has managed Ekopet in the period from 2018 to 2020 during which the maximum load of the installed capacity of the plant was achieved. Furthermore, under the bank's management a new pool of customers outside the Customs Union has been found. The company's organisational, commercial and technological transformation was carried out and is now considered to be in better shape. Ekopet's turnover in 2019 amounted to 15.4 billion roubles, 18% down on the same period in 2018.

The Ekopet group includes three legal entities: an industrial complex, a trading house, and an industrial park BaltTechProm (Baltic Industrial Park). The plant of Ekopet was commissioned in 2011 (initial design capacity of 220,000 tpa of PET) and manufactures products under the Ekopet trademark, intended for the production of bottles, as well as other types of packaging for food and non-food purposes. Feedstocks for PET production are mostly imported by Ekopet, with PTA coming largely from China and MEG from Saudi Arabia.

Aromatics

Russian Benzene Production (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Angarsk Polymer Plant	68.1	64.6
Gazprom Neft	80.3	59.5
LUKoil-Neftekhim	24.4	34.5
LUKoil-Permnefteorgsintez	40.0	45.5
Magnitogorsk MK	35.2	43.8
Nizhnekamskneftekhim	233.8	224.2
Novolipetsk MK	0.7	5.7
Gazprom n Salavat	164.9	152.1
Severstal	28.8	33.4
SIBUR-Holding	59.1	67.2
Slavneft-Yaroslavlorgsintez	56.0	50.0
Kirishinefteorgsintez	53.3	60.3
Ryazan RN Holding	27.7	31.2
Ufaneftkhim	74.0	62.3
Ural Steel	8.3	9.1
Uralorgsintez	71.9	72.8
Zapsib	52.4	59.4
Novokuibyshevsk Petrochemical	13.0	18.8
Total	1091.9	1094.5

Russian benzene production Jan-Oct 2020

Russian benzene production declined slightly in the first ten months this year from 1.095 million tons to 1.092 million tons. Nizhnekamskneftekhim increased benzene production from 224,200 tons to 233,800 tons, whilst Gazprom neftekhim Salavat increased production from 152,100 tons to 164,900 tons. Rosneft's three benzene plants at Angarsk, Novokuibyshevsk, Ufa and Ryazan produced a combined total of 108,800 tons against 114,600 tons in January to October 2019, whilst Gazprom Neft at Omsk increased benzene production from 59,300 tons to 80,300 tons.

Regarding domestic merchant sales, Russian producers shipped 612,000 tons in the first ten months this year against 627,500 tons in the same period in 2019. In the second half of 2020 benzene stocks have come under greater pressure from maintenance outages which were carried out at several plants. SIBUR-Kstovo increased shipments to the merchant market from 53,900 tons in January to October 2019 to 64,900 tons in the same period in 2020, whilst Gazprom Neft at Omsk reduced shipments slightly from 56,600 tons to 56,000 tons.

Russian Benzene Sales (unit-kilo tons)		
Company	Jan-Oct 20	Jan-Oct 19
Angarsk Polymer Plant	44.5	33.2
SIBUR-Kstovo	64.9	53.9
Severstal	28.4	31.5
Uralorgsintez	69.8	58.8
Kirishinefteorgsintez	5.9	35.2
West Siberian MC	51.3	55.0
Ryazan NPZ	23.7	31.3
Slavneft-Yanos	49.9	43.3
Gazprom Neft (Omsk)	56.0	56.6
Gazprom n Salavat	24.0	26.2
Stavrolen	24.4	33.1
Nizhnekamskneftekhim	21.7	6.9
Ufaneftkhim	7.3	2.2
Karpatneftekhim	5.3	26.7
Ukratnafta	0.0	2.0
Yasinovsky Coke	11.5	3.4
Atyrau	26.3	16.9
Chelyabinsk MK	8.9	11.8
Altay-Koks	18.7	25.5
Koks	17.6	18.3
Magnitogorsk MK	37.7	35.3
Nizhny Tagil MK	13.7	17.1
Others	0.4	3.3
Full Total	612.0	627.5

As a result of market tightness in the third and fourth quarters merchant consumers have looked towards imports in order to resolve the shortfalls. In Tatarstan TAlF bought several thousand tons of benzene from Naftan in Belarus for delivery to Kazanorgsintez, where benzene is used to produce Bisphenol A.

Deliveries of benzene from Belarus to Russia increased significantly in the first ten months, both from the Naftan and Mozyr refineries. Shchekinoazot has been the major importer of benzene from Belarus this year due to geographical proximity. In the first ten months in 2020 benzene import volumes into Russia dropped from 49,000 tons to 39,100 tons.

Kuibyshevazot reduced benzene purchases from 140,800 tons to 138,000 tons in the first ten months whilst Azot at Kemerovo reduced purchases from 95,600 tons to 91,800 tons. For the production of cumene Kazanorgsintez purchased a total of 54,800 tons of benzene in January to October 2020, versus 53,400 tons in 2019, whilst Omsk Kaucuk purchased 23,600 tons against 13,000 tons. The rise in demand from Omsk Kaucuk was due to the start-up of the modernised phenol facilities.

Nizhnekamskneftekhim will double the production of benzene following the construction of the new EP-600 cracker. The extra benzene be sold mostly to Kazanorgsintez for cumene and Bisphenol A production whilst any remaining quantities will be exported. Capacity of

benzene at Nizhnekamskneftekhim will comprise 245,600 tons raising total capacity to 510,000 tpa. In 2019, Nizhnekamskneftekhim launched a benzene extraction unit with a capacity of 265,000 tpa.

Russian Caprolactam Production (unit-kilo tons)		
<i>Producer</i>	<i>Jan-Oct 20</i>	<i>Jan-Oct 19</i>
Kuibyshevazot	155.0	172.9
Shchekinoazot	49.6	50.6
SDS Azot	96.5	93.7
Total	301.0	317.2

Russian caprolactam production, Jan-Oct 2020

Russian caprolactam production amounted to 301,000 tons in January to October 2020 against 317,2900 tons in the same period in 2019. Kuibyshevazot reduced production from 172,900 tons to 155,000 tons whilst SDS Azot at Kemerovo increased production to 96,500 tons from 93,700 tons.

Russian Caprolactam Exports (unit-kilo tons)		
<i>Producer</i>	<i>Jan-Oct 20</i>	<i>Jan-Oct 19</i>
Kuibyshevazot	50.2	42.3
Shchekinoazot	45.4	46.1
SDS Azot	101.2	98.1
Total	196.7	186.5

Caprolactam exports totalled 196,700 tons in the first ten months in 2020 against 186,500 tons in the same period in 2019. Kuibyshevazot increased exports from 42,300 tons in January to October 2019 to 50,200 tons in 2020 whilst Azot at Kemerovo exported 101,200 tons up from 98,100 tons. Shchekinoazot exported 45,400 tons of caprolactam in the first ten months in 2020 against

46,100 tons. Kuibyshevazot uses most of its caprolactam production in internal processing in the production of polyamide whilst Azot at Kemerovo and Shchekinoazot export most of its production.

Russian Orthoxylene Domestic Sales (unit-kilo tons)		
<i>Producer</i>	<i>Jan-Oct 20</i>	<i>Jan-Oct 19</i>
Gazprom Neft	21.2	5.0
Ufaneftkhim	15.1	15.8
Kirishinefteorgsintez	18.9	24.9

Russian orthoxylene market, Jan-Oct 2020

Orthoxylene export sales from Russia amounted to 55,100 tons in the first ten months in 2020 against 45,600 tons in the same period in 2019. Gazprom Neft increased export shipments from 5,000 tons to 21,200 tons whilst Ufaneftkhim reduced shipments

from 15,800 tons to 15,100 tons. Kirishinefteorgsintez reduced exports of orthoxylene from 24,900 tons to 18,900 tons. On the domestic market Kamteks-Khimprom reduced purchases of orthoxylene in the first ten months in 2020 from 64,300 tons in the previous year to 52,200 tons.

Russian Phenol Production (unit-kilo tons)		
<i>Producer</i>	<i>Jan-Oct 20</i>	<i>Jan-Oct 19</i>
Ufaorgsintez	51.1	63.7
Kazanorgsintez	60.0	58.6
Novokuibyshevsk Petrochemical	58.0	62.9
Omsk Kaucuk, Omsk	26.3	0.0
Total	195.4	185.2

Russian phenol market, Jan-Oct 2020

Russian phenol production rose from 185,200 tons in the first ten months in 2019 to 195,400 tons in the same period in 2020. Novokuibyshevsk Petrochemical produced 58,000 tons of phenol against 62,900 tons whilst Ufaorgsintez reduced production from 63,700 tons to 51,100 tons. Kazanorgsintez increased slightly from 58,600 tons to 60,000 tons. The significant change came from

Omsk Kaucuk which produced 26,300 tons against no activity in 2019.

Russian Phenol Exports (unit-kilo tons)		
<i>Producer</i>	<i>Jan-Oct 20</i>	<i>Jan-Oct 19</i>
Omsk Kaucuk	5.8	0.0
Kazanorgsintez	0.0	3.1
Ufaorgsintez	23.1	8.6
NNK	2.1	5.0
Total	31.0	16.7

Sales of phenol on the Russian domestic market amounted to 95,400 tons in the first ten months in 2020, down from 96,800 tons. Omsk Kaucuk supplied 18,800 tons of phenol to the domestic market, compensating for lower sales from Ufaorgsintez and Kazanorgsintez. Ufaorgsintez reduced sales from 51,300 tons in January to October 2019 to 28,900 tons whilst Novokuibyshevsk Petrochemical company increased shipments from 42,700 tons to 47,600 tons.

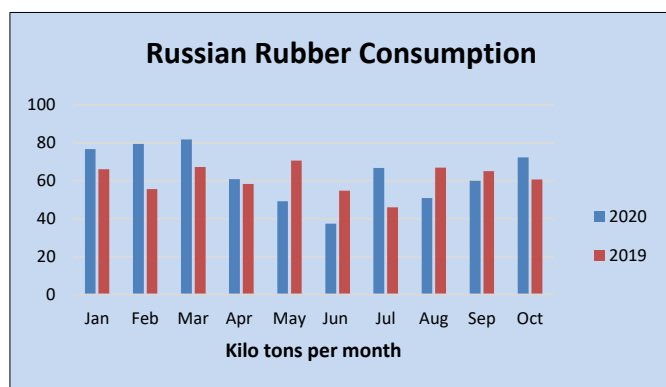
Russian phenol exports rose to 31,000 tons in the first ten months in 2020 against 16,700 tons in the same period in 2019. Poland was the largest destination for Russian exports. Ufaorgsintez exported 19,800 tons, but Kazanorgsintez did not ship either to the export market. The Novokuibyshevsk Petrochemical Plant exported only 2,100 tons of phenol in the first ten months against 5,000 tons last year.

Synthetic rubber

Russian Synthetic & Natural Rubber Market (unit-kilo tons)		
	Jan-Oct 20	Jan-Oct 19
Production	1,244.00	1,257.00
Exports	775.0	842.9
Imports	166.2	187.0
Supply/Demand Balance	635.2	601.1

Russian rubber production and market balance 2020

Synthetic rubber production in Russia totalled 1,244,000 tons in the first ten months in 2020 against 1,257 million tons in the same period in 2019. Both exports and imports of rubber declined last year whilst overall domestic consumption of rubber increased to 635,200 tons in the first ten months in 2020 against 601,100 tons.



The higher performance in the first ten months in 2020 was largely accounted to the redirection of production from Togliattikavuk away from exports to the new owners Tatneft's tyre plants in Tatarstan. Most of the increase was seen in the first few months of 2020 but then went through a slow period in the middle of the year. The downturn in the auto industry led to a decline in production in the tyre industry, but other applications have helped compensate for the lower consumption of tyres on the Russian market.

Russian Synthetic Rubber Exports (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
E-SBR	25.6	34.2
Block	42.7	32.1
SSBR	6.3	11.0
SBR	105.7	60.2
Polybutadiene	180.3	198.3
Butyl rubber	103.7	109.6
Halogenated butyl	99.7	116.3
NBR	27.2	29.4
Isoprene	167.8	223.5
Others	16.0	28.1
Total	775.0	842.9

Russian synthetic rubber exports, Jan-Oct 2020

Russian exports of synthetic rubber amounted to 775,000 tons in the first ten months in 2020, down from 842,500 tons in the same period in 2019. Average prices for Russian synthetic rubber exports dropped from \$1605 per ton in January to October 2019 to \$1302 in 2020. As a result of lower volumes and prices revenues from synthetic rubber exports dropped from \$1.340 billion to \$967 million in January to October 2020.

Regarding shipment destinations China represented the largest market for Russian exporters in the first ten months in 2020, accounting for nearly 22.3% of sales. This was followed by Poland with 9.8%, India with 10.2% and Hungary with 3.9%. Sales of synthetic rubber from Russia to China rose in the first ten months to 183,400 tons against 111,000 tons the same period in January to October 2019.

Nizhnekamskneftekhim Rubber Exports (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
Isoprene Rubber	138.5	166.5
Butyl Rubber	63.4	56.6
HBR	99.6	116.4
Polybutadiene	124.5	143.6
Others	10.3	0.6
Total	436.3	483.1

Nizhnekamskneftekhim-rubber exports

Nizhnekamskneftekhim's exports of synthetic rubbers fell in the first ten months

to 436,300 tons against 483,100 tons in the same period in 2019. Isoprene rubber exports amounted to 138,500 tons against 166,500 tons last year whilst exports of halogenated butyl rubber fell from 116,400 tons to 99,600 tons.

The Russian anti-monopoly institution FAS issued a fine to Nizhnekamskneftekhim in late November for 1.5 billion roubles for contraventions in the synthetic rubber market. Nizhnekamskneftekhim in the summer of

2019 was found to have contravened several points of the law on in the synthetic rubber market in relation to Tatneft and its tyre plants in Tatarstan. Nizhnekamskneftekhim said that it does not consider itself guilty of violating antitrust laws and has appealed. After Tatneft's conflict with Nizhnekamskneftekhim over pricing for isoprene and butyl rubber it decided to purchase its own facilities for the production of these products at Togliatti.

At the end of 2020 Nizhnekamskneftekhim started up the new facility for DSSK rubber. The production capacity consists of 60,000 tpa of DSSK, in addition to 10,000 tpa of thermoplastic elastomers (TEP, SBS). The production licensor for the DSSK project was the Japanese company ETIC Inc. This new grade of rubber provides better grip on wet roads, thus increasing driving safety. DSSK is also the basis for the production of environmentally friendly "green" tyres.

Togliattikaucuk Rubber Exports (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
Isoprene Rubber	2.5	27.9
Butyl Rubber	39.2	53.9
SBR	30.8	37.7
Others	0.2	0.5
Total	72.6	120.1

Togliattikaucuk-rubber exports

Togliattikaucuk exported a total of 72,600 tons of synthetic rubber in the first ten months in 2020 against 120,100 tons in the same period in 2019. Isoprene rubber exports dropped from 27,900 tons to 2,500 tons, whilst butyl rubber fell from 53,900 tons to 39,200 tons and SBR exports dropped from 37,700 tons to 30,800 tons. The switch of ownership of the Togliatti rubber assets from SIBUR to Tatneft has

impacted heavily on sales distribution. The transfer has largely amounted to replacing exports with domestic shipments.

Methanol

Russian Methanol Production (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Shchekinoazot	816.0	796.9
Sibmetakhim	699.3	714.6
Metafrax	937.8	891.5
Akron	80.3	87.8
Azot, Novomoskovsk	173.8	210.5
Angarsk Petrochemical	45.9	37.2
Azot, Nevinnomyssk	101.9	106.6
Tomet	750.4	669.3
Ammoni	83.7	134.3
Totals	3689.0	3648.6

Russian methanol production Jan-Oct 2020

Russia produced 3.689 million tons of methanol in the first ten months in 2020 against 3.649 million tons in same period in 2019. Metafrax produced 937,800 tons of methanol against 891,500 tons in January-October 2019 whilst Sibmetakhim at Tomsk reduced production from 714,600 tons to 699,300 tons. Despite reduced production in October and November due to litigation proceedings the Tomet plant increased production in the first ten months to 750,400 tons against 669,300 tons.

Shchekinoazot increased production volumes from 796,900 tons in January to October 2019 to 816,000 tons in the same period in 2020. Ammoni in Tatarstan reduced methanol production from 134,300 tons in the first ten

months in 2019 to 83,700 tons for the same period in 2020. Production at Mendelevsk in Tatarstan was idle for a large part of the second quarter.

Tomet-restart of methanol production affected by technical issues

After restarting at the end of the November Tomet was forced to stop production of methanol in the second week of December due to technical problems. The Court of Arbitration of the Samara Region had imposed a procedure on the monitoring of Tomet, which in the case of fraud at Togliattiazot owes minority shareholder Uralkhim, almost 88 billion roubles. At the same time, Uralkhim expects that the restoration of work will help Tomet to fulfill its obligations to pay damages.

Tomet restarted production of methanol at the end of November, despite the litigation process not having been concluded. The restart has helped increase supply availability on the domestic market although prices are yet to see much downward pressure. Tomet's restart was permitted under the provision that it ships methanol only within the framework of contractual obligations and thus should not engage in the spot market. Over the first ten months in 2020, the rail export of methanol produced by Tomet increased by 7,500 tons to

316,500 tons, while shipments to the domestic market decreased by 9,600 tons against January to October 2019 to 364,200 tons.

Russian Methanol Exports by Producer (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Azot Nevinnomyssk	6.3	0.0
Azot Novomoskovsk	62.1	71.5
Akron	12.9	7.2
Metafrax	426.9	352.4
Sibmetakhim	401.0	358.4
Tomet	316.3	323.4
Shchekinoazot	600.9	606.8
Ammoni	5.5	13.5
Total	1831.9	1733.3

Russian methanol exports, Jan-Oct 2020

Export shipments of Russian methanol totalled 1.832 million tons in the period January to October 2020 against 1.733 million tons in the same period in 2019. The average ratio of exports as a share of production achieved 49% over the ten-month period in 2020. Producers sought more sales on the export market in 2020 to offset the decline in the domestic sales.

Metafrax increased exports from 352,400 tons in the first ten months in 2019 to 426,900 tons in the same period in 2020 whilst Sibmetakhim increased exports from 358,400 tons to 401,000 tons. The largest Russian exporter was Shchekinoazot shipping 600,900 tons versus 606,800 tons.

Russian Methanol Export Destinations (unit-kilo tons)		
Country	Jan-Oct 20	Jan-Oct 19
Belarus	93.8	60.6
Finland	840.6	754.8
Kazakhstan	33.0	30.0
Lithuania	69.2	91.5
Netherlands	174.0	170.8
Poland	319.4	309.9
Romania	58.4	91.5
Slovakia	113.4	130.2
Turkey	26.8	30.3
UK	46.1	11.0
Ukraine	31.8	31.3
Others	35.2	76.8
Total	1841.5	1788.4

The main destination for Russian methanol exports remains Finland where volumes totalled 840,600 tons in the first ten months against 754,800 tons in the same period in 2019. Poland increased purchases from Russia to 319,400 tons in January to October 2020 against 309,900 tons in the same period in 2019, whilst Slovakia reduced volumes from 130,200 tons to 113,400 tons. Romania reduced imports from Russia from 91,500 tons to 58,400 tons in January to October 2020.

Shipments of methanol to the ports of Hamina and Kotka in Finland increased by 100,800 tons in January-October to 1.1 million tons which accounted for 59% of total foreign supplies. All Russian producers increased their exports of methanol in this direction, except for

Shchekinoazot, which reduced supplies by 78,200 tons to 16,700 tons.

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Azot Nevinnomyssk	13.2	28.7
Azot Novomoskovsk	114.2	128.0
Metafrax	261.5	199.3
Sibmetakhim	253.4	310.2
Tomet	359.1	489.1
Shchekinoazot	124.8	135.3
Ammoni (Mendeleevsk)	47.8	85.3
Total	1173.9	1375.8

Russian methanol domestic sales, Jan-Oct 2020

Methanol reserves for Russian producers decreased at the end of October as the effects of the Tomet stoppage took hold. Ammoni reduced its warehouse stocks of methanol by 45% against the start of October dropping to 1,200 tons whilst Sibmetakhim also reduced stocks by 45% to 4,500 tons. Metafrax had around 5,900 tons of reserves at the start of November which was 40% down from the preceding month.

Merchant sales of methanol on the Russian domestic market amounted to 1.174 million tons in the first ten months in 2020 against 1.376 million tons in the same period in 2019. The large drop in shipments last year is attributed to the pandemic and its effect particularly on the MTBE market, but also other sectors such as rubber. Nizhnekamskneftekhim reduced purchases of methanol from 195,500 tons in January to October 2019 to 170,000 tons in the same period in 2020 whilst Togliattikaucuk reduced purchases from 130,400 tons to 112,900 tons. Gazprom reduced purchases of methanol for gas hydrates in Siberia from 132,300 tons in the first ten months in 2019 to 104,500 tons in 2020. In addition, most other significant merchant consumers reduced purchases in 2020.

The largest producer of MTBE in Russia, the Ektos plant at Volzhsky, stopped the production on 12 November due to low demand. Ektos fulfilled its contractual obligations for the supply of MTBE by shipping

Russian Methanol Domestic Buyers (unit-kilo tons)		
Consumer	Jan-Oct 20	Jan-Oct 19
Nizhnekamskneftekhim	170.0	195.5
Togliattikaucuk	112.9	130.4
Uralorgsintez	56.1	65.6
SIBUR-Khimprom	15.0	18.4
SIBUR Tobolsk	36.0	35.5
Ektos-Volga	34.9	49.0
Omsk Kaucuk	68.5	74.5
Novokuibyshevsk NPZ	34.8	39.5
Uralkhimplast	16.5	32.3
Slavneft-Yanos	9.6	12.8
Metadynea	63.5	66.2
Kronospan	76.9	90.9
Gazprom	104.5	132.3
Khimsintez	10.8	19.5
Volzhsky Orgsintez	8.5	9.1
Others	363.9	333.6
Total	1182.5	1305.0

the component from the Uralorgsintez plant (Perm Territory). The volume of export shipments of MTBE produced by Ektos-Volga for ten months of 2020 dropped sharply by 45,900 tons to 36,600 tons in 2019. Supplies of MTBE to the domestic market from January to October increased by 4,800 tons, to 47.400 tons compared to 2019.

Metafrax Jan-Sep 2020

In the first three quarters in 2020 Metafrax achieved a net profit of 1.2 billion roubles which was six times lower than for the same period in 2020.

Revenue for Metafrax decreased by 21.5% in the first three quarters last year to 13.9 billion roubles, whilst for the same nine months production costs increased by 2.7% to 7.6 billion roubles. As a result, the plant reduced its gross profit by more than 1.6 times. Exports accounted 34.7% of sales made by Metafrax in the third quarter.



Opposition to methanol plant in Khabarovsk Kray

Residents of the Ayan-May district of Khabarovsk region oppose the possible construction of a world-scale methanol plant of 7.2 million tpa capacity near the village of Ayan. A referendum is to be held in January which could affect the eventual decision on the investment stemming from a Chinese company Hong Kong Corporation Sherwood Energy. Project economics may ultimately be the key to this project.

Gas deposits in the west of Yakutia have been identified as the main feedstock source, which would involve the construction of an industrial complex 3.5 km from the village of Ayan. This would then be followed by the construction of a gas pipeline with a capacity of 20 billion cubic metres per annum and a length of 1,200 km.

Skovorodino methanol plant-Marubeni offtake agreement

The ESN group and Marubeni Corporation have signed a binding contract for the supply of methanol of 500,000 tpa for twenty years to be delivered from the plant under construction at Skovorodino the Amur region. ESN is building a 1 million tpa methanol plant at Skovorodino on the basis of its own railway oil terminal. The volume of investments in the first phase of the project amounts to 55 billion roubles, with a launch date scheduled for 2024, or fourth quarter of 2023.

Pechora methanol project

Having withdrawn from its methanol project in the Ust Luga region the Ruskhim Group has now turned its attention to constructing a methanol plant in the Yamal-Nenets region. Around 200 billion roubles will be invested in natural gas processing into methanol. The raw material for the production of methanol will be sourced from the Korovinokoye and Kuyumzhinskoye gas fields in the Nenets Autonomous Okrug. The project includes the development and development of gas fields, the extraction and preparation of natural gas, the construction of a main gas pipeline for gas transportation and the construction of a natural gas processing plant.

Gas from Gazprom's Power of Siberia pipeline, which runs around 15 km from the plant location will provide the feedstock. Gazprom Interregional is ready to supply about 1.5 billion cubic metres of natural gas per annum for the first phase of the new plant. In addition to the Power of Siberia gas pipeline the methanol plant location at Skovorodino is next to the East

Siberia-Pacific pipeline (ESPO) oil supply system. Even before the construction of the methanol plant is well advanced a second unit is being considered which would increase total capacity to 2 million tpa. The offtake agreement with Marubeni is the first the long-term contract signed by a Russian methanol producer.

Organic chemicals

Russian N-Butanol Production (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Angarsk Petrochemical company	23.8	21.9
Azot Nevinnomyssk	14.5	13.6
Gazprom neftekhim Salavat	52.2	49.4
SIBUR-Khimprom, Perm	25.0	33.6
Total	115.4	118.5
Russian Isobutanols Production (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Angarsk Petrochemical company	15.6	13.4
Gazprom neftekhim Salavat	30.3	27.6
SIBUR-Khimprom, Perm	40.1	45.3
Total	85.9	86.3

Russian butanol production Jan-Oct 2020

Russian normal butanol production totalled 115,400 tons in January to October 2020, against 118,500 tons in the same period in 2019. Gazprom neftekhim Salavat was the largest Russian producer, producing 52,200 tons against 49,400 tons in January to October 2019.

Isobutanol production in Russia dropped from 86,300 tons to 85,900 tons in the first ten months in 2020 during which Gazprom neftekhim Salavat increased production to 27,600 tons from 30,300 tons, and SIBUR-Khimprom reduced from 45,300 tons to 40,100 tons.

Russian domestic butanol sales, Jan-Oct 2020

Whilst merchant butanol sales on the domestic market rose in the first ten months to 50,000 tons from 43,400 tons, demand underwent a significant fall in the second quarter due to the economic effects resulting from COVID-19. The largest supplier of butanols to the domestic merchant market in the first ten months in 2020

Russian Butanol Consumption (unit-kilo tons)		
Consumer	Jan-Oct 20	Jan-Oct 19
Akrilat	13.6	14.3
Dimitrievsky Chemical	19.2	14.0
Kazanorgsintez	0.0	0.4
Volzhskiy Orgsintez	7.8	7.9
Roshalsky Plant of Plasticizers	1.5	1.0
Others	7.9	5.8
Total	50.0	43.4

was Angarsk Petrochemical which shipped 21,300 tons against 14,100 tons in the same period in 2019. Most of the butanols produced at Angarsk are sold on the merchant market.

The largest butanol buyer on the domestic market in the first ten months in 2020 was Dimitrievsky Chemical which took 19,200 tons against 14,000 tons of deliveries in January-October 2019 whilst Akrilat at Dzerzhinsk reduced purchases from 14,300 tons to 13,600 tons. In the period January to October 2020 normal butanol exports from Russia amounted to 14,900 tons for \$8.1 million whilst exports of isobutanols amounted to 19,300 tons for \$9.3 million.

Russian Acrylonitrile Exports (unit-kilo tons)		
Country	Jan-Oct 20	Jan-Oct 19
Turkey	109	122.0
Hungary	2.9	5.9
Others	0.0	1.1
Total	111.9	129.0

Russian acetone production & exports, Jan-Oct 2020

Russian acetone production increased in the first ten months in 2020 to 134,300 tons against 116,800 tons in the same period in 2019. Omsk Kaucuk produced 16,600 tons of acetone from the modernised plant which started up in late 2019. This plant has been the main difference to total production in Russia this year.

Russian Acetone Production (unit-kilo tons)		
Producer	Jan-Oct 20	Jan-Oct 19
Ufaorgsintez	37.2	40.1
Kazanorgsintez	37.6	37.5
Novokuibyshevsk Petrochemical	42.9	39.3
Omsk Kaucuk	16.6	0.0
Total	134.3	116.8

Acetone exports from Russia totalled 39,200 tons in the first ten months in 2020 against 35,500 tons in the same period in 2019. Revenues from acetone exports rose from \$15.8 million to \$16.5 million. The domestic market is also benefiting from upward pressure from European prices and all producers have increased prices in the past few months. Supply is tighter this year due to

increased captive consumption at Kazanorgsintez which has capacity for Bisphenol A production. Omsk Kaucuk was the most expensive source of domestic acetone supply in December, priced at 105,000 roubles per ton. The rise in prices has led some buyers to replace expensive acetone with other raw materials, where technology allows.

Russian Imports of isopropanol (unit-kilo tons)		
Country	Jan-Oct 20	Jan-Oct 19
China	17.6	6.2
US	4.2	3.3
Germany	2.9	2.8
South Africa	1.7	2.1
South Korea	1.2	3.5
Others	4.2	3.3
Total	33.0	21.2

Russian TDI Imports (unit-kilo tons)		
Country	Jan-Oct 20	Jan-Oct 19
Belgium	0.4	0.7
China	4.1	0.3
France	0.0	0.3
Germany	11.8	16.3
Hungary	7.8	6.8
Italy	0.1	0.0
Japan	1.0	1.7
Netherlands	1.7	0.1
Saudi Arabia	6.3	7.2
South Korea	5.4	1.8
Turkey	0.2	0.2
US	1.2	4.6
Total	43.1	40.1

Russian Imports of MDI (unit-kilo tons)		
Country	Jan-Oct 20	Jan-Oct 19
Belgium	13.3	12.9
China	29.2	25.7
Germany	18.0	13.4
Hungary	3.1	6.4
Japan	1.6	1.8
Netherlands	25.7	28.9
Saudi Arabia	34.9	33.2
South Korea	1.0	2.0
Others	0.6	1.3
Total	129.7	126.2

Russian isopropanol imports, Jan-Oct 2020

Russian imports of isopropanol increased in the first ten months in 2020 to 33,000 tons against 21,200 tons in the same period in 2019. Costs rose from \$21 million to \$52.9 million. Imports are expected to decline in 2021 Omsk Kaucuk has started production of isopropanol.

The production capacity of the new plant for isopropyl alcohol is 75,000 tpa and is currently in the process of gradual increase in utilisation. Antiseptics have been in great demand since the onset of the COVID-19 pandemic and isopropyl alcohol as the main raw material. Novokuibyshevsk Petrochemical Company is now considering the installation of another plant for isopropyl alcohol.

Russian TDI-MDI Imports

Russian TDI-MDI imports, Jan-Oct 2020

Russian TDI imports amounted to 43,100 tons in the first ten months in 2020 against 40,100 tons in the first same period in 2020. Values of Russian TDI imports dropped from a total of \$81.2 million in January to October 2019 to \$75.8 million.

Germany was the largest supplier of TDI to Russia shipping 11,200 tons in the first ten months of 2020 against 16,300 tons in January to October 2019. Other important suppliers included Hungary which increased TDI shipments to Russia to 6,700 tons against 6,200 tons in January to October 2019 and Saudi Arabia which reduced from 7,200 tons to 6,500 tons. Around 43% of TDI imports into Russia were sold into the Moscow region followed by Tatarstan with 16.1%.

MDI imports into Russia amounted to 129,700 tons in the first ten months in 2020 against 126,200 tons in the same period last year with costs dropping from \$192.8 million to \$174.8 million. Saudi Arabia was the largest supplier accounting for 25.4%, shipping 34,900 tons in the first ten months in 2020 against a similar volume last year. This was followed by China with 24.5% and the Netherlands with 19%. The largest region for Russian MDI imports this year has been the Vladimir Oblast followed by Moscow.

Isocyanate prices

TDI costs for Russian importers rose in October but may now stabilise after a build of supply on the international market. TDI prices are estimated to have risen in October by around €300/ton

from September, whilst polyol contracts climbed to levels not seen since 2015.

It was the fourth consecutive monthly increase in TDI contract prices. Crude or polymeric MDI (PMDI) contracts for October rose €50/ton at the lower end and €70/ton at the upper end of the range, to €1,600-1,900/ton. Monomer MDI price rose €50-100/ton in October to €1,850-2,100/ton. Prices are difficult to forecast in terms of supply affected by chaos in shipping and port deliveries.

Ukraine

Ukrainian polymer imports & production, Jan-Oct 2020

In the first ten months in 2020 polypropylene imports into the Ukrainian market amounted to 113,000 tons, against 112,300 tons in the same period in 2019. Homopolymer imports rose from 85,600 tons to 86,800 tons whilst imports of block copolymers dropped from 12,100 tons to 11,400 tons. Inward shipments of random copolymers dropped from 13,100 tons to 12,900 tons whilst imports of other copolymers amounted to 1,700 tons against 1,000 tons.

Ukrainian Polymer Imports (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
PVC	29.0	41.3
PET	12.4	111.3
LDPE	67.3	66.0
LLDPE	65.1	68.2
HDPE	80.9	79.4
Ethylene Vinyl Acetate	10.5	11.5
PP	113.0	112.3

Polyethylene imports to the Ukrainian market amounted to 224,900 tons in the first ten months in 2020 against 224,200 tons in January to October 2019. HDPE imports rose to 80,900 tons against 79,400 tons, whilst LDPE imports totalled 67,300 tons against 66,000 tons. LLDPE imports totalled 65,100 tons in the first ten months against 68,200 tons in the same period in 2019. Imports of other types of polyethylene into Ukraine, including ethylene vinyl acetate amounted 10,500 tons against 11,500 tons in January to October 2019.

PVC imports into Ukraine amounted to 29,000 tons in the first ten months in 2020 against 41,300 tons in the same period in 2019. The key suppliers of resin to the Ukrainian market are producers from Europe, accounting for around 80% of volumes followed by the US with 17%. Regarding Ukrainian export activity, Karpatneftekhim exported 136,300 tons of PVC in the first ten months against 111,000 tons in January to October 2019.

Karpatneftekhim Production (unit-kilo tons)			
Product	Aug	Sep	Oct
Benzene	8,722	8,806	1,309
Ethylene	19,210	19,898	17,133
Propylene	8,213	8,525	7,264

Karpatneftekhim-butadiene project

Karpatneftekhim has received permission to build a butadiene extraction plant at Kalush with a capacity of 45,000 tpa. Butadiene would be exported to possibly Russia or Central Europe.

On current production activity Karpatneftekhim began repair work on the benzene unit on 7 October with production being discontinued until late November. The company has the capacity to produce 250,000 tpa of ethylene, 117,000 tpa of propylene and 72,000 tpa of C4s.

Karpatneftekhim Petrochemical Exports (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
Propylene	80.3	72.4
Benzene	57.2	52.8

Karpatneftekhim increased exports of propylene in the first ten months in 2020 from 72,400 tons to 80,300 tons, whilst benzene exports dropped rose from 52,800 tons to 57,200 tons. The largest share of propylene shipments was exported to Poland. Karpatneftekhim has encountered several stoppages this year due the high cost of raw materials combined with low prices for polyethylene.

Belarussian Petrochemical Production (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
Ethylene	90.7	83.1
Propylene	55.6	43.0
Benzene	79.9	82.4
Caprolactam	47.8	88.2
OX	17.8	3.5
PX	40.3	11.0
Methanol	53.7	68.9

from 43,000 tons to 55,600 tons, whilst caprolactam production dropped from 88,200 tons to 47,600 tons.

Belarus

Belarussian chemical production, Jan-Oct 2020

Ethylene production in Belarus totalled 90,700 tons in the first ten months in 2020 against 83,100 tons in the same period in 2019. Propylene production increased

Paraxylene production at the Naftan refinery increased in the first ten months in 2020 to 40,300 tons against 11,000 tons in the same period in 2019.

In the first three quarters in 2020 Belarussian chemical companies Belaruskali and Grodno Azot reported significant losses, with total revenues in the sector dropping by 12.7% against the same period in 2019. Profits from sales in the chemical industry in Belarus decreased by 47.1% in the first three quarters to 911.3 million Belarussian roubles. The average profitability of sales in the chemical industry decreased markedly, dropping from 18.6% to 11.3%. The drop in profitability is due mainly to the deterioration of the market for mineral fertilisers.

Belarussian Xylene Imports from Russia (unit-kilo tons)		
Period	Orthoxylene	Paraxylene
Q1 19	4.1	7.9
Q2 19	4.9	1.1
Q3 19	2.7	3.5
Q4 19	1.2	.9
Q1 20	2.7	2.0
Q2 20	3.4	2.5
Q3 20	5.5	6.3

Mogilevkhinmvolokno-paraxylene imports 2020

In January-October 2020 Mogilevkhinmvolokno imported 13,690 tons of paraxylene versus 12,775 tons in the same period in 2019. Gazprom Neft shipped 7,200 tons from the Omsk refinery to Belarus in the first ten months. From other Russian paraxylene producers Ufaneftkhim shipped 2,500 tons of paraxylene in the first ten months in 2020 and Kirishinefteorgsintez 2,400 tons. Mogilevkhinmvolokno uses paraxylene for the production of PET, polymer fibres and threads.

Belarussian Organic Chemical Exports (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
Acrylonitrile	24.0	32.2
Melamine	2.7	6.5
Caprolactam	2.5	7.5
Phthalic anhydride	26.5	27.9
Methanol	10.5	18.4

Belarussian chemical trade, Jan-Oct 2020

Exports of benzene from Belarus increased to 40,744 tons in the first ten months in 2020 against 3,956 tons the previous year. The reason for such a large rise was due to lower caprolactam production at Grodno.

Acrylonitrile export volumes from Belarus dropped in the first ten months in 2020 to 23,954 tons against 32,200 tons in the same period in 2019. Average prices dropped from \$1349 per ton to \$871 per ton. Phthalic anhydride exports from Belarus totalled 26,452 tons in the first ten months in 2020 against 27,900 tons in same period in 2019, with average export prices dropping from \$912 per ton to \$650. Methanol exports from Belarus dropped from 10,500 tons in the first ten months last year to 13,500 tons in 2020.

Belarussian Organic Chemical Imports from Russia (unit-kilo tons)			
Period	Propylene	Methanol	Acetone
Q1 19	11.2	16.1	4.8
Q2 19	9.4	24.8	3.4
Q3 19	6.8	22.4	3.8
Q4 19	4.2	23.0	2.8
Q1 20	8.1	20.4	3.8
Q2 20	0.0	27.6	1.8
Q3 20	0.0	34.0	3.1

Propylene imports from Russia to Belarus have stopped since the first quarter in 2020 due to increased domestic production, dropping to 4,283 tons for the first ten months against 29,043 tons in the same period in 2019. Belarus uses propylene in the production of acrylonitrile. In other organic chemical trade methanol imports into Belarus have increased steadily since the start of 2019 and amounted to 34,000 tons in the third quarter last year. Imports totalled 73,045 tons in January to October 2020 versus 46,901 tons in the same

period in the year before.

Belarussian PTA Imports (kilo tons)		
Country	Jan-Oct 20	Jan-Oct 19
Turkey	0.0	1.0
China	0.0	0.0
South Korea	22.7	9.8
Portugal	8.0	5.0
Poland	25.0	29.5
Thailand	0.0	0.2
Total	55.8	45.6

Belarus imports normally around 3,000 tons of acetone per quarter from Russia for further processing. In December Naftan announced a tender for the purchase of 10,000 tons of acetone intended for the period April 2021 to January 2022. Imports were lower in 2020 totalling 8,612 tons in January to October versus 12,643 tons in the same period in 2019.

PTA imports into Belarus totalled 55,754 tons in the first ten months in 2020 against 45,566 tons in 2019. Average prices dropped from

\$869 per ton to \$642 in 2020. Poland remains the largest supplier of PTA to Belarus, down to 25,000 tons in January to October 2020 against 29,500 tons whilst South Korea increased shipments to 22,700 tons from 9,800 tons.

Belarussian Polymer Imports (unit-kilo tons)		
Product	Jan-Oct 20	Jan-Oct 19
PVC	67.4	52.7
Polypropylene	95.5	97.5
LDPE	33.9	41.9
HDPE	47.6	21.6
Polystyrene	62.4	56.6

key suppliers of resin during this period were producers from Russia, their share in the Belarussian market was about 85%. The second and third place in terms of supply is occupied by producers from Germany and Ukraine with a share of about 8% and 5% respectively.

Belarussian polymer imports, Jan-Oct 2020

In the first ten months in 2020 imports of polypropylene to Belarus increased by 6% amounted to 95,500 tons. Imports of polypropylene homopolymer amounted to 69,000 tons, which is 14% more than in 2019. Imports of propylene copolymers dropped 11% to 26,500 tons.

Imports of PVC into Belarus amounted to 44,600 tons, which is 39% more than in the same period of 2019. The

Central Asia/Caucasus

Azerbaijan polypropylene exports Jan-Oct 2020

In January-October 2020 Azerbaijan exported 92,314 tons of polyethylene for \$58.2 million, amounting to

Azerbaijan Polyolefin Exports Jan-Oct 2020		
Product	Kilo tons	\$ million
Polyethylene	92,314	\$127.608
Polypropylene	67,109	\$54.454

5.05% of the country's non-oil exports. LDPE is produced in Azerbaijan at Azerkhiya and HDPE at the SOCAR Polymer plant, which was commissioned in February 2019. Polypropylene

exports in the first ten months totalled 67,109 tons at \$54.454 million. Azerbaijan exported a total of 169,836 tons of polymer products in January-October 2020 which was 22.1% less than in the same period in 2019. Values dropped 20.8% to \$127.608 million. The export of chemical products from Turkey to Azerbaijan increased by 27.3% from January through October 2020, compared to the same period of 2020, having surpassed \$270.6 million.

Turkmenistan-tenders for iodine-bromine project

Turkmenkhiya has launched a tender for the design and construction of three turnkey factories for the production of iodine, bromine and derivatives in the west of Turkmenistan. Cheleken, Boyadagskoye, Nebitdag-Monzhuklinskoye fields are in active industrial development. The reserve group includes the Gogherendag-Karadashlinskoye field, where over 50% of the iodine reserves of Turkmenistan are concentrated.

The tender expires on 15 January 2021. One of the enterprises is to be designed to produce iodine and iodine derivatives with a capacity of 300 tons per annum; and bromine and bromine derivatives with a capacity of 4,500 tpa. A second plant comprises the annual capacity for the production of 240 tons of iodine and 2,400 tpa of bromine and bromine derivatives.

Methanol Central Asia

In January-October 2020 Azerbaijan exported 403,000 tons of methanol worth \$42.3 million. The share of methanol amounted to 2.9% in the export of the non-oil sector. The plant's production capacity is 720,000 tpa of methanol.

in 2021 the consumption of methanol in Kazakhstan is forecast to increase by one and a half times, to 66-67,000 tons. This is largely due to the expected start-up of the new MTBE plant at the Shymkent refinery will have a capacity of 57,000 tpa. The plant is scheduled to start at the end of the first quarter.

Navoiyazot-methanol start-up

Navoiyazot launched its new methanol plant in Uzbekistan in early December which has a capacity of 295,400 tpa. The company expects to export most of the production as domestic consumption in Uzbekistan does exceed 1,000 tons per month. The closest export market for the company is Kazakhstan, which currently buys around 40,000 tpa of methanol from Russia.

After the introduction of capacity, Navoiyazot will compete with Russian suppliers. From the current plant Navoiyazot produces about 1,000 tons of methanol per month. The bulk of the product is shipped to local

extractive companies, which use it to prevent hydraulic formation in wells for oil and gas production. Navoiyazot also uses methanol in its own production of resins and formalin.

Uzbek plans to stop exporting gas by 2025 and focus on polymers

By 2025, Uzbekistan plans to stop exporting natural gas entirely, processing it instead into polymer products for export. This includes the Uzbekistan GTL project in southern Uzbekistan. The plant was slated for launch at the end of this year, but this has been put back due to the impact of the coronavirus pandemic on construction. Commissioning is expected to take place in the middle of the year.

Uzbekistan also plans to increase capacity at the Shurtan gas chemical plant from 125,000 tpa to 500,000 tpa. In late 2020 Lummus Technology has signed a contract with Enter Engineering as part of the Shurtan Gas Chemical Complex project in Uzbekistan. The company will be responsible for the design and supply of equipment for pyrolysis. Lummus will supply equipment for four pyrolysis furnaces at Shurtan using patented technology, which will increase the production of ethylene by more than twice to 270,000 tpa.

Kazakh polymer trade Jan-Oct 2020

In the first ten months of 2020 imports of polypropylene into Kazakhstan totalled 33,300 tons against 31,000 tons in the same period in 2019. Imports of PP-homo and propylene copolymers totalled 26,300 tons and 7,024 tons respectively against 24,500 tons and 6,500 tons a year earlier. In the first ten months of 2020 19,800 tons of polypropylene from Kazakhstan were shipped for export, compared to 21,000 tons in January to October 2019.

In the first ten months in 2020 imports of polyethylene to Kazakhstan increased by 14% to 154,000 tons against 135,100 tons. HDPE imports rose 21% to 127,300 tons, LDPE imports dropped 17% to 15,800 tons and LLDPE imports rose 4% to 10,800 tons.

Contents from Issue No 361

CENTRAL & SOUTH EAST EUROPE	2
PKN Orlen change in strategic direction	2
PKN Orlen production, Jan-Oct 2020	2
Unipetrol change of name	2
Spolana-mercury removal and lignite to gas	2
Synthos-production & power resources	3
Petrohemija-increase in polyethylene exports	3
BorsodChem-new aniline plant start-up and green strategy	3
PCC Rokita-costs and sales	4
MOL-progress on polyol complex	4
PCC Exol-increased profits in 2020 due to demand for surfactants	4
Grupa Azoty-lower gas prices	5
Chimcomplex Borzesti-polyol expansion	5
Ciech rising profits in 2020 due to high soda ash margins	5
Czech petrochemical trade, Jan-Oct 2020	6
Czech chemical trade, Jan-Oct 2020	6
RUSSIA	7
Russian chemical production, Jan-Oct 2020	7
RUSSIAN PETROCHEMICAL PROJECTS	7
SIBUR-Gazprom feedstock contract for Amur Gas Chemical Complex	7
Nizhnekamskneftekhim-ethylene project update	8
RUSSIAN PETROCHEMICAL MARKETS	8
Russian ethylene production, Jan-Oct 2020	8
Russian propylene production, sales & exports, Jan-Oct 2020	8
Russian styrene production & sales, Jan-Oct 2020	9
BULK POLYMERS	10
Russian polyethylene production and trade, Jan-Oct 2020	10
Russian polypropylene trade, Jan-Oct 2020	10
Russian PVC production & trade, Jan-Oct 2020	11
Astrakhan gas-chemical project	11
Kazanorgsintez-polycarbonate expansion	11
PARAXYLENE-PTA-PET	11
Russian paraxylene trade Jan-Oct 2020	11
Russian PTA imports, Jan-Oct 2020	12
SIBUR signs agreement for recycled PET	12
Ekopet-share sale fails for second time	12
AROMATICS	13
Russian benzene production Jan-Oct 2020	13
Russian caprolactam production, Jan-Oct 2020	14
Russian orthoxylene market, Jan-Oct 2020	14
Russian phenol market, Jan-Oct 2020	14
SYNTHETIC RUBBER	15
Russian rubber production and market balance 2020	15
Russian synthetic rubber exports, Jan-Oct 2020	15
Nizhnekamskneftekhim-rubber exports	15
Togliattikaucuk-rubber exports	16
METHANOL	16
Russian methanol production Jan-Oct 2020	16
Tomet-restart of methanol production affected by technical issues	16

Russian methanol exports, Jan-Oct 2020	17
Russian methanol domestic sales, Jan-Oct 2020	17
Metafrax Jan-Sep 2020.....	18
Opposition to methanol plant in Yakutia.....	18
Skovorodino methanol plant-Marubeni offtake agreement	18
Pechora methanol project.....	18
ORGANIC CHEMICALS	19
Russian butanol production Jan-Oct 2020	19
Russian domestic butanol sales, Jan-Oct 2020	19
Russian acetone production & exports, Jan-Oct 2020	19
Russian isopropanol imports, Jan-Oct 2020	20
RUSSIAN TDI-MDI IMPORTS.....	20
Russian TDI-MDI imports, Jan-Oct 2020.....	20
Isocyanate prices	20
UKRAINE	21
Ukrainian polymer imports & production, Jan-Oct 2020	21
Ukrainian Polymer Imports (unit-kilo tons).....	21
Karpatneftekhim-butadiene project	21
BELARUS.....	21
Belarusian chemical production, Jan-Oct 2020.....	21
Mogilevkhinmvolokno-paraxylene imports 2020	22
Belarusian chemical trade, Jan-Oct 2020.....	22
Belarusian polymer imports, Jan-Oct 2020	23
CENTRAL ASIA/CAUCASUS.....	23
Azerbaijan polypropylene exports Jan-Oct 2020	23
Turkmenistan-tenders for iodine-bromine project	23
Methanol Central Asia	23
Navoiyazot-methanol start-up.....	23
Uzbek plans to stop exporting gas by 2025 and focus on polymers.....	24
Kazakh polymer trade Jan-Oct 2020	24