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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Issue 356, 20 July 2020

Key points from Issue 356

Central European petrochemical markets

- The European Commission has approved the acquisition of Grupa Lotos by PKN Orlen which is conditional on full compliance with a commitment package offered by PKN Orlen
- Polish propylene production amounted to 176,100 tons in the first five months against 184,000 tons in 2019. Ethylene production dropped from 220,000 tons to 200,100 tons
- MOL's petrochemical margin for its plants in Hungary and Slovakia dropped from €402.2 per ton in May to €312.2 in June
- Methanol exports into the Czech Republic amounted to 37,100 tons in the first five months against 54,600 tons in same period last year

Russian chemical production

- Chemical production in Russia rose 5.4% in the first five months in 2020, with the largest increase in production in attributed to primary polymers
- Russian ethylene production amounted to 1.802 million tons in the first five months in 2020 versus 1.316 million tons in the same period in 2019
- Russia produced 1.951 million tons of methanol in the first five months in 2020 against 1.194 million tons in the same period in 2019
- In the first five months of 2020 production of polypropylene in Russia increased by 26% and amounted to 765,200 tons against 607,400 tons in January-May 2019
- Russian phenol production rose in the first five months to 110,500 tons from 95,000 tons in the same period in 2019

Russian chemical trade

- Due to reduced domestic consumption of caprolactam this year Russian exports rose from 78,100 tons in January-May 2019 to 106,900 tons in the same period this year
- Polypropylene exports from Russia amounted to 246,200 tons in the first five months in 2020 against 90,800 tons in the same period last year
- MDI imports into the Russian market amounted to 45,800 tons in the first five months this year against 46,400 tons in January to May 2019tons
- Russian companies increased their methanol shipments for export in the first five months to 972,300 tons against 927,400 tons in the same period in 2019

Russian petrochemical investments

- The season for the delivery of licensed equipment for the Amur Gas Processing Plant (GPP) is currently open whereby the delivery route starts from the port of De Kastri to Nikolaevsk-on-Amur
- SIBUR and Sinopec signed a shareholder agreement in June for the Amur Gas Chemical Complex and the two companies are currently working on regulatory approvals

CENTRAL & SOUTH EAST EUROPE

Orlen-Lotos merger approved by European Commission

The European Commission has approved the acquisition of Grupa Lotos by PKN Orlen which is conditional on full compliance with a commitment package offered by PKN Orlen and also reaching agreement with the trade unions. The decision follows an in-depth investigation of the proposed merger by the Commission, which combines PKN Orlen and Grupa Lotos, two large Polish integrated oil and gas companies.

To address the Commission's concerns, PKN Orlen offered to divest a 30% stake in the Lotos refinery at Gdansk. Other commitments include divesting nine fuel storage depots to an independent logistics operator, and to build a new jet fuel import terminal at Szczecin. This is to be transferred to the independent logistics operator on completion. Lotos is almost entirely focused on refining, but its acquisition should provide Orlen with an expanded base in order to develop its petrochemical investment programme. Moreover, as a larger refining group it may be in stronger position to achieve discounts on feedstock supplies.

PKN Orlen-Margins 2020			
	Currency	***Q1***	***Q2***
Brent crude oil price	$/b	50.1	29.6
Model downstream margin	$/b	11.0	7.3
Model refining margin	$/b	5.8	3.3
Model petrochemical margin	€/ton	845	846

Central European petrochemical margins

PKN Orlen's petrochemical margin recorded a figure of €774 in June against €843 per ton in May. Overall petrochemical margins amounted to €846 per ton in the second quarter versus €845 in the first quarter this year. Refining margins dropped in the second quarter to $3.3 per barrel against $5.8 per barrel from the first three months.

MOL-Margins 2020						
Macro figures	***Jan***	***Feb***	***Mar***	***Apr***	***May***	***Jun***
Brent dated ($/bbl)	63.5	55.4	31.8	18.5	29.0	40.1
MOL Group refinery margin ($/bbl)	4.8	4.8	9.3	9.1	0.4	-1.3
MOL + Slovnaft refinery margin ($/bbl)	5.6	5.4	9.8	9.8	0.7	-1.0
MOL Group petrochemicals margin (€/ton	269.0	335.5	546.5	577.4	402.2	312.5

MOL's petrochemical margin for its plants in Hungary and Slovakia dropped from €402.2 per ton in May to €312.2 in June, whilst the group refinery margin dropped to minus $1.3 against $0.4 per barrel in May. MOL reduced refinery operating rates in the second quarter to around 70% of capacity at its sites in Hungary, Croatia and Slovakia, whilst petrochemical plants were affected in Hungary and Slovakia.

MOL Group Petrochemical production (kt)		
	2019	**2018**
Ethylene	734.0	810.0
Propylene	370.0	421.0
Other products	729.0	810.0
Butadiene	80.0	88.0
Raffinate	139.0	135.0
LDPE	211.0	241.0
HDPE	355.0	402.0
PP	464.0	517.0

Slovnaft undertook a maintenance shutdown at the end of June, lasting for around four weeks. Investments into maintenance have been estimated at €7 million. The Bratislava refinery processed 5.1 million tons of crude oil in 2019 which was 5.9% down on 2018. Slovnaft processed 722,000 tons of crude feedstocks last year which was 12% less. Polypropylene production totalled 228,000 tons which was 9.1% lower than in 2018. Polyethylene production at Bratislava dropped 14% in 2019 to 154,000 tons.

In the area of petrochemical development, Slovnaft continues to work with other parts of the MOL Group on a strategy to reduce fuel production and how to increase petrochemical production. As part of the strategy, Slovnaft has expanded the focus to a new programme of processing crude oil more efficiently and reduce fuel oil production. Another part of the long-term strategic programme is the reduction of CO2 levels from the plant.

Due to environmental concerns that Slovnaft is too close to Bratislava politicians have recently recycled an old idea that Slovnaft should relocate inside Slovakia. Nitra has been mentioned as a possible alternative, but Slovnaft has rejected any such suggestions.

PKN Orlen Chemical Production (unit-kilo tons)		
Product	***Jan-May 20***	***Jan-May 19***
Ethylene	200.1	220.0
Propylene	176.1	184.0
Butadiene	25.0	28.5
Toluene	4.5	5.5
Phenol	20.9	18.7
Polyethylene	83.5	100.1
PVC	74.9	68.7
Polypropylene	89.7	82.5

PKN Orlen petrochemical production, Jan-May 2020

Polish propylene production amounted to 176,100 tons in the first five months against 184,000 tons in the same period in 2019. At the same time ethylene production at Plock dropped from 220,000 tons to 200,100 tons. PKN Orlen completed maintenance at the end of June at the phenol and acetone plants after one month of stoppage. The production capacity of the site is 55,000 tpa of phenol and 34,000 tpa of acetone.

PKN Orlen has begun construction of the Visbreaking installation which is of key importance for the refinery at Płock. Investment works related to the Visbreaking installation will be completed in 30 months, which means that production from this installation should start in December 2022. In parallel, the infrastructure for connecting Visbreaking to the rest of the refinery will be implemented.

Shares in European Polyethylene Market (%)		
Producer	***2019***	***2018***
Orlen Group	4.0	4.2
SABIC	12.0	11.9
Borealis	13.1	13.1
LyondellBasell	16.3	16.5
Others	54.6	54.5
Total	100	100

As part of the integration of refinery and petrochemical assets and the extension of the value chain, PKN Orlen is also accelerating other investments at Płock. The full start-up of the PE3 plant at Litvinov will help the Orlen Group to increase its share in the European market which last year comprised 4%.

Orlen Group-lactic acid project

The Orlen Group is constructing an installation using the microorganisms at the Trzebinia will transform raw materials of plant origin into ecological lactic acid which is widely used in the chemical, food, pharmaceutical and agricultural industries. At the pilot stage, the installation will produce 5 tons of lactic acid per annum, and the target capacity of 5,000 tons per annum when completed will cover all domestic demand for this product.

Serbian Chemical Exports (unit-kilo tons)		
Product	***Jan-Apr 20***	***Jan-Apr 19***
Polyethylene	32.2	30.9
Polypropylene	5.5	4.3
Styrene Butadiene Rubber	7.1	5.7
Methanol	39.4	31.9
Acetic Acid	31.5	22.7

Petrohemija proves too expensive for Russian investors

While the International Monetary Fund continues to insist that Serbia privatize Petrohemija, the authorities in the government is still unable to find a buyer. Belgrade is persistently trying to appease Moscow so that NIS, owned by Gazprom, can buy the plant in Pancevo, but the Russians do not see any economic interest in that investment.

Even during the negotiations on the purchase of the oil refining company NIS Gazprom Neft made it clear that it was not interested in the petrochemical plant. The majority owner of Petrohemija is the state with 76% of shares in its hands, while 3% belongs to Lukoil. One of the reasons cited why Petrohemija is uninteresting for Gazprom Neft and other Russian investors is that Russia is already building large petrochemical complexes on its territory in cooperation with Chinese companies.

PCC Rokita Q1 2020

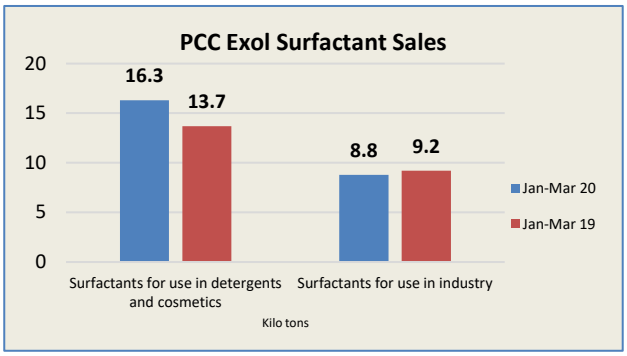
PCC Rokita has reduced propylene oxide imports over the past two years as domestic production has risen at Brzeg Dolny. PCC Rokita recorded zl 16.04 million of net profit in Q1 2020 compared to zl 37.74 million in the same quarter in 2019. Operating profit amounted to zl 28.67 million against zl 60.51 million a year earlier. EBITDA was zl 69.95 million, compared to zl 84.84 million a year earlier. Consolidated sales revenues reached zl 374.4 million in Q1 2020 compared to zl 384.12 million.

Polish Imports of Propylene Oxide (unit-kilo tons)			
Country	***2018***	***2019***	***Q1 20***
Belgium	3.041	0.0	0.0
Netherlands	14.350	9.445	0.797
Germany	0.155	0.230	0.0
Total	17.545	9.499	0.797

In the first quarter the chlorine sector was marked by further drops in alkali prices. Despite higher sales volumes, EBITDA was 61% lower. compared to the same period last year. The drops in alkali prices that

have been observed for a long time have been discontinued and upward trends are currently being recorded. The polyurethane segment, the group's second main production division, generated a 29% increase EBITDA profit compared to same period in 2019. The segment was also struggling with low demand for polyether polyols, in particular in the area of flexible foams.

In the first quarter of this year impact of the COVID-19 pandemic on operations had not been significantly noticeable for PCC Rokita but the second quarter has been much more affected. Despite the difficult beginning of the second quarter, now began to note a gradual increase in orders at simultaneous observed gradual improvement in moods on the polyurethane market.



PCC Exol has also begun research on the development of surfactants with a special polymeric structure, in addition to carrying out subsequent stages of the investment at the ethoxylate plant at Brzeg Dolny.

Regarding investments in 2019 PCC Rokita expanded its propylene storage base and expanded the electrolysis plant to increase production capacity. Other investments included the expansion of capacity for propylene oxide. In 2018 PCC increased the capacity of the monochloroacetic acid plant at Brzeg Dolny from 42,000 tpa to 50,000 tpa. The medium-term goal is to expand MCAA production up to 100,000 tpa.

Anwil project-vinylidene chloride

Anwil is exploring the possibility of producing vinylidene chloride from trichloroethane, a by-product from chlorination and ethylene oxychloride. If approved the contract will be awarded in accordance with the guidelines on eligibility of expenditure under the European Regional Development Fund.

Czech Petrochemical Exports (unit-kilo tons)		
Product	***Jan-May 20***	***Jan-May 19***
Ethylene	6.0	39.8
Propylene	5.1	2.9
Butadiene	0.0	2.0
Benzene	8.4	28.7
Toluene	2.3	5.8
Ethylbenzene	29.4	67.2

Czech petrochemical trade, Jan-May 2020

Unipetrol reduced exports of ethylene in the first five months to 6,000 tons against 39,800 tons in January to May 2019 whilst propylene exports amounted to 5,100 tons against 2,900 tons. Ethylbenzene exports from Kralupy dropped in January to May 2020 to 29,400 tons against 67,200 tons in the same period last year. No shipments of ethylbenzene were made in April and May.

For inward shipments benzene imports into the Czech Republic amounted to 33,200 tons in the first five months against 40,400 tons. Last year Poland shipped 90,351 tons of benzene to the Czech Republic supplemented by 11,273 tons from Serbian refinery NIS at Pancevo. Propylene imports increased to 17,900 tons in the first five months, whilst styrene monomer shipments rose to 13,300 tons.

Czech Petrochemical Imports (unit-kilo tons)		
Product	***Jan-May 20***	***Jan-May 19***
Ethylene	2.2	0.0
Propylene	17.9	15.8
Butadiene	20.5	6.0
Benzene	33.2	40.4
Toluene	2.1	0.0
Styrene	13.3	9.5

Czech methanol imports Jan-May 2020

Methanol exports into the Czech Republic amounted to 37,100 tons in the first five months against 54,600 tons in same period last year. Russian shipments dropped from 31,800 tons to 14,100 tons, whilst volumes from Poland jumped from 3,100 tons to 15,600 tons. Polish shipments into the Czech market this year are thought to be Russian produced methanol.

Romgaz considers methanol project

Romgaz is interested in constructing a methanol plant in Romania, as one of the development directions of the company for the period 2020. In this context, Romgaz is studying the possibility of converting natural gas into methanol by making an investment in the construction of a new (greenfield) methanol production

unit. Earlier in 2020 Romgaz abandoned the idea of building a new chemical plant at a cost of €2.5 billion, whilst the costs of constructing a new methanol plant might amount to around €300 million.

Czech Methanol Imports (unit-kilo tons)		
Country	***Jan-May 20***	***Jan-May 19***
Germany	5.8	10.7
Norway	0.3	7.3
Russia	14.1	31.8
Slovakia	0.5	0.1
Poland	15.6	3.1
Others	0.8	1.6
Total	37.1	54.6

Romgaz is the largest gas producer in Romania and is seeking ways to add value. The costs of investing into petrochemicals seems too expensive whilst methanol investment costs are more realistic. Romgaz natural gas production activities are performed by the two production branches with the headquarters in Medias and Tg. Mures, operating together over 140 commercial fields located in Transylvania, Moldova, Oltenia and Muntenia.

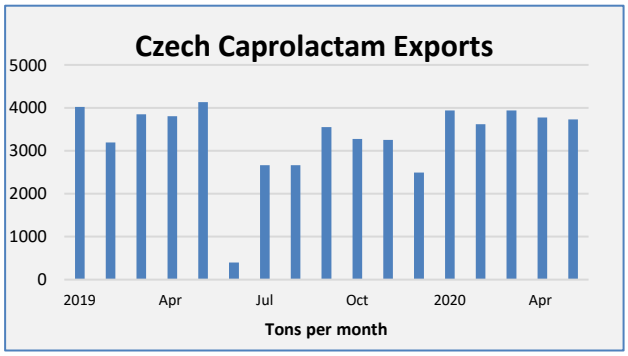
Czech chemical trade Jan-May 2020

TDI imports into the Czech Republic amounted to 2,328 tons in the first five months at a cost of €6.515 million, down from 3,723 tons in the same period in 2019 at a total cost of €10.127 million. MDI imports into the Czech Republic amounted to 10,865 tons in the first five months against 10,824 tons in 2019, whilst costs of imports dropped from €15.221 million for €17.670 million.

Czech MDI Imports (unit-kilo tons)		
Country	***Jan-May 20***	***Jan-May 19***
China	1.0	1.0
Belgium	3.0	2.4
Germany	4.5	3.7
Italy	0.1	0.1
Hungary	0.8	0.7
Netherlands	1.0	0.5
Others	0.4	2.4
Total	10.8	10.9

Phthalic anhydride exports from the Czech Republic totalled 5,255 tons in January to May this year for €4.244 million, against 6,279 tons at a value of €6.058 million. Regarding DINP plasticizers, imports into the Czech Republic totalled 4,082 tons in January to May 2020 at a total cost of €4.055 million. This reflected a rise from 5,353 tons in January to May 2019 for a total cost of €6.688 million.

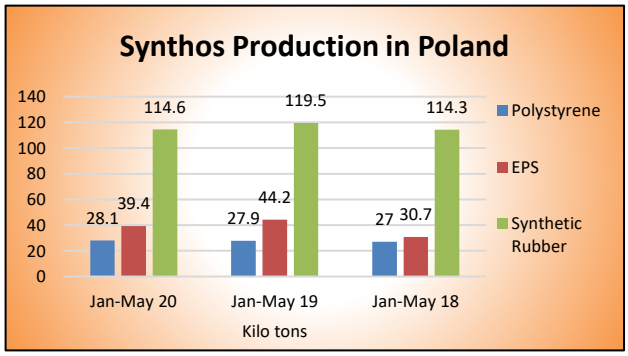
DINP plasticizer exports from the Czech Republic totalled 22,365 tons in the first five months in 2020 at a total cost of €19.693 million against 17,098 tons in the same quarter last year for €20.657 million.



Spolana is conducting maintenance at the caprolactam plant from 1 August for around a month. Exports of caprolactam from the Neratovice plant were stable in the months of April and May whilst the lockdown was in full effect.

Synthos Jan-May 2020

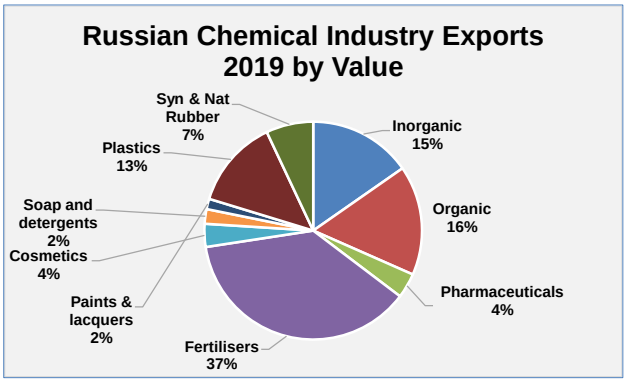
Synthos produced 114,600 tons of synthetic rubber in the first five months in 2020 against 119,500 tons in the same period in 2019. Tyre production dropped in April and May after a strong first quarter and thus overall rubber used in this sector dropped from 174,000 tons to 170,300 tons for the first five months this year. Production of expandable polystyrene dropped from 44,200 tons to 39,400 tons whilst general polystyrene production dropped from 28,100 tons to 27,900 tons.



Polish Chemical Production (unit-kilo tons)		
Product	***Jan-May 20***	***Jan-May 19***
Caustic Soda Liquid	159.1	145.6
Caustic Soda Solid	31.0	24.5
Caprolactam	67.5	73.6
PVC	116.5	123.0
Polypropylene	146.7	144.9
Synthetic Rubber	114.6	119.5
Pesticides	34.2	28.1
Nitric Acid	1035.0	1040.0

RUSSIA

Russian Chemical Production (unit-kilo tons)		
Product	***Jan-May 20***	***Jan-May 19***
Caustic Soda	552.0	535.0
Soda Ash	1,472.0	1,427.0
Ethylene	1,801.6	1,317.8
Propylene	1,032.5	1,004.0
Benzene	502.0	614.4
Xylenes	170.3	149.3
Styrene	300.2	326.2
Phenol	110.5	94.9
Ammonia	8,500.0	7,800.0
Nitrogen Fertilisers	4,824.0	5,005.0
Phosphate Fertilisers	1,847.0	1,753.0
Potash Fertilisers	4,054.0	3,649.0
Plastics in Bulk	4,115.0	3,497.0
Polyethylene	1,418.0	947.0
Polystyrene	234.1	227.9
PVC	458.6	444.4
Polypropylene	783.3	632.1
Polyamide	70.9	65.4
Synthetic Rubber	615.0	661.0
Synthetic Fibres	62.0	69.7



Russian chemical production, Jan-May 2020

Chemical production in Russia rose 5.4% in the first five months in 2020, with the largest increase in production in attributed to primary polymers.

COVID-19 has thus far had limited impact on production volumes, although markets and prices have for many products been badly affected during the second quarter. Styrene and synthetic rubber saw the largest falls this year, whilst benzene production dropped 1.7% to 615,000 tons. Caustic soda production amounted to 552,000 tons, which is 1.4% more than in 2019.

In May the production of bulk polymers increased to 820,000 tons against 775,000 tons in April. Total primary production of polymers amounted to 4.115 million tons, which is 16.6% more than a year earlier which was due to increased loading at ZapSibNeftekhim.

Russian chemical trade, Jan-May 2020

Exports and imports of chemicals and chemical products have remained fairly stable in terms of aggregate figures for the first five months in 2020 despite the pandemic. The most important countries for imports included Germany (14.5%), China (11.6%) and France (8.2%). The most important destinations for Russian exports included Kazakhstan (7.5%), Finland (6.9%) and Belarus (6.4%).

Fertilisers represent the largest category of chemical exports followed by organic chemicals, including methanol where volumes are up this year although prices and margins much reduced. In the synthetic rubber sector exports were down sharply in the first five months. Regarding imports, pharmaceutical products comprised the largest sector followed by organic chemicals where physical volumes were up in January to May 2020.

The orientation of the Russian chemical industry towards the export of large-tonnage products results in heavy dependency on imports of higher added products. The chemical industry in 2019 accounted for only 4.6% of total exports based on 2019 data whilst imports accounted for 13.1%.

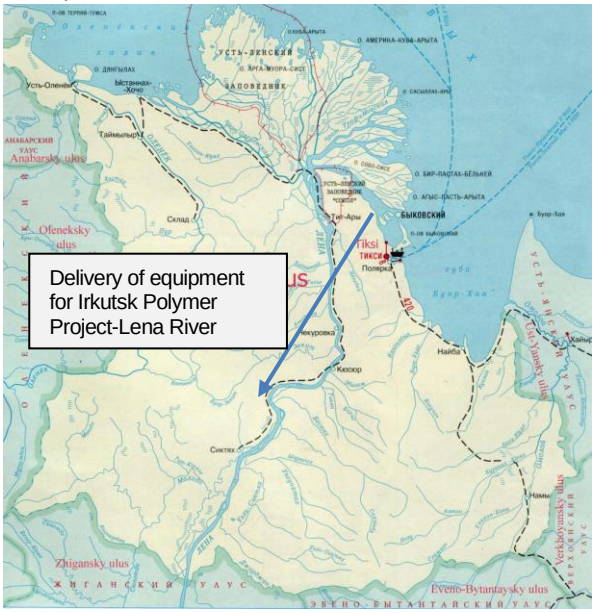
Last year, exports of chemical industry products increased by 2.7% in physical terms but fell by 1.5% in value terms, mainly due to falling prices for ammonia and fertilisers. Other important commodities such as methanol and synthetic rubber each experienced price falls last year. COVID-19 and its wider economic impact has only amplified the imbalance in product focus in the Russian chemical industry, but it is not clear yet if at all how that may change perceptions towards investment.

Russian petrochemical projects

Irkutsk Polymer Plant-equipment deliveries

A large shipment of equipment was shipped from the South Korean port of Masan in June for the Irkutsk Polymer Plant (IZP) under construction at Ust-Kut. A total of 45 units were shipped to Masan, comprising a total weight of 4,500 tons of which the largest unit of equipment was the deethanizer with a length of 81.9 metres, and weight 357 tons. Also, included the equipment deliveries is a polymerization reactor with a length of 44.5 metres and a weight of 597 tons. All equipment was manufactured at factories in Japan, Korea and China.

The delivery route to Ust-Kut includes transportation along the Northern Sea Route through the Far East port of Tiksi. On the route section from the Chukchi Sea to the Laptev Sea, ships with cargo are then escorted by Atomflot icebreakers. Oversized equipment was to be loaded with ship cranes onto nine river barges by mid-July. Then the barges, accompanied by tugboats, will head up the Lena River.



Arrival of the first barges at Ust-Kut is expected by second half of August. By the end of September, all barges are planned to be unloaded, and the equipment delivered by specialized modular vehicles to the prepared sites.

The production capacity of the polyethylene plant at Ust-Kut will be 650,000 tpa. Natural and associated gas produced at fields in Ust-Kut and other northern regions of the region (Yarakta) will supply the feedstocks. Irkutsk Polymer expects to create 1,200 permanent new jobs (7,000 at the construction stage) from the project.

Irkutsk Oil Company (INK) is unable to supply gas to Russian consumers as the market is too distant and there is no infrastructure to provide a connection. At the same time despite being located near to the Power of Siberia gas pipeline to China, only Gazprom has the right to use this route thus ruling out this option for INK. Thus, the company has decided the most logical usage of gas would be to produce polyethylene.

Irkutsk Oil Company-helium contract

Irkutsk Oil Company (INK) and international energy company Uniper have signed a long-term contract for the purchase and sale of liquefied helium. INK plans to launch a helium plant at the Yarakta field in late 2021. Production capacity will be 10 million litres of liquefied gas per annum. ThyssenKrupp Industrial Solutions LLC (RUS) is providing the technical and technological support for the helium project.

Besides the polyethylene plant ThyssenKrupp Industrial Solutions is building a liquid helium at Ust-Kut for Irkutsk Oil Company with a capacity of 10 million litres per annum. Commissioning of the enterprise is scheduled for 2022.

Amur Gas Processing Plant-equipment deliveries

The season for the delivery of licensed heavy oversized equipment for the Amur Gas Processing Plant (GPP) is currently open. The delivery route extends 237 km by sea from the port of De Kastri to Nikolaevsk-on-Amur, another 1923 km along the Amur River finally the hardest part of the journey along Zeya River of around 212 km to the terminal which is near the site of the gas processing plant under construction.

Delivery of equipment starts from the South Korean port of Masan is sent to the port of De Kastri. The first and largest batch of the 2020 season includes a demethanizer with a transport weight of 860 tons. This equipment arrived in Russia in late May (using a crane ship) at De Kastri was unloaded on four barge-tow trains which took around 25 days to arrive over the journey of 2,500 km

The Zeya River is narrow with numerous rifts and also requires deepening the fairway in shallow water. It requires constant adjustment of the ship's charts due to the fact that its fairway can change several times during navigation. Daily monitoring of the water level and weather forecast are carried out which is fundamental for the transportation of heavy oversized equipment.

In the 2020 season, the total volume of deliveries of bulky and heavy cargo scheduled for delivery to the Amur GPP amounts to 43 pieces of equipment with a total weight of about 8,000 tons. The transportation of heavy oversized equipment for the Amur GPP is carried out by the Special Project together with Combi Lift GmbH under a contract with Linde AG.

The design capacity of the Amur Gas Processing Plant comprises 42 billion cubic metres per annuum of gas (six production lines with a capacity of 7 billion cubic metres per annum each). The Amur GPP will include the world's largest helium production with a capacity of 60 million cubic metres per annum. In addition to natural gas and helium, the GPP's commercial products will comprise ethane which is intended for sale to the proposed Amur Gas Chemical Complex. Until the plant is built, on which the decision has yet to be reached by SIBUR, the ethane fraction will go to China as part of the deals on natural gas at no extra charge. The level of progress in the construction of the Amur Gas Processing Plant had amounted to 63.4% by the end of June.

Baltic Gas Chemical Complex-gas agreement with Gazprom

Gazprom signed one of its largest gas supply contracts in June with Ruskhimalliance, concluded for a period of twenty years as part of a project to create a complex for processing and liquefying ethane-containing gas in the Ust-Luga region. The volume of gas deliveries has been agreed at 45 billion cubic metres per annum. Ruskhimalliance and the Baltic Chemical Complex (a 100% subsidiary of Rusgazdobycha), signed a contract for the supply of ethane fraction for further processing at a gas chemical plant connected with the integrated complex. The petrochemical plant is intended to produce up to 3 million tpa of various grades of polyethylene.

Engineering surveys were carried out at the construction site, in May preparations were made for the start of work. In October 2019, Rusgazdobycha signed a FEED and an EPC contract with the China National Chemical Engineering Group Corporation (CNCEC). In November 2019 Baltic Chemical Complex entered into licensing agreements with Lummus Technology on ethylene production technology.

The project provides for the construction of two ethylene cracking units with a capacity of 1.4 million tpa each (total capacity 2.8 million tpa). Six polyethylene production units with a capacity of 480,000 tpa with a total capacity of 2.88 million tpa, in addition to two plants for the production of linear alpha-olefins with a capacity of 137,000 tpa (274,000 tpa in total).

SIBUR-Sinopec jv for Amur Gas Chemical Complex

SIBUR and Sinopec signed a shareholder agreement in June for the Amur Gas Chemical Complex and the two companies are currently working on regulatory approvals. SIBUR and Sinopec have signed a shareholder agreement to create a joint venture for the Amur Gas Chemical Complex project. SIBUR plans to place five-year Eurobonds worth $500 million. If SIBUR makes a final investment decision for the project, Sinopec plans to participate in the joint venture with a 40% stake. SIBUR tentatively estimates investments in the creation of the Amur Gas Chemical Complex at around $10.7 billion.

The Amur Gas Chemical Complex will be connected with a range of pipelines to the Amur Gas Processing Plant, from which it will receive ethane as a raw material. SIBUR is considering the possibility of implementing the project in either one of two configurations including 1.5 million tpa of ethylene based on 2 million tpa of ethane and up to 2.7 million tpa of ethylene based on 2 million tpa of ethane and 1.5 million tpa of LPGs. The commissioning of the first capacities of the Amur Gas Chemical Complex are not expected to take place until 2024-2025. The Amur Gas Chemical Complex and the Amur Gas Processing Plant are envisaged as creating a large gas processing and gas chemical cluster in the Amur Region, which will become the driver of the economic development in the Far East.

Russian petrochemical markets

Russian ethylene production, Jan-May 2020

Russian ethylene production amounted to 1.802 million tons in the first five months in 2020 versus 1.316 million tons in the same period in 2019. Production of ethylene remains unaffected thus far by COVID-19, with all plants running to normal. ZapSibNeftekhim produced 452,200 tons of ethylene in January to May 2020 from the new plant at Tobolsk, whilst Nizhnekamskneftekhim increased production from 272,100 tons to 274,400 tons.

Russian Ethylene Production (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Angarsk Polymer Plant	99.0	94.0
Kazanorgsintez	269.6	274.8
Stavrolen	146.5	139.9
Nizhnekamskneftekhim	274.4	272.1
Novokuibyshevsk Petrochemical	20.2	28.0
Gazprom n Salavat	161.8	159.1
SIBUR-Kstovo	179.4	157.3
SIBUR-Khimprom	23.9	23.5
Tomskneftekhim	118.6	114.9
Ufaorgsintez	56.1	52.9
ZapSibNeftekhim	452.2	0.0
Total	1801.7	1316.4

Ethylene prices in Russia rose in July to around 35-46,000 roubles per ton from 31-35,000 roubles in June. This follows the European contract price rise in July where ethylene producers increased by around €84 to €764 per ton Northwest Europe.

Regarding Russian plant downtime, the Angarsk Polymer Plant (part of Rosneft) maintenance started on 20 June which will last until 30 July. During this period, the company will not produce ethylene, propylene, C4s, benzene and styrene.

Tomskneftekhim started maintenance on 12 July whereby repairs are being carried out on the pyrolysis unit. During this period, the company will not produce olefins and C4s. The restart is scheduled for 10 August.

SIBUR-Kstovo started scheduled repairs from 19 July lasting to August 15. The production of ethylene, propylene, C4s and benzene will be discontinued. The repairs were originally planned for April and May, but SIBUR decided to postpone the maintenance work in July.

Russian Propylene Production (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Angarsk Polymer Plant	54.6	51.9
Kazanorgsintez	21.3	21.9
Lukoil-NNOS	94.6	126.0
Stavrolen	56.1	55.8
Nizhnekamskneftekhim	131.6	137.7
Novokuibyshevsk	16.6	19.0
Omsk Kaucuk	19.7	16.1
Polyom	75.4	80.1
Gazprom neftekhim Salavat	69.9	71.5
SIBUR Kstovo	77.9	69.2
SIBUR-Khimprom	25.1	28.7
Tomskneftekhim	66.8	61.4
SIBUR Tobolsk	143.8	184.2
Ufaorgsintez	79.1	80.7
ZapSibNeftekhim	175.2	0.0
Total	1107.7	1004.0

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

Russian propylene production amounted to 1.108 million tons in the first five months up from 1.004 million tons in the same period in 2019. The rise was due largely to the addition of ZapSibNeftekhim which produced 175,200 tons in January to May 2020. SIBUR's Tobolsk plant reduced production from 184,200 tons to 143,800 tons, whilst Nizhnekamskneftekhim produced 131,600 tons against 137,700 tons and Lukoil-NNOS produced 94,600 tons against 126,000 tons.

Russian Propylene Domestic Sales (unit-kilo tons)		
Company	***Jan-May 20***	***Jan-May 19***
Angarsk Polymer Plant	36.8	36.3
SIBUR-Kstovo	68.4	54.8
Lukoil-NNOS	84.4	87.9
Others	16.8	17.1
Total	193.4	186.1

In June, there was an increase in the consumption of propylene in the Russian market after Saratovorgsintez resumed production on its second line for acrylonitrile. At the end of May, shipments of propylene fraction from Belarus began to Russian enterprises, including NPP Neftekhimiya, SIBUR-Khimprom and the Synthetic Alcohol Plant. The Plant of Synthetic Alcohol entered into a direct contract for the supply of 1,500 tons of propylene from Polymir after encountering difficulties in buying product from Russian suppliers.

Major Russian Propylene Domestic Purchasers (unit-kilo tons)		
Consumer	***Jan-May 20***	***Jan-May 19***
Saratovorgsintez	65.9	79.5
SIBUR-Khimprom	23.8	26.9
Omsk-Kaucuk	11.5	11.3
Tomskneftekhim	2.5	2.5
SIBUR Tobolsk	51.3	38.3
Moscow Refinery	8.0	6.6
Ufaorgsintez	8.6	2.1
Plant of Synthetic Alcohol	8.3	4.4
Others	13.5	14.5
Total	193.4	186.1

Russian sales of propylene on the domestic merchant market amounted to 193,400 tons in the first five months in 2020 against 186,100 tons in the same period last year. The increase in supply due to higher demand by SIBUR-Tobolsk for crude propylene to produce polypropylene whilst maintenance was being undertaken in the first quarter.

A total of 51,300 tons of propylene was shipped to the SIBUR Tobolsk plant, 85% more than the same period last year.

Lukoil-NNOS at Kstovo shipped 84.400 tons to the domestic market against 87,900 tons in the same period last year, whilst SIBUR-Kstovo shipped 68,400 tons to the merchant market against 54,800 tons. The largest merchant consumer of propylene in Russia Saratovorgsintez at Saratov purchased 65,900 tons in the first five months in 2020 against 79,500 tons in the same period in 2019.

Russian Propylene Exports (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Lukoil-NNOS	16.5	21.0
SIBUR-Kstovo	3.4	6.1
Omsk Kaucuk	0.0	0.0
Angarsk Polymer Plant	0.7	0.0
Stavrolen	2.0	11.1
Total	22.6	38.2

Russian propylene exports amounted to 22,600 tons in the first five months in 2020 against 38,200 tons in the same period in 2020. Exports were dominated this year by Lukoil-NNOS which shipped 16,500 tons for export against 21,000 tons in the same period in 2019.

Russian styrene production & sales, Jan-May 2020

Russia reduced styrene production min the first five months to 301,200 tons against 326,200 tons in the same period in 2019. The largest producer Nizhnekamskneftekhim increased production from 126,500 tons to 126,800 tons, whilst Gazprom neftekhim Salavat reduced production from 99,700 tons to 74,500 tons. SIBUR-Khimprom at Perm produced 60,900 tons versus 62,200 tons.

Russian Styrene Production (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Nizhnekamskneftekhim	126.8	126.5
Angarsk Polymer Plant	17.2	17.7
SIBUR-Khimprom	60.9	62.2
Gazprom n Salavat	74.5	99.7
Plastik, Uzlovaya	21.8	20.1
Total	301.2	326.2

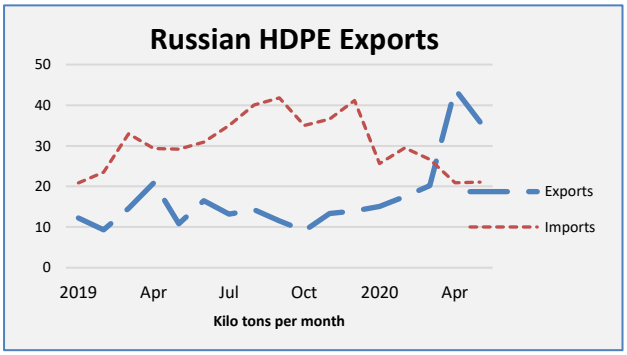
Styrene exports from Russia totalled 45,200 tons in the first five months in 2020 against 58,200 tons in the *same period last year.* Gazprom neftekhim Salavat reduced exports from 49,800 tons to 33,200 tons, whilst Angarsk Polymer Plant shipped 1,300 tons in the first five months this year against 3,200 tons. The main destination for styrene exported from Salavat is Russia taking 57.4% of shipments in the first five months, followed by Turkey with 24.4% and Norway 8.8%. Revenues from styrene exports dropped from $46.6 million in January to May 2019 to $34.5 million in 2020.

Russian Styrene Domestic Sales (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Angarsk Polymer Plant	9.1	9.2
Plastik	0.8	0.4
Gazprom n Salavat	22.9	21.8
SIBUR-Khimprom	10.9	18.8
Nizhnekamskneftekhim	0.0	2.1
Total	43.8	52.2

The prices of European styrene rose from $620 per ton in June up to $690 in July, increasing due to rising ethylene and benzene costs.

Styrene sales on the Russian domestic merchant market totalled 43,800 tons in January to May 2020 against 52,200 tons in the same period in 2019. Gazprom neftekhim Salavat increased shipments from 21,800 tons to 22,900 tons and SIBUR-Khimprom reduced shipments from 18,800 tons to 10,900 tons. Nizhnekamskneftekhim uses most of its styrene for internal consumption including synthetic rubber and polystyrene.

Bulk Polymers



Russian HDPE trade, Jan-May 2020

The impact of the start-up of the ZapSibNeftekhim HDPE plant this year has been to experience a fall in import activity whilst at the same time leading to an increase in export volumes. Over the first five months in 2020 exports totalled 133,000 tons against 124,000 tons of imports. Volumes of HDPE imports were down from 136,000 tons in January to May 2020, not only due to the start-up of ZapSibNeftekhim but also to economic effects of COVID-19. Exports of HDPE rose from 67,000 tons in the first five months last year to almost double. Export activity from Russia should rise for the rest of the year as ZapSibNeftekhim achieves higher utilisation rates at Tobolsk.

Russian polyethylene shutdowns 2020

In 2020, Tomskneftekhim is reconstructing the second LDPE line. After the reconstruction of the two lines, the plant expects an increase in the polyethylene production capacity by 6.5%. In 2019, the company completed a project in 2019 to upgrade compressor equipment, which allowed to increase the production capacity of triethyl aluminum by 35% from 170 to 230 tons per annum. In 2020, Tomskneftekhim is implementing an investment project to increase triethyl aluminum production up to 459 tons for one calendar year.

Russian Polyethylene Shutdowns 2020			
Producer	***Product***	***Start date***	***Period***
Angarsk Polymer	LDPE	22 June	1 month
Gazprom n Salavat	LDPE	1 July	1 month
Gazprom n Salavat	HDPE	1 July	1 week
Kazanorgsintez	LDPE	28 April	21 days
Tomskneftekhim	LDPE	15 July	2 weeks

Gazprom neftekhim Salavat halted the production of polyethylene for routine preventive maintenance on 1 July. Capacities for the production of LDPE were stopped for 30 days, while the production of HDPE was shut for one week.

The start-up of production at Tobolsk has enabled SIBUR to help provide the raw materials for epidemiological kits. Overalls made of polymeric material contain the necessary level of barrier protection to prevent infection of medical staff during the provision of care to patients with the coronavirus infection.

Russian Polypropylene Production (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Ufaorgsintez	53.5	56.4
Stavrolen	52.1	42.3
Neftekhimya	62.6	61.5
Nizhnekamskneftekhim	92.0	87.3
Polyom	78.9	90.0
Tomskneftekhim	64.4	62.4
SIBUR-Tobolsk	168.6	207.5
ZapSibNeftekhim	193.1	607.4
Total	765.2	607.4

Russian polypropylene production and trade Jan-May 2020

In the first five months of 2020 production of polypropylene in Russia increased by 26% and amounted to 765,200 tons against 607,400 tons in January-May 2019. The main increase in production volumes was provided by ZapSibNeftekhim at Tobolsk, which produced 193,100 tons. SIBUR-Tobolsk reduced production by 19% to 168,600 tons, whilst Polyom at Omsk reduced production by 12% to 78,900 tons.

Nizhnekamskneftekhim produced 92,000 tons compared to 87,300 tons in January to May 2019, Tomskneftekhim increased by 3% to 64,400 tons and Ufaorgsintez dropped production by 4% to 53,500 tons. NPP Neftekhimiya produced 13,000 tons in May against 12,600 tons in April, resulting in a 2% rise in volumes in the first five months to 62,600 tons, which is 2% more than the same indicator in 2019. Stavrolen produced 52,100 tons against 45,000 tons in January to May 2019.

In response to the coronavirus pandemic, ZapSibNeftekhim increased the production of polypropylene grades that are used in the manufacture of non-woven medical masks, and other products such as blisters

for medicines, medical equipment, supplies, and to produce packaging. The polypropylene polymerisation unit at ZapSibNeftekhim was put into operation earlier than the polyethylene plant and has capacity of 500,000 tpa.

Russian Polypropylene Exports (unit-kilo tons)		
Country	***Jan-May 20***	***Jan-May 19***
Belarus	25.7	36.4
China	88.9	3.3
Kazakhstan	6.9	11.7
Poland	19.9	10.3
Serbia	7.1	6.3
Turkey	43.4	2.2
Ukraine	13.2	1.2
Others	39.7	19.4
Total	246.2	90.8

Polypropylene exports from Russia amounted to 246,200 tons in the first five months in 2020 against 90,800 tons in the same period last year. The largest recipient of Russian polypropylene exports was China, taking 88,900 tons followed by Turkey with 43,400 tons and Belarus 25,700 tons.

Revenues from polypropylene exports increased from $118 million in January to May 2019 to $233 million in the same period this year. Imports into Russia amounted to 98,100 tons for $136 million against 88,000 tons for $147 million in 2020. The largest sources of polypropylene imports included South Korea, Belgium and Germany.

Russian PVC production & trade, Jan-May 2020

Russian PVC Production (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Bashkir Soda	114.9	114.9
Kaustik	30.6	31.8
RusVinyl	140.2	140.5
Sayanskkhimplast	138.0	135.7
Total	423.7	422.9

Russian PVC production totalled 432,700 tons in January-May 2020, compared to 422,900 tons last year. In May, RusVinyl produced 29,900 tons of PVC of which 1,800 tons comprised emulsion PVC. Production for RusVinyl in January to May 2020 totalled 140,200 tons against 140,500 tons for the same period in 2019. Sayanskkhimplast produced 138,000 tons of PVC against 135,700 tons. Bashkir Soda Company produced 114,900 tons, unchanged from last year while Kaustik produced 30,600 tons.

Russian PVC Shutdowns 2020		
Producer	***Start date***	***Period***
Bashkir Soda	15 June	5 days
Kaustik	1 July	1 month
RusVinyl	13 July	2 weeks

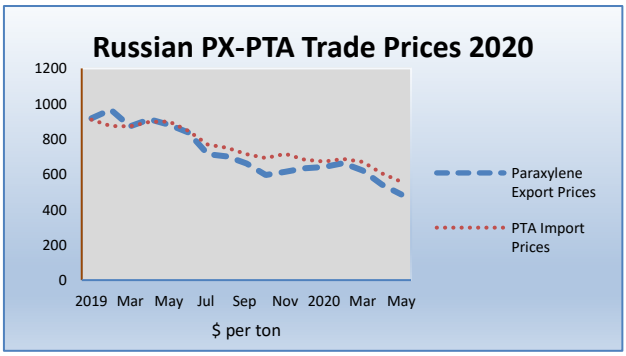
Sayanskkhimplast stopped the production of PVC on 8 July to carry out scheduled preventive repairs which will take about 25 days. The production capacity is 350,000 tpa. RusVinyl stopped production for scheduled preventive repairs from 13 July for two weeks. Bashkir Soda company closed the production of PVC for several days in mid-June due to a lack of ethylene.

Paraxylene-PTA-PET

Russian Paraxylene Exports 2019-2020					
Ktons					
Year	***Jan***	***Feb***	***Mar***	***Apr***	***May***
2020	10.0	1.4	11.9	4.8	23.9
2019	7.3	3.5	18.8	21.4	11.8
$ million					
Year	***Jan***	***Feb***	***Mar***	***Apr***	***May***
2020	6.4	1.0	7.4	2.6	11.6
2019	6.7	3.4	16.4	19.5	10.4

Russian paraxylene exports Jan-May 2020

Paraxylene exports from Russia amounted to 52,000 tons in the first five months in 2020 against 62,800 tons in the same period last year. Whilst volumes amounted to 23,900 tons in May, most of which was exported to Finland, prices dropped to $485 per ton which is the lowest price level since the financial crash in 2008-2009.



Russian PTA imports, Jan-May 2020

Whilst paraxylene export prices were down in May PTA import prices also encountered a fall partly due to the impact from crude prices, dropping to $558 per ton for Russian buyers.

PTA imports into Russia totalled 132,500 tons in the first five months of 2020 against 186,200 tons in January to May 2019. China reduced shipments to Russia to 112,600 tons in January to March 2020 against 135,700 tons whilst South Korea reduced deliveries from 32,900 tons to 7,000 tons. Although Russian PTA imports are still

significant volumes have been lower this year due to the extra production from the sole Russian producer Polief and a shutdown at the Kaliningrad PET plant in January-February this year.

Russian PTA Imports by Country (unit-kilo tons)		
Country	***Jan-May 20***	***Jan-May 19***
Belgium	8.0	12.0
India	0.0	1.0
China	112.6	135.7
South Korea	7.0	32.9
Poland	3.0	1.0
Thailand	0.0	3.0
Others	1.9	0.6
Total	132.5	186.2

Ekopet at Kaliningrad imported 73,000 tons of PTA in January to May against 123,200 tons in the same period in 2019. China supplied 54,201 tons to Ekopet for a cost of $35.214 million, followed by South Korea supplying 7,000 tons for $4.851 million and Belgium which supplied 6,965 tons for $4.184 million.

For the whole of 2019 Ekopet imported 240,400 tons of PTA against 175,200 tons in 2018. In addition to PTA Ekopet also imports MEG where 24,000 tons was shipped into the region (all of which was supplied by Saudi Arabia) in the first five months in 2020.

The other major Russian PET importer Senezh imported 53,600 tons against 31,800 tons in January to May 2019. China supplied 41,175 tons in the first five months to Senezh for a cost of $24.689 million. Senezh is part of the Evroplast group and has a capacity of 100,000 tpa.

Russian PTA Imports by Region (unit-kilo tons)		
Location	***Jan-May 20***	***Jan-May 19***
Kaliningrad	73.0	123.2
Moscow	53.6	31.8
Perm	0.0	0.0
Tver	0.0	8.1
Tyumen	2.5	10.3
Others	3.4	12.8
Total	132.5	186.2

Polief & SIBUR-PETF, PET recycling

Polief is working on a project to launch the recycling and recycling of PET bottles. The project involves the launch of a plant for the post-treatment and sorting of flex (flakes obtained from recycled plastic bottles) from PET bottles with a view to its further use in the production.

SIBUR-PETF is also considering a project to add recycled materials to existing production through chemical processing and cleaning of plastic bottles. Due to properties such as high transparency, high mechanical strength, due to the minimum wall thickness, low permeability for CO2 and a relatively low price, the use of PET is v important for domestic and municipal needs. One of the focuses of SIBUR-PETF is the preservation and further development of the company's competence in the field of environmental protection and nature management, as well as social problems of the region. In 2019, the company spent 51.1 million roubles on an environmental protection programme. SIBUR-PETF produced 75,800 tons of PET in 2019 of which 2,400 tons was exported.

Russian PET Imports (unit-kilo tons)		
Month	***2020***	***2019***
Jan	11.6	10.1
Feb	7.3	9.1
Mar	17.2	13.4
Apr	14.7	23.2
May	22.0	16.4
Total	72.8	72.1

Russian PET imports, Jan-May 2020

Russian PET imports totalled 72,800 tons in the first five months in 2020 against 72,100 tons in the same period last year. Imports rose in May due partly to the increased demand for PPE. In total for the period January-May this year, the estimated PET consumption in Russia amounted to 304,310 tons of material which is 3% down on 2019.

Aromatics

Russian benzene production-sales, Jan-May 2020

Demand for benzene on the Russian market remained low in June. Caprolactam producers reduced operating rates as did phenol producers, with Omsk Kaucuk and Novokuibyshevsk Petrochemical both undergoing maintenance outages. July saw little change for benzene demand as derivative plants completed maintenance, but with scheduled shutdowns at several production plants up to the end of August market is relatively well balanced compared to April at the height of the lockdown. From 21 June to 1 August aromatics production was stopped at Lukoil-Perm, whilst other outages at Angarsk Polymer and SIBUR-

Kstovo in July have helped tighten up supply. Moreover, for technical reasons benzene production at Stavrolen is idle over the summer months. As Gazprom neftekhim Salavat is using all of its benzene for internal processing in July and August this could make merchant purchases difficult for consumers such as Kuibyshevazot.

Russian Benzene Production (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Angarsk Polymer Plant	41.1	36.9
Gazprom Neft	58.2	34.7
LUKoil-Neftekhim	24.4	14.2
LUKoil-Permnefteorgsintez	24.7	21.9
Magnitogorsk MK	17.7	22.4
Nizhnekamskneftekhim	127.5	120.0
Novolipetsk MK	0.6	4.7
Gazprom n Salavat	93.6	80.7
Severstal	14.9	15.3
SIBUR-Holding	39.7	30.2
Slavneft-Yaroslavlorgsintez	27.2	21.7
Surgutneftegaz	25.8	34.8
Ryazan RN Holding	13.2	11.6
Ufaneftekhim	39.9	39.1
Ural Steel	4.5	4.1
Uralorgsintez	32.5	34.1
Zapsib	25.9	32.5
Novokuibyshevsk Petrochemical	7.7	12.1
Total	619.2	571.0

Demand for benzene in the Russian domestic market was severely suppressed in April, culminating in a large surplus in May. Most major consumers held large inventories which reduced the need to purchase more benzene.

Russian benzene production rose in the first five months to 619,200 tons against 571,000 tons in the same period in 2019. Nizhnekamskneftekhim increased production from 120,000 tons to 127,500 tons, whilst Gazprom neftekhim Salavat increased production from 80,700 tons to 93,600 tons. Rosneft's three benzene plants at Angarsk, Novokuibyshevsk and Ryazan produced a combined total of 61,400 tons against 60,600 tons in January to May 2019, whilst Gazprom Neft at Omsk increased benzene production from 34,700 tons to 58,200 tons.

Russian caprolactam production, Jan-May 2020

Russian caprolactam production amounted to 157,500 tons in January to May 2020 against 153,100 tons in the same period in 2019. Kuibyshevazot increased production from 81,300 tons to 84,000 tons whilst SDS Azot at Kemerovo produced 48,700 tons from 50,300 tons. Although market factors are restraining demand for caprolactam, benzene supply side tightness could impact on caprolactam production in July and August for Kuibyshevazot. Shchekinoazot stopped caprolactam production for scheduled repairs in July.

Russian Caprolactam Production (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Kuibyshevazot	84.0	81.3
Shchekinoazot	24.7	21.6
SDS Azot	48.7	50.3
Total	157.5	153.1

Due to reduced domestic consumption of caprolactam this year Russian exports rose from 78,100 tons in January-May 2019 to 106,900 tons in the same period this year.

Kuibyshevazot increased exports from 15,200 tons to 25,000 tons, Azot at Kemerovo increased from 42,400 tons to 59,400 tons and Shchekinoazot from 20,500 tons to 22,500 tons. Revenues from Russian caprolactam exports amounted to $128 million in January to May 2020 against $139 million in 2019.

Russian Caprolactam Exports (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Kuibyshevazot	25.0	15.2
SDS Azot	59.4	42.4
Shchekinoazot	22.5	20.5
Total	106.9	78.1

Russian OX & toluene market, Jan-May 2020

Orthoxylene sales on the Russian domestic market rose in the first five months rose to 67,200 tons against 62,300 tons, due partly to increased usage in fuels.

Russian Orthoxylene Domestic Sales (unit-kilo tons)		
Company	***Jan-May 20***	***Jan-May 19***
Gazprom Neft	35.1	41.6
Ufaneftekhim	29.8	16.8
Kinef, Kirishi	2.3	3.9
Total	67.2	62.3

Kamteks-Khimprom remains the largest orthoxylene buyer in Russia, purchasing 24,400 tons in January to May 2020 against 35,300 tons in 2019. Gazprom neftekhim Salavat reduced purchases from 3,800 tons to 3,100 tons whilst other buyers were much smaller, taking volumes of several hundred tons. Demand for phthalic anhydride in Russia remains low due to the effects of the lockdown policy, putting pressure on pricing.

Russian Toluene Domestic Sales (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Slavneft-Yanos	9.8	7.2
Severstal	4.1	3.0
LUKoil-Perm	12.9	12.8
Gazprom Neft	17.0	23.7
Zapsib	4.3	3.3
Kinef, Kirishi	6.3	9.9
Others	0.4	40.4
Total	54.8	60.2

Toluene sales on the Russian domestic market dropped from 60,200 tons in the first five months against 54,800 tons in the same period last year. The largest supplier to the domestic market was Gazprom Neft at the Omsk refinery which shipped 17,000 tons against 23,700 tons in the previous year. Kirishinefteorgsintez shipped 6,300 tons of toluene to the domestic market against 9,900 tons in the same period in 2019.

In Russia, the price of toluene is repeated by the dynamics of changes in the prices of high-octane gasoline. In the second half of June, the toluene of Kirishinefteorgsintez rose in the North-western Federal District of the country by an average of 7% compared to the beginning of this month, up to 50,000-50,600 roubles per ton including VAT.

In the second half of June Lukoil's Perm refinery stopped for scheduled maintenance including the toluene plant, which will last until early August. In addition, the Omsk refinery is likely to reduce sales, increasing the processing of toluene in the production of high-octane gasoline. The largest Russian domestic buyer usually is TAIF in Tatarstan which buys toluene from Omsk. Domestic producers are expected to reduce the price of toluene due to competition with imported alternative, and low demand for paint, and high-octane motor fuels.

Russian Phenol Production (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Ufaorgsintez	25.9	31.8
Kazanorgsintez	33.8	32.2
Novokuibyshevsk Petrochemical	32.5	31.0
Omsk Kaucuk	18.2	0.0
Total	110.5	95.0

Russian phenol market, Jan-May 2020

Russian phenol production rose in the first five months to 110,500 tons from 95,000 tons in the same period in 2019. Novokuibyshevsk Petrochemical increased production from 31,000 tons to 32,500 tons whilst Ufaorgsintez reduced production from 31,800 tons to 25,900 tons. Kazanorgsintez produced 33,800 tons versus 32,200. The significant difference came from Omsk Kaucuk which produced 18,200 tons in the first five months.

Sales of phenol on the Russian domestic market amounted to 52,600 tons in the first five months in 2020 against 51,300 tons in the same period in 2019. The two largest suppliers were Novokuibyshevsk Petrochemical and Ufaorgsintez, rising from 23,400 tons to 26,400 tons and dropping from 26,200 tons to 14,500 tons in 2019 respectively.

Russian Market Phenol Sales by Supplier (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Omsk Kaucuk	11.5	0.0
Novokuibyshevsk Petrochemical	26.4	23.4
Kazanorgsintez	0.1	1.7
Ufaorgsintez	14.5	26.2
Total	52.6	51.3

Russian Phenol Exports (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Omsk Kaucuk	5.1	0.0
Kazanorgsintez	0.0	3.1
Ufaorgsintez	13.0	5.8
NNK	1.0	1.9
Total	19.1	10.8

The production of phenol and acetone at Omsk Kaucuk was stopped for scheduled repairs on 14 May with production to resumed in June. Omsk Kaucuk returned to the market in December resulting in sales of 11,500 tons on the domestic market in the first five months in 2020. On 28 August Ufaorgsintez expects to begin repair work on the production of phenol and acetone. The planned completion date is 23 September. Ufaorgsintez operates a plant for phenol production with a capacity of up 75,000 tpa acetone up to 45,000 tpa. Kazanorgsintez postponed the dates for repair work on the production of phenol and acetone from August and expects to stop the plants on 28 September lasting through to 25 October.

Export activity for Russian phenol increased in the first five months to 19,100 tons of phenol against 10,800 tons in the same period last year. Omsk Kaucuk exported 5,100 tons which compensated for the absence

of exports from Kazanorgsintez which shipped 3,100 tons last year. Elsewhere Ufaorgsintez increased exports from 5,800 tons to 13,000 tons.

Synthetic rubber

Russian rubber production-market balance Jan-May 2020

Synthetic rubber production in Russia amounted to 615,000 tons in the first five months in 2020 against 661,000 tons in January to March 2019. Exports amounted to 345,800 tons against 434,000 tons, with volumes down particularly in April and May. Domestic demand helped compensate for the drop in exports, partly due to the revival of production at Nizhnekamskshina in Tatarstan. This was largely facilitated through the purchase by the tyre plant's owners Tatneft of the synthetic rubber production assets at Togliatti from SIBUR in late 2019.

Russian Synthetic & Natural Rubber Market (unit-kilo tons)		
	Jan-May 20	*Jan-May 19*
Production	615.0	661.0
Exports	345.8	434.0
Imports	78.7	90.1
Supply/Demand Balance	347.9	317.1

Whilst the domestic market has risen this year largely due to the redirection of exports from Togliatti to Tatarstan the overall outlook is depressed by the lack of demand from the automotive sector. Even if other areas of consumption rise, they are not expected to compensate for the fall in tyre sales. Thus, demand for rubber in other industries is unlikely to cover the decline in demand from the tyre industry which is likely to remain under pressure until the pandemic is over.

Whilst tyre production in Russia rose in May by 13% over April it only constituted 44% of the volume produced in May 2019.

Russian Synthetic Exports by Destination (unit-kilo tons)		
Country	*Jan-May 20*	*Jan-May 19*
Belarus	9.2	13.9
Brazil	5.4	14.7
China	77.6	57.4
Czech	8.9	15.1
Germany	10.9	13.7
Hungary	13.1	33.8
India	35.7	35.6
Mexico	8.6	23.7
Poland	34.4	47.4
Romania	10.4	19.7
Serbia	5.6	5.7
Slovakia	10.9	20.1
Turkey	21.7	21.8
Ukraine	5.5	8.2
US	14.5	26.7
Others	71.3	76.6
Total	345.8	434.0

Nizhnekamskshina-higher tyre production in 2020

Nizhnekamskshina has restored levels in tyre production this year although started to slow down in the second quarter. In the first quarter production rose sharply against the same period in 2019 due largely to the takeover by Tatneft of the Togliattikaucuk complex, thereby improving the raw material situation. Production of passenger tyres in Nizhnekamsk increased by 36% in the first three months to 1.567 million units, and light truck tyres by 105% to 346,000 units. In total tyre production in Russia in the first quarter grew by 420,000 to 5.9 million units. The second quarter has almost inevitably seen a slowdown due to the economic effects from COVID-19.

Until 2019, the Tatneft tyre complex depended on its only supplier and neighbour Nizhnekamskneftekhim which is part of the TAIF group of companies. Price disputes over rubber shipments led to court proceedings between Nizhnekamskneftekhim and Tatneft significantly affecting the amount of rubber deliveries and sales. In 2018, Nizhnekamskneftekhim raised prices for the Tatneft tyre complex in a range of 10–27%, depending on the type of rubber. In response Tatneft eventually took the opportunity to purchase of two assets in Togliatti in late 2019 with a combined turnover of 14 billion roubles a year.

Rubber from Togliatti now provides sufficient volumes for Tatneft's tyre division Nizhnekamskshina which helped to increase production in the first quarter in 2020. Despite the rise in production revenues for

Nizhnekamskshina fell 17% in the first quarter to 38.1 billion roubles, while the company's operating profit fell 47% to 5.3 billion roubles. Rubber costs fell by 47% to 1.53 billion roubles which resulted in a gross profit of 235 million roubles against a 33 million rouble gross loss in the first quarter of 2019.

Russian Synthetic Rubber Exports (unit-kilo tons)		
Product	***Jan-May 20***	***Jan-May 19***
E-SBR	12.7	17.5
Block	20.6	16.8
SSBR	2.5	6.0
SBR	42.8	34.9
Polybutadiene	85.6	103.2
Butyl rubber	48.1	55.5
Halogenated butyl	43.0	57.0
NBR	14.3	15.0
Isoprene	69.2	112.8
Others	7.1	15.3
Total	345.8	434.0

Russian synthetic rubber exports, Jan-May 2020

Russian exports of synthetic rubber amounted to 345,800 tons in the first five months in 2020 against 434,000 tons in the same period last year. Revenues from exports dropped from $438 million to $322 million. Regarding shipment destinations China represented the largest market for Russian exporters in the first five months accounting for 13.2% of sales. This was followed by Poland with 12.1%, after which came India with 10.8% and Mexico 6.0%. Exports to China increased from 57,400 tons in the first five months in 2019 against 77,600 tons in the same period this year but shipments to most countries have been lower this year.

The highest value product category exported from Russia is halogenated butyl rubber (HBR) where exports totalled 43,000 tons in January to May 2020 at a total value of $93.8 million. The largest product in terms of volume was polybutadiene which dropped from 103,200 tons to 85,600 tons followed by isoprene which dropped from 112,800 tons to 69,200 tons. In addition to COVID-19 the fall in isoprene rubber exports was due to increase in domestic consumption. More detail of volumes and revenues for rubber categories are available on the CIREC website or by contacting us at support@cirec.net.

Togliattikaucuk Rubber Exports (unit-kilo tons)		
Product	***Jan-May 20***	***Jan-May 19***
Isoprene Rubber	3.6	12.6
Butyl Rubber	18.2	28.0
SBR	12.1	21.8
Others	0.2	0.5
Total	34.0	62.9

Togliattikaucuk Jan-May 2020

Togliattikaucuk exported 34,000 tons of synthetic rubber in the first five months in 2020 against 62,900 tons in the same period last year. Isoprene rubber exports dropped from 12,600 tons in January to May 2019 against 3,600 tons this year whilst butyl rubber exports dropped from 28,000 tons to 18,200 tons.

In July Togliattikaucuk undertook a scheduled shutdown at two units for isobutane-isobutylene fraction and butyl rubber. At the facilities, an audit and cleaning of technological equipment was carried out. New equipment for the butyl rubber plant came from the Chinese company Harbin Boshi Automation. At the production unit of the isobutane-isobutylene fraction at Togliattikaucuk the automated control systems of the technological process of adjacent plants were combined into a single operator room.

Nizhnekamskneftekhim rubber exports Jan-May 2020

In the first five months in 2020 Nizhnekamskneftekhim reduced exports of synthetic rubber to 190,900 tons against 252,100 tons in the same period in 2019. Due to reduced purchases in the domestic market it has meant that Nizhnekamskneftekhim has accumulated large inventories and overstocking of warehouses.

Nizhnekamskneftekhim rubber exports (unit-kilo tons)		
Category	***Jan-May 20***	***Jan-May 19***
Isoprene Rubber	55.6	89.8
Butyl Rubber	30.1	28.4
HBR	43.0	57.7
Polybutadiene	58.2	76.2
Others	4.0	0.2
Total	190.9	252.1

Nizhnekamskneftekhim's exports of synthetic rubbers dropped in most categories, only butyl rubber surpassed volumes last year for the first five months to 30,100 tons against 28,400 tons. Exports of halogenated butyl rubber dropped to 43,000 tons against 57,700 tons. Overall revenues from synthetic rubber exports for the company dropped from $423.7 million in the first five months in 2019 to $287.7 million in the same period in 2019. Nizhnekamskneftekhim continues to

implement a strategic project for the construction of a new generation of functionalized styrene butadiene synthetic rubber (DSSK). The production capacity for the new unit is 60,000 tpa and completion is scheduled for 2021.

Methanol

Russian Methanol Production (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Shchekinoazot	400.8	390.3
Sibmetakhim	394.3	398.3
Metafrax	522.8	513.1
Akron	36.4	45.5
Azot, Novomoskovsk	97.8	107.9
Angarsk Petrochemical	24.3	18.1
Azot, Nevinnomyssk	49.3	48.4
Tomet	387.1	311.4
Ammoni	38.6	73.7
Totals	1951.3	1906.5

Russian methanol production Jan-May 2020

Russia produced 1.951 million tons of methanol in the first five months in 2020 against 1.194 million tons in the same period in 2019. Domestic demand dropped sharply in the second quarter due to the lockdown in Russia and methanol production was reduced slightly. The ratio of exports to production rose in May.

Output volumes of 360,365 tons in May versus 360,589 tons in April are not particularly low monthly totals, but usually volumes around this level include scheduled shutdowns. The larger producers maintained normal production levels in April and May whilst falls were reported by the plants at Novgorod, Angarsk, Nevinnomyssk and Novomoskovsk. Ammoni at Mendeleevsk did not produce in May after producing 8,749 tons in April.

Metafrax produced 522,800 tons in the first five months in 2020 against 513,100 tons in the same period in 2019 whilst Sibmetakhim at Tomsk reduced production from 398,300 tons to 394,300 tons. Tomet at Togliatti increased production to 387,100 tons from 311,400 tons, whilst Shchekinoazot produced 400,800 tons against 390,300 tons.

Russian Methanol Exports (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Azot, Nevinnomyssk	0.0	0.0
Azot Novomoskovsk	31.3	27.6
Akron	5.6	3.8
Metafrax	247.5	212.1
Sibmetakhim	222.0	188.0
Tomet	157.8	152.6
Shchekinoazot	308.1	329.7
Ammoni	0.0	13.5
Total	972.3	927.4

Russian methanol export sales, Jan-May 2020

Russian companies increased their methanol shipments for export in the first five months to 972,300 tons against 927,400 tons in the same period in 2019. Shipments to foreign markets were increased by Sibmetakhim from 212,100 tons in the first five months in 2019 to 222,000 tons in the same period in 2020. Tomet increased exports in January to May 2020 shipping 152,600 tons versus 157,800 tons in the same period in 2019. The reason for the increase in export shipments was largely due to higher production in Russia but also lower domestic sales.

Selected Russian Methanol Exports		
Country	***Jan-May 20***	***Jan-May 19***
Belarus	36.9	21.0
Finland	401.5	408.4
Kazakhstan	21.3	13.7
Latvia	4.7	6.6
Lithuania	26.9	58.2
Netherlands	72.6	60.9
Poland	158.1	166.4
Romania	26.7	42.6
Slovakia	57.3	65.0
Turkey	19.3	14.2
UK	28.5	11.0
Ukraine	14.3	20.0

In the first five months Russian methanol exports to Lithuania decreased from 58,200 tons to 26,900 tons. The Orlen refinery in Lithuania, which uses methanol for the production of MTBE, has reduced purchases this year. Methanol shipments from Russia to Kazakhstan increased in January-May to 21,300 tons due to purchases made by the Atyrau refinery, which was absent from the market last year. Methanol is shipped from Russia to Atyrau and Pavlodar for the production of MTBE. Methanol in Kazakhstan is also acquired by companies engaged in the development of oil and gas fields. The export of methanol to Belarus grew to 36,900 tons in the first five months, up from 21,000 tons last year.

Russian methanol domestic sales, Jan-May 2020

Methanol sales dropped on the Russian domestic market in May following the April fall as both formaldehyde and MTBE producers lowered production in response to the economic impact of COVID-19. As a consequence, sales of methanol

on the Russian domestic market totalled 576,600 tons in the first five months against 611,200 tons in the same period last year.

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Azot Nevinnomyssk	7.5	13.0
Azot Novomoskovsk	14.4	67.2
Metafrax	71.5	103.7
Sibmetakhim	127.4	162.6
Tomet	66.4	171.1
Shchekinoazot	139.7	53.7
Ammoni (Mendeleevsk)	149.6	39.8
Total	576.6	611.2

Almost half of all methanol consumed in Russia goes into formaldehyde derivatives. In April and May 2020, the production of formaldehyde and its derivatives declined in Russia on average by almost 30-35%.

Kronospan, located at Yegorevsk in the Moscow region, stopped one of the three plants for the production of synthetic resins in April and May thus reducing capacity utilisation by 30%. Kronospan has subsequently reduced methanol purchases, reducing inward shipments to 32,200 tons in January to May 2020 versus 42,300 tons last year. Metadynea has managed to maintain higher rate of production than Kronospan, but still reduced methanol purchases from 30,300 tons to 28,700 tons.

Russian Methanol Consumption (unit-kilo tons)		
Consumer	***Jan-May 20***	***Jan-May 19***
Nizhnekamskneftekhim	72.0	100.0
Togliattikaucuk	61.1	69.0
Uralorgsintez	23.7	32.4
SIBUR-Khimprom	7.4	12.0
SIBUR Tobolsk	15.5	13.5
Ektos-Volga	23.2	23.4
Omsk Kaucuk	32.2	42.3
Novokuibyshevsk NPZ	16.9	19.5
Uralkhimplast	8.4	12.8
Slavneft-Yanos	2.5	6.6
Metadynea	28.7	30.3
Kronospan	31.4	42.6
Gazprom	59.0	67.5
Khimsintez	4.0	8.5
Volzhsky Orgsintez	3.8	4.7
Others	186.9	126.5
Total	576.6	611.2

MTBE accounts for almost a quarter of Russian methanol consumption which has also seen reduced demand. Tatneft in April reduced capacity utilization for the production of MTBE at Togliattikaucuk by 40-45% and was only slightly higher in May.

Synthetic rubber production accounts for around 10% of Russian methanol consumption where reductions of 20-25% were also noted in May. Nizhnekamskneftekhim, which uses methanol in the production of isoprene rubber, reduced methanol purchases from 100,000 tons in January to May 2019 against 72,000 tons in the same period this year.

Gazprom purchased 59,000 tons in the first five months against 67,500 tons in January-May 2019. All of these volumes were purchased from Sibmetakhim at Tomsk to meet the demand for methanol from gas hydrates in the Siberian gas fields.

Regarding other methanol derivatives some processors have found it difficult to pay for contracted deliveries due to their low solvency. Prices are under extreme pressure in the domestic market from high inventory and constrained demand. In June and July producers located in the Volga Federal District, such as Tomet, Shchekinoazot and Azot at Novomoskovsk were offering a price in the range of 14,000-16,800 roubles per ton, including VAT, and by Metafrax for consumers located in the Ural Federal District a range of 14,500-17,400 roubles per ton.

Skovorodino methanol project-government support

The Russian government has pledged to allocate almost five billion roubles for the construction of the 1.0 million tpa methanol plant at Skovorodino in the Amur Oblast. Around two billion roubles will go to the development of the municipal and social infrastructure in Skovorodino of the city which like many Russian towns has seen minimal investment. As a small town the construction of the methanol plant is seen a major investment project that could have a transformative effect in attracting people to the area.

Nakhodka methanol and fertiliser project

Nakhodka Mineral Fertiliser Plant (NZMU) completed the first stage of public discussions within the framework of the Environmental Impact Assessment (EIA) procedure. Opposition to the project on environmental grounds is extremely intense and local residents are undertaking private studies on the impact of the methanol plant. NZMU has stated it will relocate the project if the findings prove negative, but this is consistent with previous cases of Russian investors into chemical projects

when the main aim is to soften the protest and deploy patience. The construction of the Nakhodka project is being financed by VEB, VTB and the China Development Bank (CDB).

Ammoni-bankruptcy proceedings

Ammoni at Mendeleevsk will repay a debt of 111.7 billion roubles over a period of five years as part of the settlement agreement with the creditor. VEB.RF state corporation has sold the plant to billionaire Roman Trotsenko, who has pledged to invest 12 billion roubles in the plant over the next two years. The fertiliser and methanol plant started production in 2015 but has encountered suffered huge losses due to the collapse of the rouble in the period 2014-2015. In effect the plant's owners were unable to service loans.

Ammoni Methanol Balance (unit-kilo tons)					
	2015	***2016***	***2017***	***2018***	***2019***
Production	60.2	136.1	212.0	221.0	157.5
Exports	0.0	0.0	42.2	6.1	13.5
Domestic	49.8	97.6	114.6	163.5	100.8
TAIF Internal/Inventory	10.5	38.5	55.2	51.3	43.2

Haldor Topsoe acted as a licensor of the combined production of ammonia and methanol unit at Mendeleevsk which was the first application in Russia using this integrated technology. The experience gained by Haldor Topsoe was subsequently used in the construction of another combined production plant for Shchekinoazot. Ammoni and Shchekinoazot differ however in that the Mendeleevsk plant is an ammonia unit with a relatively low methanol capacity, whilst at Shchekino it is a methanol plant that allows the producer to produce a small amount of ammonia.

The capacity of the Ammoni complex includes 717,000 tpa of ammonia (without methanol) or 455,000 tpa of ammonia and 238,000 tpa of methanol. Urea produced from Mendeleevsk is exported, ammonium nitrate is supplied to the domestic market, and methanol is shipped to chemical plants, including Nizhnekamskneftekhim. The volume of natural gas consumption at the complex is about 1 billion cubic metres per annum. Ammoni has now entered the structure of Trotsenko's group KAO Azot, which mainly includes the fertiliser and caprolactam facilities at Kemerovo.

Russian N-Butanol Production (unit-kilo tons)		
	Jan-May 20	***Jan-May 19***
Angarsk Petrochemical Company	13.0	12.3
Azot, Nevinnomyssk	6.8	5.6
Gazprom neftekhim Salavat	24.2	24.1
SIBUR-Khimprom, Perm	12.3	18.1
Total	56.3	60.1
Russian Isobutanols Production (unit-kilo tons)		
	Jan-May 20	***Jan-May 19***
Angarsk Petrochemical Company	6.5	7.2
Gazprom neftekhim Salavat	13.2	14.8
SIBUR-Khimprom, Perm	22.1	25.0
Total	41.9	42.7

Russian Butanol Domestic Sales (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Gazprom n Salavat	1.6	2.1
SIBUR-Khimprom	10.9	12.0
Angarsk Petrochemical	12.4	7.8
Azot Nevinnomyssk	0.7	0.5
Totals	25.6	22.4

Organic chemicals

Russian butanol production Jan-May 2020

Russian normal butanol production totalled 98,200 tons in January to May 2020, against 102,800 tons in the same period in 2019. Gazprom neftekhim Salavat was the largest Russian producer, producing 37,400 tons against 38,900 tons in January to May 2019. Isobutanol production in Russia dropped from 42,700 tons to 41,900 tons. Gazprom neftekhim Salavat's isobutanol production amounted to 13,200 tons against 14,800 tons in January to May 2019, whilst SIBUR-Khimprom reduced production from 25,000 tons from 22,100 tons.

Russian domestic butanol sales, Jan-May 2020

Russian butanol merchant sales in January to May 2020 amounted to 25,600 tons against 22,400 tons in the same period in 2019. SIBUR-Khimprom increased shipments from 12,000 tons to 10,900 tons and Angarsk Petrochemical increased from 7,800 tons to 12,400 tons. The two largest domestic purchasers in January to May 2020 were Dmitrievsky Chemical Plant with 9,000 tons, versus 7,500 tons last year, and Akrilat at Dzerzhinsk with 6,400 tons against 7,300 tons. N-butanol availability in the Russian market is affected by processing by both Gazprom neftekhim Salavat and SIBUR-Khimprom. Gazprom neftekhim Salavat uses a significant part of its own

n-butanol to produce butyl acrylate, whilst SIBUR uses it also for internal processing. Angarsk Petrochemical is the only Russian producer with available product where there is no internal demand.

Russian Butanol Consumption (unit-kilo tons)		
Consumer	***Jan-May 20***	***Jan-May 19***
Akrilat	6.4	7.3
Dimitrievsky Chemical	9.0	7.5
Volzhskiy Orgsintez	3.8	4.1
Roshalsky Plant of Plasticizers	0.9	0.3
Others	5.8	3.1
Total	25.8	22.4

Markets for butanol sales on the domestic Russian market improved slightly in July over June but prices are under extreme pressure from slower sales. SIBUR-Khimprom's oxo alcohol plant was stopped in May, but this seems to have had little impact on supply. However, SIBUR significantly increased the cost of isobutanol in July due to a sharp increase in fuel demand.

N-butanol from the Angarsk Petrochemical Company in the Siberian Federal District is currently available from 38,000 roubles per ton, including VAT. Gazprom neftekhim Salavat is offering n-butanol at 66,450 roubles, and isobutanol at 63,650 roubles per ton, including VAT.

Russian Phthalic Anhydride Production (unit-kilo tons)		
Producer	***Jan-May 20***	***Jan-May 19***
Gazprom n Salavat	3.9	5.3
Kamteks	31.0	37.7
Total	34.9	43.1

Russian phthalic anhydride market, Jan-May 2020

Russian phthalic anhydride production dropped from 43,100 tons in the first five months in 2019 to 34,900 tons in 2018. Demand has been affected by COVID-19, although the situation on the market began to stabilize in the second half of June, particularly in the paint and varnish industries where consumption of plasticizers is steadily reviving.

SIBUR-Sintez Oka ethylene oxide contract

SIBUR and Sintez Oka Group of Companies signed a ten-year contract for the supply of a total of 600,000 tons of ethylene oxide. Until recently SIBUR-Neftekhim shipped about 30,000 tpa of ethylene oxide from its Dzerzhinsk site to Sintez Oka which is also at Dzerzhinsk. Under the new agreement, the supply volume from SIBUR-Neftekhim almost doubles. Another recent long-term contract for ethylene oxide supplies was concluded by SIBUR with the NORKEM Group of Companies. According to the agreements, SIBUR-Neftekhim will supply around 150,000 tons of ethylene oxide over the next five years to the NORKEM subsidiary Sintanol.

SIBUR-maleic anhydride project at Tobolsk

The Ural Chemical Engineering Plant (part of OMZ) shipped a batch of column equipment for the production of maleic anhydride under construction at the SIBUR site in Tobolsk. In May, a recycled gas scrubber and a solvent recovery column with an integrated condenser were shipped from a Glazov industrial site. In the latter part of June, the maleic anhydride stripper was delivered with a mass of 54 tons and a height of 23 metres. The equipment has arrived at its destination and its installation has already begun.

SIBUR's maleic project dates back to October 2016 when a licence for maleic anhydride production was signed with Conser. Butane from the Tobolsk gas fractionating plant will be used as the raw material. Conser was selected as the licensor for the production of 45,000 tpa of maleic anhydride. Commissioning of the installation was previously scheduled for 2021. NIPIGAZ was involved in the development of working documentation. Although maleic anhydride consumption in Russia is very small SIBUR hopes the availability of maleic will stimulate investments in derivatives.

Russian Isopropanol Imports			
Month	***Value $***	***Kilo tons***	***Price Per Ton $***
January 2020	1.5	1.68	892.9
February 2020	1.3	1.32	984.8
March 2020	1.6	1.49	1073.8
April 2020	2.4	1.75	1371.4
May 2020	13.9	6.8	2034.0

Russian isopropyl alcohol imports rise

Russian imports of isopropyl alcohol (isopropanol) increased sharply in May to 6,800 tons at a price of $2034 per ton compared to 1,750 tons in April at $1371.4 per ton. In the meantime, the Synthetic Alcohol Plant at Orsk has been improving its product quality for isopropanol production lowering the content of

diisopropyl ether, acetone and organic impurities. The measures taken are aimed at maintaining the competitiveness of products in the face of increased demand for isopropanol. The plant is scheduled to stop for repairs in August-September for which around 65-75 million roubles are required. However, at this stage it is not clear where the funds might come from to undertake the maintenance shutdown.

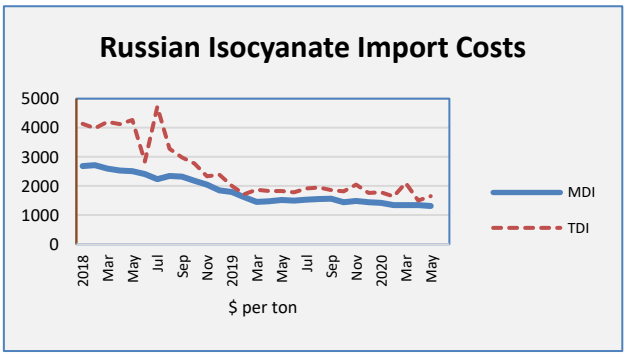
Other Products

Russian TDI imports, Jan-May 2020

Russian TDI imports amounted to 16,300 tons in the first five months in 2020 against 18,800 tons in the same period in 2019. Germany increased shipments from 4,300 tons in January to May 2019 to 4,600 tons in 2020 with Hungary rose from 4,000 tons to 4,200 tons. Saudi Arabia supplied 2,700 tons to the Russian market, up from 4,100 tons in the same period in 2019.

Russian TDI Imports (unit-kilo tons)		
Country	***Jan-May 20***	***Jan-May 19***
Belgium	0.1	0.2
China	1.0	0.9
Germany	4.6	4.3
Hungary	4.2	4.0
Japan	0.4	0.7
Netherlands	0.7	0.4
Saudi Arabia	2.7	4.1
South Korea	1.5	0.4
Turkey	0.1	0.1
US	1.1	3.6
Others	0.9	0.0
Total	16.3	18.8

The main regions inside Russia accounting for TDI purchases, include Moscow and the Moscow area taking 49.5% of shipments in January to May 2020, followed by Tatarstan with 16.6%. Germany is the main supplier of TDI to Tatarstan where it accounted for 66.6% of deliveries in January to May 2020 for revenues of $3.2 million followed by Hungary with 32.1% for $1.5 million. Imports of TDI from Germany into the Moscow area amounted to 1,860 tons in January to May 2020 for costs of $3.5 million. Average prices overall for Russian TDI imports the first five months in 2020 amounted to $1737 per ton against $1865 for the whole of 2019.



Russian MDI imports, Jan-May 2020

MDI imports into the Russian market amounted to 45,800 tons in the first five months this year against 46,400 tons in January to May 2019.

Import costs for MDI in the first five months totalled $70.6 million versus $95.2 million in the first five months in 2019, with average prices dropping to $1369 per ton versus $1562 per ton in the whole of 2019. Saudi Arabia was the leading supplier in the first five months, although reducing shipments from 15,500 tons to 12,000 tons. As the second largest supplier China supplied 11,100 tons against 14,700 tons.

Russian Imports of MDI (unit-kilo tons)		
Country	***Jan-May 20***	***Jan-May 19***
Belgium	5.9	7.1
China	11.1	14.7
Germany	5.7	6.1
Hungary	1.4	3.2
Italy	0.1	0.0
Japan	1.2	0.9
Netherlands	8.3	12.5
Saudi Arabia	12.0	15.5
South Korea	0.3	1.0
Others	6.4	0.3
Total	45.8	46.4

Khimprom Novocherkassk-calcium hypochlorite and hydrogen peroxide

Khimprom at Novocheboksarsk has committed to building a second line for the production of calcium hypochlorite in try to meet full demand in the Russian market. The total volume of the Russian hypochlorite market is estimated at 30,000 tpa and until 2019 was covered by imports. Mostly calcium hypochlorite in Russia is purchased by gold mining companies.

At the end of 2018, Khimprom launched the first calcium hypochlorite production line of 15,000 tpa which was later adjusted to produce 18,000 tpa. Khimprom recently began production of an antiseptic agent based on hydrogen peroxide for surface disinfection. Khimprom continues to construct another plant for the production of hydrogen peroxide by the anthraquinone technology. The 50,000 tpa plant is based on technology provided by Chematur Engineering AB. With the

introduction of the new production, the concentration of the final product will reach 60%, it will be used in medicine, mining, petrochemical, food industry, as well as in water and wastewater treatment systems. Production is scheduled to reach its design capacity in 2022. Five years ago, the capacity of hydrogen peroxide was expanded by 50% from 64,000 tpa to 95,000 tpa.

Tokem-expansion of ion exchange resins

Tokem at Kemerovo may receive around 50 million roubles in the form of a soft loan from the Industrial Development Fund (FRP) for a project to increase the production of ion-exchange resins. Tokem plans to increase the production of sulphonic acid cation exchangers by 720 tons and copolymers by 400 tons per year. The total project budget is estimated at 109 million roubles.

Russian Imports of Ion-Exchange Resins		
Year	*Kilo tons*	*$ million*
2013	14.8	52.5
2014	14.1	52.9
2015	11.9	41.0
2016	11.1	35.3
2017	14.3	47.9
2018	14.0	53.8
2019	14.8	54.9

Currently, the capacity of the Russian market of ion-exchange materials is estimated to comprise 20,000 tpa of which 60% is imported from abroad. After increasing production in Kemerovo, this figure will drop to about 50%. The additional volume of the Tokem copolymer is planned to be exported to China, about 50% of the cation exchangers to the CIS countries. Tokem Production Association has been operating since 1942 and is currently the only large-tonnage producer of ion-exchange resins in Russia.

Ukraine

Ukrainian Polypropylene Imports (unit-kilo tons)		
Category	*Jan-May 20*	*Jan-May 19*
Homo	44.1	37.0
Block	4.1	5.4
Random	5.8	6.4
Other	0.8	0.5
Total	47.7	56.5

Ukrainian polymer imports & production, Jan-May 2020

Imports of polypropylene (PP) on the Ukrainian market amounted to 47,700 in January to May 2020, against 56,500 tons in the same period in 2019. Imports of homopolymer dropped from 44,100 tons to 37,000 tons, whilst imports of block copolymers dropped from 5,400 tons to 4,100 tons. In January-May 2020 imports of random copolymers dropped to 5,800 tons against 6,400 tons in the same period last year. The total supply of other propylene copolymers amounted to slightly less than 800 tons.

Ukrainian Polymer Imports (unit-kilo tons)		
Product	*Jan-May 20*	*Jan-May 19*
PVC	11.5	11.1
LDPE	31.4	31.6
LLDPE	29.3	32.4
HDPE	46.6	42.0
Ethylene Vinyl Acetate	5.4	5.5
Polypropylene	47.7	56.5

Ukraine abolished an 18% duty on imports of certain types of polyethylene and PVC, which are not produced by Karpatneftekhim. Polyethylene imports into Ukraine rose by 1% in the first five months to 112,700 tons against 111,300 tons a year earlier.

HDPE imports increased mainly due to the forced downtime of Karpatneftekhim in the first quarter of this year, and thus rose to 46,600 tons versus 42,000 tons. LDPE imports amounted to 31,400 tons versus 31,600 tons and LLDPE imports dropped from 32,400 tons to 29,300 tons. Import of ethylene vinyl acetate (EVA) amounted to about 5,400 tons compared to 5,500 tons a year earlier.

Karpatneftekhim, Jan-May 2020

Karpatneftekhim plans to stop the cracker at n Kalush (Ukraine) for scheduled maintenance in late September or early October 2020 and will last approximately three weeks. Benzene production at the site will also be discontinued during this period. The production capacity of the enterprise is 250,000 tpa of ethylene, 117,000 tpa of propylene, about 100,000 tpa of benzene and 72,000 tpa of C4s.

Karpatneftekhim exported 43,500 tons of propylene in the first five months in 2020 against 27,800 tons in the same period in 2019. Most of the propylene is exported to Poland. Benzene exports dropped from

18,700 tons to 11,600 tons in January to May 2020. However, after resumed production two 5,000 loads of benzene were shipped by Karpatneftekhim in June to the Spanish styrene producer in the port of Tarragona.

Karpatneftekhim Petrochemical Exports (unit-kilo tons)		
Product	**Jan-May 20**	***Jan-May 19***
Propylene	43.5	27.8
Benzene	11.6	18.7

Production at Kalush in 2020 has been intermittent with occasional shutdowns. The polyethylene plant stopped in January and due to the high cost of raw materials and did not restart until 20 March. In the April shutdown the largest share of work took place in the PVC plant. the polymerization reactors were cleaned.

The company currently operates at maximum capacity utilisation in order to meet customer obligations and to build up inventory prior to the Q3-Q4 shutdown. This year Karpatneftekhim has diversified its feedstock purchases partly away from Russia this year to other countries such as Kazakhstan and Belarus.

Belarus

Belarussian Chemical Production (unit-kilo tons)		
Product	***Jan-May 20***	***Jan-May 19***
Ethylene	32.6	37.8
Propylene	20.5	23.3
Benzene	35.1	45.9
Caprolactam	27.4	49.9
Orthoxylene	23.4	3.5
Paraxylene	8.4	6.0
Methanol	23.4	33.0

Belarussian petrochemicals Jan-May 2020

In the first five months this year Belarus produced 32,600 tons of ethylene against 37,800 tons in the same period in 2019, whilst propylene dropped 23,300 tons against 20,500 tons. Benzene and caprolactam production both encountered significant falls. The reduction of caprolactam production at Grodno impacted on benzene directly. In April and May, the caprolactam plant was approximately ran at only around 30% of capacity at Grodno.

Central Asia/Caucasus

SOCAR Methanol Jan-May 2020

SOCAR Methanol produced 203,200 tons of methanol in the first five months in 2020, which is 45.7% higher than the same period in 2019. Last year the SOCAR Methanol plant produced 383,000 tons of methanol and the target for 2020 has been set at 480,000 tons. The production capacity of the plant is 720,000 tpa. SOCAR acquired the plant for $477.5 million from Agrarkredit, which received the enterprise at its disposal from the International Bank of Azerbaijan by court order.

Impact of COVID-19 on Kazakh petrochemical projects

The economic consequences of COVID-19 has required reassessment for some petrochemical projects in Kazakhstan. The 500,000 tpa polypropylene project at Atyrau is still on schedule in 2021 but several months later than planned due to the repercussions from the lockdown conditions. This affected both equipment deliveries from China and movement of labour.

The polyethylene project at Atyrau is less certain following the withdrawal of Borealis from the joint venture and thus the Ministry of Energy is now looking for a new partner and a new source of financing. An MTO project at Aktau is still under consideration which will produce methanol and olefins (propylene, ethylene), with respective capacities of 300,000 tpa and 600,000 tpa.

Navoiazot-ammonia launch

Navoiazot is preparing to launch a complex of ammonia and urea and is awaiting Mitsubishi support to start the technical process of commissioning. The ammonia capacity has been designed at 660,000 tpa and urea with a capacity of 577,500 tpa. Licensors for the project include Haldor Topsoe (ammonia), Saipem (synthesis) and Uhde Fertiliser Technology (granulation).

Uzbekneftegaz completion of LPG and GTL projects

Uzbekneftegaz is completing the construction and installation work on the LPG unit at the Mubarek Gas Processing Plant which includes an increase in the production of LPG by 38,400 tpa. The project provides for the construction of a booster compressor station, a zeolite gas dehydration plant, additional tanks for receiving, storing, and shipping liquefied gases to consumers, and a plant for producing propane-butane mixture.

Uzbekneftegaz is close to completion of the GTL project at the Shurtan gas and chemical complex in the Kashkadarya region, although a large number of workers contracted coronavirus in July. The assembly and installation of Fischer-Tropsch reactors has been fully completed and completion of the whole project is aimed for by the end of 2020. After reaching full design capacity, the plant will produce 307,000 tpa of jet fuel, 724,000 tpa of diesel fuel, 437,000 tpa of naphtha and 53,000 tpa of liquefied gas. It is planned to complete the construction of the plant at the end of 2020.

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