Chemical Information Resources for East Europe and CIS

CIREC MONTHLY NEWS

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

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Key pointers from this month's issue

Central Europe

In April PKN Orlen entered into an agreement with Saudi Aramco through which it can bring around 800,000 tons of oil over a period of six months. Around 30% of PKN Orlen's current crude supply is from non-REPCO (Russian) sources including Saudi Arabia, the UAE, the US and Africa, which compares against only 5% back to 2012-2013. PDH Polska has selected Hyundai Engineering for the Polymery Police project in which total budget required is estimated at €1.52 billion (zl 6.5 billion). The completion of this key investment project for Grupa Azoty is planned for the fourth quarter of 2022. PKN Orlen has approved the Petrochemicals Development Programme (PDP), which seeks to significantly expand the company's petrochemical production capacity and consolidate its position in the petrochemical market in the region.

Russian chemical production & domestic sales

Russian chemical production was largely unchanged for the first two months in 2019. Ethylene production totalled 516,800 tons against 519,000 tons in the same two months in 2018 whilst benzene dropped to 225,400 tons from 248,000 tons. Sales of propylene on the Russian domestic market rose in the first two months to 75,200 tons from 68,100 tons in the same period in 2018, mainly due to extra purchases made by SIBUR Tobolsk for polypropylene production.

Russian chemical trade

Despite the balance in weight in favour of exports, Russia remains a net importer of chemical industry products by value as import costs for January to December 2018 amounted to $36.284 billion against export revenues of $21.427 billion. Russian chemical and chemical product exports totalled 51,960 million tons in 2018 against imports of 15.252 million tons. The average price of exported chemicals from Russia in 2018 amounted to $401 per ton against the average import price of $2,738 per ton. Russian PTA imports amounted to 68,900 tons in the first two months in 2019 against 33,100 tons in the same period last year, the rise due to the necessity to cover the shutdown of the Polief plant. Russian exports of methanol increased in the first two months in 2019 to 344,800 tons from 309,100 tons in the same period in 2018. Shchekinoazot increased exports from 49,900 tons to 117,800 tons whilst the only other producer to export volumes was Metafrax which increased from 72,500 tons to 80,900 tons.

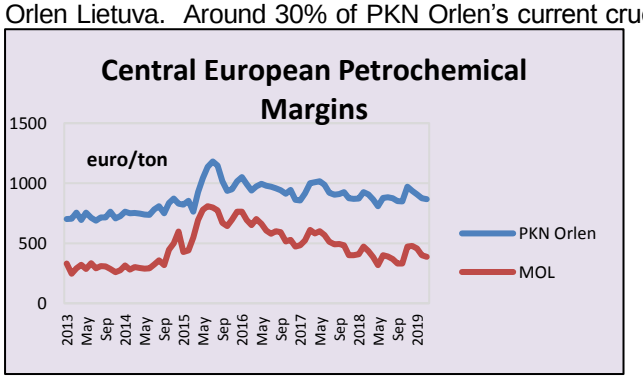
Russian chemical projects

The production of ethane is expected to be used in a gas chemical complex at Ust Luga through a special purpose company Baltic Chemical Complex aimed at producing over 3 million tpa of polymers. On the northern part of the Gulf of Finland, Lukoil is examining the prospects for a methanol project at Vysotsk. In the Russian Far East SIBUR has outlined intentions to negotiate with Gazprom on the supply of LPG before making a decision on the Amur Gas Chemical Complex. Irkutsk Polymers has selected the UNIPOL polyethylene production technology for a new polymer plant at Ust-Kut in the Irkutsk Oblast. In Kazakhstan, Borealis and Kazakhstan Petrochemical Industries continue negotiations regarding the polyethylene jv project at Atyrau in Kazakhstan which will amount to 1.25 million tpa. Uzbekistan outlined a framework strategy in March 2019 to invest $12.1 billion in the chemical industry over a period of the next decade and at the same time to sell off state shares in a number of chemical enterprises.

CENTRAL & SOUTH-EAST EUROPE

Central European feedstocks & petrochemical margins

In April PKN Orlen entered into an agreement with Saudi Aramco through which it can bring around 800,000 tons of oil over a period of six months. Under a separate agreement, Aramco will buy heavy fuel oil from Orlen Lietuva. Around 30% of PKN Orlen's current crude supply is from non-REPCO (Russian) sources including Saudi Arabia, the UAE, the US and Africa. Comparing back to 2012-2013, the share of Russian crude in refinery production amounted to approximately 95%.



Petrochemical margins for PKN Orlen dropped in March 2019 to €868 per ton versus €876 in February and €906 per ton in January. The highest margin achieved in 2018 took place in November at €970. MOL uses a different formula for calculating petrochemical margins but followed the same pattern as Orlen in the first quarter. Prices dropped to €387.5 per ton in March from €400.8 per ton in February and €457.2 in January. December was last year's highest margin in petrochemicals, at €478.6.

Grupa Lotos, LNG terminal Gdansk

Grupa Lotos has outlined plans to build a small-scale LNG terminal at Gdansk by 2021, which will serve to popularise the service of refueling ships and trucks. Due to the European Union's environmental policy, LNG is considered a very promising fuel for sea transport.

The purpose of the possible construction of a small LNG terminal at Świnoujście would allow entry of Grupa Lotos into a new, prospective market.

Orlen group refining upgrade & propylene

Unipetrol has signed a contract with engineering company McDermott to provide EPCM services for the upgrade of a hydrocracking unit at the Litvinov refinery. McDermott has previously undertaken projects for Unipetrol on its refineries and petrochemical facilities. The work for the Litvinov refinery will be fully performed from McDermott's office at Brno and the project likely to be completed in second quarter 2020.

Orlen Lietuva expects to introduce a PPF splitter at the Mazeikiu refinery in the near future for the production of propylene. Before the end of the second quarter in 2019, propylene will be available for merchant sale some of which will be sent to Poland. The plans at Orlen Lietuva also include construction of a hydrocracking installation that will increase the production of high-margin fuel products. The Mazeikiu refinery is the second refinery in the Orlen group in terms of oil processing size, consisting of a capacity of around 10 million tpa versus 16.5 million tpa at Plock. The Mazeikiai refinery is responsible for almost one third of the fuel processing in the Orlen Capital Group.

Orlen Group Production Total & Breakdown 2018

	Total	Poland	Czech	Lithuania
Total	**32.7**	**17.8**	**6.5**	**8.4**
Refining	**27.7**	**14.7**	**4.6**	**8.4**
Petrochemicals	**5.0**	**3.1**	**1.9**	**0**
Olefins	849	693	156	0
Polyolefins	540	0	540	0
Benzene	367	164	203	0
Plastics	371	276	95	0
Fertilisers	1.067	881	186	0
PTA	508	508	0	0
Other petrochemical products	1,281	563	718	0

PKN Orlen-Petrochemicals Development Programme

PKN Orlen has approved the Petrochemicals Development Programme (PDP), which seeks to significantly expand the company's petrochemical production capacity and consolidate its leadership in the petrochemical market in the region.

In southern Poland, Orlen Południe is working on a project entitled glycerine conversion to 1,2-propylene glycol. Work involving market research on methanol and available production technology has commenced under Orlen Południe. PKN Orlen's PDP will comprise three projects: including the extension of the olefins complex, expansion of the phenol production capacity, and construction of an Aromatic Derivatives Complex and a Research and Development Centre.

PDH Polska-Hyundai selected as contractor

After selecting Hyundai Engineering for the Polymery Police project, PDH Polska is now engaged in further talks with the South Korean company to finalise a contract for the comprehensive turnkey delivery. Three offers were submitted for the Polymery Police project; apart from Hyundai Engineering, the offer was submitted by a consortium led by Technip Italy and a consortium led by Tecnimont. The licensed PDH technology to be used in the project will be Oleflex from Honeywell, while for the polypropylene plant Unipol technology from Grace Technologies will be installed.

Polish Propylene Imports (unit-kilo tons)		
Country	***Jan-19***	***Jan-18***
Azerbaijan	0.0	0.9
Czech R	0.0	1.1
Germany	2.2	6.5
Russia	3.2	4.0
Ukraine	5.1	5.4
Hungary	1.1	1.0
Others	0.0	0.0
Total	11.6	18.9

Hyundai Engineering is are interested in investing $130 million in the Polymery Police project which may convince Grupa Azoty that the project can succeed. The total estimated capital expenditure value for the implementation of the project, which is to produce a polypropylene plant with a capacity of 437,000 tpa has been estimated at €1.18 billion.

Financing costs and reserves requirements would raise that figure to an estimated maximum of €1.52 billion. Both propylene and polypropylene in Poland are in deficit providing opportunities for increasing domestic production. Polish production of polypropylene is currently around 290,000 tpa while demand amounted to nearly 700,000 tpa.

Polish PTA Exports (unit-kilo tons)		
Country	***Jan-19***	***Jan-18***
Belarus	1.9	2.3
Germany	27.3	24.1
Others	1.1	0.4
Total	30.2	26.8

The planned increase in the share capital of PDH Polska is to take place as part of a private subscription excluding the pre-emptive right of the existing shareholders in their entirety. Currently, Grupa Azoty holds directly 40.1% of shares in PDH Polska, and 59.9% of shares belong to the subsidiary Grupa Azoty Zakłady Chemiczne Police.

MOL-polyol project April 2019

MOL is progressing with its polyol and propylene derivatives project, having arranged for up to 3,000 guest workers to be engaged at Tiszaújváros involving a total investment of Ft 390 billion. The vast majority of workers will come from outside the European Union. In September last year, MOL had agreed with the ThyssenKrupp Solution Industrial Group on the accelerated construction of the plant. The main contractor will decide what subcontractors will be involved in the construction of the plant. The new chemical complex will have a polyether polyol production capacity of 200,000 tpa. It will also include a propylene glycol production unit to maximise operational and commercial flexibility. MOL aims to become a strategic partner of polyurethane producers in Central and East Europe.

MOL acquires German recycler of plastics

MOL announced in April that it had signed a sales-purchase agreement to acquire Aurora Kunststoffe GmbH, a recycled plastic compounder with production plants located nearby automotive manufacturing and plastics conversion clusters in Baden-Württemberg, Germany. Aurora's portfolio largely consists of engineering plastics and polypropylene recycle-based compounds. In the beginning of 2019, a new state-of-the-art compounding facility was completed in Neuenstein, doubling production capacity up to 15,000 tpa. With this investment, MOL will be able to offer a wide range of high-quality polyamide, polypropylene and other recycle-based compounds, complementing its existing portfolio of virgin polypropylene and polyethylene.

Czech Petrochemical Exports (unit-kilo tons)		
Product	***Jan-Feb 19***	*Jan-Feb 18*
Ethylene	14.0	19.3
Propylene	1.9	3.1
Butadiene	0.3	0.2
Benzene	8.8	3.8
Toluene	2.5	2.5
Ethylbenzene	25.4	22.8

One of the cornerstones of MOL Group 2030 strategy is to expand the petrochemicals value chain. MOL plans to invest around $4.5 billion until the end of the next decade into petrochemical and chemical growth projects. Compounding and recycling are among the key areas defined in MOL's 2030 Strategy and the automotive industry is a strategic sector, where both MOL and Aurora recognise a growing demand for recycled materials.

Czech petrochemical exports, Jan-Feb 2019

Ethylene exports from Unipetrol totalled 14,400 tons in the first two months months in 2019 from 19,300 tons in the same period in 2018. Almost all of the ethylene was shipped to Bohlen in Germany. Propylene exports dropped in the first two months to 1,900 tons from 3,100 tons, whilst imports of propylene dropped from 9,800 tons in January to February 2018 to 7,100 tons in the same period in 2019. .

Ethylbenzene exports from the Czech Republic totalled 25,400 tons against 22,800 tons. Exports of phthalic anhydride from the Czech Republic amounted to 2,272 tons in the first two months in 2018 against 2,935 tons in the same period in 2018. Exports of DINP in the first two months in 2018 amounted to 811 tons versus 856 tons in the same period this year.

Czech Petrochemical Imports (unit-kilo tons)		
Product	***Jan-Feb 19***	***Jan-Feb 18***
Ethylene	0.3	0.0
Propylene	7.3	9.8
Butadiene	7.1	6.3
Benzene	15.8	15.4
Ethylbenzene	0.0	1.1
Styrene	2.9	1.5

Czech petrochemical imports, Jan-Feb 2019

Spolana has needed to import ethylene dichloride since January 2018 in order to produce VCM since the close of the mercury chlorine plant at Neratovice in late 2017. Last year the company imported 82,559 tons of EDC but started reducing inward shipments in December and for the first two months this year imports had slowed down sharply.

Czech TDI Imports (unit-kilo tons)		
Country	***Jan-Feb 19***	***Jan-Feb 18***
Belgium	0.3	0.4
Germany	0.7	1.1
Hungary	0.4	0.4
Poland	0.1	0.0
Slovakia	0.0	0.1
UK	0.0	0.3
Others	0.0	0.1
Total	1.5	2.4

Benzene imports into the Czech Republic amounted to 15,800 tons in the first two months in 2019 from 15,400 tons in the same period last year. TDI imports into the Czech Republic totalled 4,300 tons in Januatu to Februarty 2019 against 2,407 tons in January to February 2018. Imports were sourced last year from Germany, Belgium, UK, and Hungary. MDI imports totalled 4,042 tons in the first two months in 2019 with Germany, Belgium and Hungary acting as the main suppliers.

PGG-coal gasification and methanol

Polish Mining Group (PGG) is considering the potential start of carbochemical production and coal gasification, including a methanol investment. The project for the construction of a coal gasification plant at one of the PGG mines for the production of methanol, estimated at around €500 million, has already passed the initial research phase. Further decisions regarding its possible implementation are to be made in the second half of 2019. PGG is considering an installation capable of processing approx. 1.2 million tpa including a methanol plant with a capacity of up to 619,000 tpa.

Polish Methanol Imports (unit-kilo tons)		
Country	***Jan-19***	***Jan-18***
Belarus	1.6	0.7
Finland	0.0	8.5
Germany	0.8	9.0
Norway	0.0	0.0
Russia	46.4	37.3
Slovakia	1.0	1.0
Venezuela	10.8	0.0
Others	0.0	0.3
Total	60.5	56.9

Grupa Azoty Pulawy-melamine contracts

Grupa Azoty Pulawy concluded three-year contracts in April with resin producer Lerg SA at Pustków for the supply of melamine and urea, with an estimated value of about zl 53 million. Grupa Azoty Puławy is the only Polish producer of melamine and one of the three suppliers of urea in the Azoty group (next to Grupa Azoty Police and Grupa Azoty Kedzierzyn).

The most important recipient of the Puławy melamine is the sector of laminates, wood adhesives and script coatings. Lerg Pustków is a producer and exporter of synthetic resins used in various industries. Currently, the company is at the first place in Poland in terms of the amount of resins produced.

Polish-polyurethane market

Imports of polyurethanes in Poland totalled 177,200 tons in 2018 against 168,546 tons in 2017 whilst exports rose from 202,786 tons to 233,250 tons. In value terms exports equated to €1.4 billion against exports of €1.3 billion. The Polish market for polyurethane foams is estimated at more than 200,000 tpa and is growing at approximately 3%. Production capacities of Polish producers are estimated at about 210-220,000 tpa of which Ciech Pianki has about a 16% share. Major competitors of the Ciech

Group on the Polish market include Eurofoam, Vita Polymers and MZCh Organika. IKEA also hold large production capacities; however, they are designated mainly for internal purposes.

Polish TDI Imports (unit-kilo tons)		
Country	***Jan-19***	***Jan-18***
Saudi Arabia	0.0	0.4
Belgium	0.2	0.2
France	0.1	0.1
Netherlands	0.4	0.0
South Korea	0.0	0.0
Germany	2.2	1.4
Hungary	3.3	3.5
Italy	0.0	0.0
Others	0.6	1.1
Total	6.8	6.8

Flexible polyurethane foams are used mainly in production of furniture and sleeping mattresses, which amount to about 75% of consumption of this material in Poland. Another 15-20% is used in automotive industry for production of seats, interiors and the textile industry.

Ciech-new sodium bicarbonate plant

In 2019 the main event for Ciech comprises the launch of a new line for the production of sodium bicarbonate at the Stassfurt plant, which will be offered, among others, to customers from the pharmaceutical industry. After the full launch of the new production capacities in Germany, the capacity for sodium bicarbonate by the Ciech Group will rise to 200,000 tpa.

Polish Chemical Production (unit-kilo tons)		
Product	***Jan-Feb 19***	***Jan-Feb 18***
Caustic Soda Liquid	59.8	63.7
Caustic Soda Solid	10.6	10.6
Ethylene	87.4	91.7
Propylene	60.0	62.8
Butadiene	10.7	9.7
Toluene	2.0	3.2
Phenol	8.2	8.2
Caprolactam	29.1	28.4
Acetic Acid	1.4	4.2
Polyethylene	66.3	65.7
Polystyrene	11.7	12.0
EPS	15.6	9.9
PVC	49.0	47.4
Polypropylene	51.5	53.4
Synthetic Rubber	48.8	48.2
Ammonia (Gaseous)	468.0	491.0
Ammonia (Liquid)	17.7	25.7
Pesticides	4.3	8.4
Nitric Acid	427.0	447.0
Nitrogen Fertilisers	364.0	358.0
Phosphate Fertilisers	83.7	70.2
Potassium Fertilisers	76.7	64.1

The Ciech Group achieved revenues of zl 3672.7 million in 2018, an EBITDA profit of zl 633.5 million, and a net profit to zl 183.5 million. Revenues dropped 2.6%, whilst the EBITDA dropped by 21.6% and net profit dropped by 53.4%. The costs of raw materials, energy, increase in prices of CO2 certificates, as well as plant downtimes, impacted on the profitability of soda ash production. The decrease in the soda production volumes was also due to production stoppages at the plant in Romania and scheduled shutdowns of both foreign plants of the Ciech Group. Unfavourable weather conditions also affected the results of the agro-chemical business where the market of plant protection products in Poland decreased by 6%.

PCC Rokita-investment outline 2018-2020

The investment plan of PCC Rokita for the years 2018-2020 covers a range of projects with a total value of approximately zl 700 million, with the main focus on polyols and the propylene chain. PCC Rokita is considering further development of membrane electrolysis capacity, whilst looking into building a research and development laboratory together with a scaling hall and a warehouse. PCC Rokita is also planning to modernise the combined heat and power plant. Another project includes a pilot plant for the development of polyols, a pilot installation for the production of phosphates and phosphates, and investments related to the expansion and optimisation of electrolysis and propylene oxide installations.

Regarding finance, PCC Rokita and PCC Exol have been obtaining financing for further development through public bond issues for several years. Both companies have now approved public bond issue programmes. In Malaysia the group operates PCC Oxyalkylates Malaysia at Kertih. PCC Exol has approved preparations for the potential oxyalkylated investment at Kertih. PCC Rokita achieved revenues of zl 1.49 billion in 2018 compared to zl 1.29 billion in 2017, representing a 15% increase over 2017.

In 2018, PCC Rokita's operating profit rose 30.8% to zl 263.11 million compared to zl 201.14 million in 2017, whilst the net profit increased 24.6% to zl 226.79 million compared to zl 182.36 million. PCC Rokita's EBITDA increased 28% in 2018 to zl 341.25 million compared to zl 266.4 million in 2017. The EBITDA grew by 9%. and a 7% increase in net profit to zl 20 million. The main reason for such good results is attributed to the results of the chlorine division.

RUSSIA

Russian Chemical Production (unit-kilo tons)		
Product	***Jan-Feb 19***	***Jan-Feb 18***
Caustic Soda	211.0	217.0
Soda Ash	549.0	570.0
Ethylene	516.8	519.0
Propylene	395.8	402.6
Benzene	225.4	248.0
Xylenes	102.4	106.3
Styrene	129.0	120.2
Phenol	36.5	31.8
Ammonia	3,100.0	3,100.0
Nitrogen Fertilisers	1,817.0	1,913.0
Phosphate Fertilisers	689.0	666.0
Potash Fertilisers	1,462.0	1,367.0
Plastics in Bulk	1,335.0	1,326.0
Polyethylene	372.0	362.0
Polystyrene	88.6	89.8
PVC	170.8	171.0
Polypropylene	220.1	261.0
Polyamide	24.9	28.5
Synthetic Rubber	264.0	282.0
Synthetic Fibres	25.0	26.2

Russian chemical production Jan-Feb 2019

Russian chemical production was largely unchanged for the first two months in 2019. Ethylene production totalled 516,800 tons against 519,000 tons in the same two months in 2018 whilst benzene dropped to 225,400 tons from 248,000 tons. Exports of chemical products for the first two months from Russia totalled 6.729 million tons against 6.481 million tons in January to February 2018, whilst imports rose slightly from 1.605 million tons to 1.611 million tons.

Despite the balance in weight in favour of exports, Russia remains a net importer by value as import costs for January to December 2018 amounted to $36.284 billion against export revenues of $21.427 billion. Russian chemical and chemical product exports totalled 51,960 million tons in 2018 against imports of 15.252 million tons. The average price of exported chemicals from Russia in 2018 amounted to $401 per ton against the average import price of $2,738 per ton.

Pharmaceuticals and pharmaceutical intermediates represent the largest deficit sector for Russia's chemical industry balance, with imports amounting to $10.540 billion in 2018 against exports worth only $788 million. The only sector in the chemical sector where exports dominated imports was fertilisers where export values totalled $8.2 billion in January to December against just $118.4 million of imports. To achieve the fertiliser export revenues Russian companies exported 34.0 million tons at an average price of $233 per ton. Despite Russia being a major exporter of synthetic rubber, with exports amounting to 1.419 million tons in 2018 against imports of synthetic and natural rubber of 950,000 tons.

Russian Chemical Trade Jan-Dec 2018				
Product Category	***Exports ktons***	***Exports $ mil***	***Imports ktons***	***Imports $ mil***
Inorganic	8,064	2,596	5,760	3807
Organic	6,116	4,122	1,410	1977.12
Pharmaceuticals	39	788	163	10540
Fertilisers	33,997	8,200	301	118.4
Cosmetics	272	683	348	3291
Soap-detergents	139	504	584	1499
Paints-lacquers	439	315	630	1918
Proteins, enzymes	21	47	253	698
Explosives	41	129	1,014	53.8
Photo chemicals	1	11	20	293.8
Other Chemicals	807	878	1,219	2378
Plastics	2,024	3,154	3,550	9710
Rubber	1,419	3,150	950	2853.0
Total	51,960	21,427	15,252	36,284

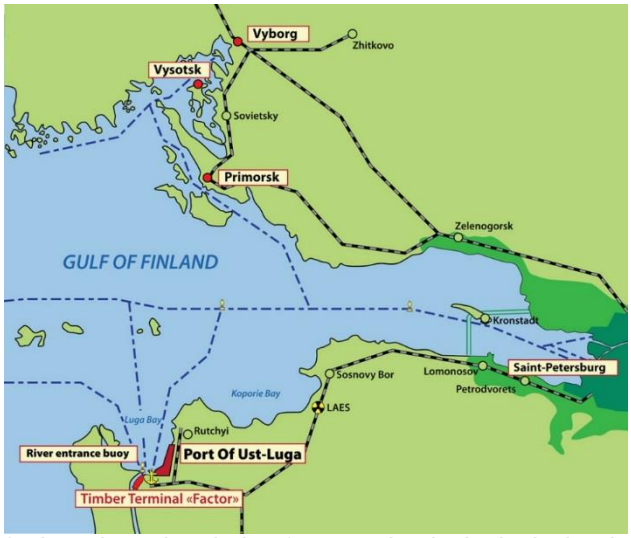
Of the product areas where Russia shows a large deficit, plastics is the most likely to see a change in the next three to five years. Exports of plastics were worth $3.2 billion in 2018 against imports of $9.7 billion, but in view of the pending projects this deficit might be expected to come down. Paints is also a sector where the deficit of $1.6 billion in 2018 could come down as domestic companies increase production.

For petrochemicals, Russian government support has been outlined for major projects involving largely polyolefins, with minimal emphasis on recycling. The so-called roadmap for the petrochemical industry fails to identify serious opportunities where Russia could exercise innovative investment and heavily concentrates on product duplication. The support measures under discussion between the Ministry of Industry and Trade and the Ministry of Finance include a reverse excise tax, which will help to equalize the various raw materials in the petrochemical industry including LPGs and the return of the infrastructure component for ethane used in petrochemical processes.

Russian petrochemical projects

Gazprom gas processing project & gas-chemical complex Ust Luga

Gazprom and RusGazDobicha have signed an agreement on the creation of a gas processing facility in the Ust-Luga region with a capacity of 45 billion cubic metres of gas per annum. The launch of the first stage is set out provisionally for 2023. The facilities of the complex would be designed to process ethane-containing gas from West Siberia with the subsequent production of 13 million tpa of LNG, up to 4 million tpa of ethane and more than 2.2 million tpa of LPGs. The remaining volume of gas (about 20 billion cubic metres) will be sent to the gas transmission system of Gazprom.



The production of ethane is expected to be used in a gas chemical complex through a special purpose company Baltic Chemical Complex which is aimed at producing over 3 million tpa of polymers. The advantages of the project include the integration of production facilities at a single site, the optimisation of the industrial and logistics infrastructure of the complex, the use of a common offshore shipping terminal.

One idea that has been discounted is to produce ethylene for merchant export, which the investors feel that the current geopolitical situation will not allow Russia to act as a guaranteed olefin supplier for European projects, so the decision to move further along the chain of processing looks logical. The total investment in the project is estimated at 700 billion roubles. The estimated plant revenue is more than $4 billion a year.

Gazprom-expansion of Amur Gas Processing Plant

Russian state body Glavgosexpertiza has issued a positive opinion in support of expanding the Amur GPP under construction by Gazprom near Svobodny in the Amur Oblast. At current levels of approval, the project is being designed to produce 42 billion cubic metres of gas per annum, but Gazprom is now considering the possibility of expanding up to 56 billion cubic metres. The current project includes key decisions on the fourth stage of construction, including connections of the plant to the gas pipeline.

The first stage of the plant (two technological lines) will be commissioned in April 2021, from January 2025, the GPP is expected to reach its design capacity. The launch of the enterprise will allow annually producing up to 2.6 million tons of ethane, 1.6 million tons of liquefied hydrocarbon gases, up to 60 million cubic metres s of helium and about 40 billion cubic metres of marketable gas.

ZapSibNeftekhim start-up and SIBUR IPO

SIBUR claims to be structurally ready for an IPO, but the decision on choosing the right moment remains with the shareholders. The IPO may become a more attractive proposition after the full operations at the new complex ZapSibNeftekhim at Tobolsk. SIBUR started the process of start-up in April 2019. Completion of construction and installation work on the project was scheduled for early May, and then the transition to commissioning was planned.

Amur Gas Processing Plant expansion depends on feedstock data

SIBUR has outlined intentions to negotiate with Gazprom on the supply of LPG before making a decision on the construction of the Amur Gas Chemical Complex. As a result of the expansion of the raw material base, the capacity of the Amur Gas Chemical Complex for the production of petrochemicals could increase by around 40% but SIBUR does need more information before committing any efforts towards design concepts of a larger cracker. Land for construction of the gas-

chemical complex has already been determined, geographically it is located next to the Amur GPP under construction.

Irkutsk Polymers Plant selects UNIPOL technology

Irkutsk Polymers Plant (a 100% subsidiary of Irkutsk Oil Company) has selected the UNIPOL polyethylene production technology from Univation Technologies for a new polymer plant to be built near Ust-Kut in the Irkutsk Oblast. The new plant will be able to produce both HDPE and LLDPE and in addition, the line will include technology for the manufacture of bimodal polyethylene, which can be used for pipes and high-strength film brands. An important goal of the plant is to meet the market demand for high-quality polyethylene in Russia and abroad. The company will also acquire a process control and management system developed by Univation.

Irkutsk Oil Company-Gas Chemical Project

- Ethylene-Lummus technology
- Polyethylene-UNIPOL technology
- General Contractor-Toyo

In February, the Irkutsk Oil Company (INK) signed a contract with Toyo Engineering Corporation for the construction of a plant for the production of ethylene and polyethylene with a capacity of 650,000 tpa. Lummus was chosen as the licensor of pyrolysis, and Russian company Neftekhimproekt was chosen as the general designer. INK expects that the plant in Ust-Kut district will be built by 2023. Investment in the project is estimated at 175 billion roubles.

INK was established on 27 November 2000. Including shareholders European Bank for Reconstruction and Development (EBRD), Goldman Sachs International, and Russian legal entities. In contrast to current producers of polyethylene in Russia INK will not have to buy its feedstocks and thus can benefit from almost zero cost of raw materials.

Russian Ethylene Production (unit-kilo tons)

Producer	*Jan-Feb 19*	*Jan-Feb 18*
Angarsk Polymer Plant	35.5	38.1
Kazanorgsintez	109.4	106.2
Stavrolen	49.4	53.2
Nizhnekamskneftekhim	106.4	103.9
Novokuibyshevsk Petrochemical	11.5	6.1
Gazprom n Salavat	62.2	61.6
SIBUR-Kstovo	67.4	67.6
SIBUR-Khimprom	8.5	8.2
Tomskneftekhim	44.5	46.7
Ufaorgsintez	21.1	21.2
Total	515.7	513.0

Russian Propylene Production (unit-kilo tons)

Producer	*Jan-Feb 19*	*Jan-Feb 18*
Angarsk Polymer Plant	19.4	21.4
Kazanorgsintez	8.1	7.4
Lukoil-NNOS	46.9	44.8
Stavrolen	19.5	22.0
Nizhnekamskneftekhim	53.2	54.8
Novokuibyshevsk	7.7	7.1
Omsk Kaucuk	7.1	21.5
Polyom	29.5	19.4
Gazprom n Salavat	28.2	26.5
SIBUR Kstovo	30.0	30.3
SIBUR-Khimprom	10.7	12.4
Tomskneftekhim	24.3	24.8
SIBUR Tobolsk	46.0	80.7
Ufaorgsintez	31.3	29.5
Total	361.6	402.6

Russian petrochemical production & sales

Russian ethylene production, Jan-Feb 2019

Russian ethylene production amounted to 515,700 tons in the first two months in 2019 against 513,000 tons in the same period in 2018. Kazanorgsintez increased production from 106,200 tons to 109,400 tons whilst Nizhnekamskneftekhim increased production from 103,900 tons to 106,400 tons. Stavrolen reduced production from 53,200 tons to 49,400 tons whilst Tomskneftekhim reduced production from 46,700 tons to 44,500 tons.

Russian propylene production, Jan-Feb 2019

Russian propylene production amounted to 361,600 tons in the first two months in 2019 against 402,600 tons in the same period in 2018. SIBUR-Tobolsk reduced production from 80,700 tons in January to February 2017 to 46,000 tons in the same period this year. Angarsk Polymer Plant reduced production from 21,400 tons to 19,400 tons.

Russian propylene domestic sales 2018

Sales of propylene on the Russian domestic market rose in the first two months to 75,200 tons from 68,100 tons in the same period in 2018, mainly due to extra purchases made by SIBUR Tobolsk for polypropylene production. SIBUR-Tobolsk's requirement to purchase extra propylene has impacted on market tightness. Moreover, in March Volzhsky Orgsintez was forced to stop purchasing the product from the Angarsk Polymer Plant due to a switch to propane-propylene fractions. Volzhsky Orgsintez is considering the possibility of

purchasing imported propylene. In the second half of February, the Orsk plant stopped the production of isopropanol due to high prices of raw materials and limited financial opportunities.

Russian Propylene Merchant Domestic Sales (unit-kilo tons)		
Company	***Jan-Feb 19***	***Jan-Feb 18***
Angarsk Polymer Plant	13.5	12.9
SIBUR-Kstovo	22.4	20.4
LUKoil-NNOS	36.8	34.6
Tomskneftekhim	0.0	0.0
Gazprom Neftekhim Salavat	2.5	0.0
Tobolsk-Polymer	0.0	0.2
Total	75.2	68.1

In March, Gazprom neftekhim Salavat reduced sales of propylene by around 1,000 tons due to increased internal processing. The change in the composition of pyrolysis raw materials and an increase in the production of propylene at Salavat was prompted by increased demand for processing into oxo alcohols, acrylic acid and butyl acrylate.

Propylene sales on the Russian domestic market totalled 376,100 tons in 2018 versus 371,100 tons in 2017. Lukoil-NNOS at Kstovo reduced shipments from 192,900 tons to 181,600 tons whilst SIBUR-Kstovo increased sales from 93,000 tons to 113,400 tons. The third largest supplier to the merchant market is Angarsk Polymer Plant. Lukoil-NNOS spends most of its propylene to Saratovorgsintez, SIBUR-Kstovo ships of all its monomer to SIBUR subsidiaries and Angarsk Polymer ships to consumers such as Omsk Kaucuk and SIBUR-Khimprom.

Russian Propylene Exports (unit-kilo tons)		
Producer	***Jan-Feb 19***	***Jan-Feb 18***
Lukoil-NNOS	11.0	18.6
SIBUR-Kstovo	4.0	1.6
Omsk Kaucuk	0.0	0.0
Stavrolen	3.9	1.7
Total	18.9	21.9

Russian propylene exports Jan-Feb 2019

The rise in consumption of propylene in the Russian domestic market has led to a reduction in the supply of product for export, dropping from 21,900 tons in the first two months in 2018 to 18,900 tons this year. The decrease in exports was due mostly to a reduction in the supply of propylene from Lukoil-NNOS, dropping from 18,600 tons to 11,000 tons.

Russian Styrene Production (unit-kilo tons)		
Producer	***Jan-Feb 19***	***Jan-Feb 18***
Nizhnekamskneftekhim	51.8	50.5
Angarsk Polymer Plant	5.8	6.2
SIBUR-Khimprom	23.7	18.6
Gazprom n Salavat	44.3	33.6
Plastik, Uzlovaya	8.0	11.2
Total	133.7	120.2

Russian styrene production & exports Jan-Feb 2019

Russia produced 133,700 tons of styrene in the first two months in 2019 against 120,200 tons in the same period last year. Gazprom neftekhim Salavat increased styrene production to 44,300 tons versus 33,600 followed by SIBUR-Khimprom at Perm where production increased from 18,600 tons to 21,600 tons.

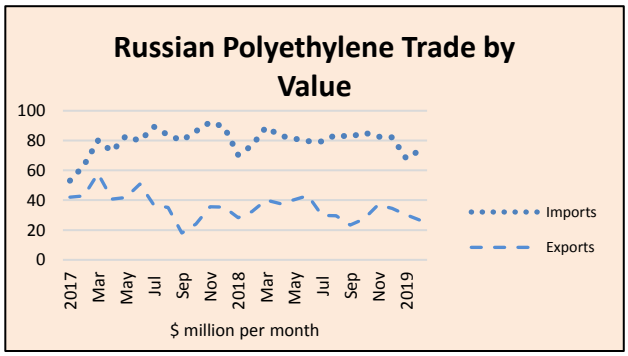
Styrene sales on the Russian domestic merchant market totalled 17,200 tons in January to February 2019 against 16,400 tons in the same period in 2018, with Gazprom neftekhim Salavat increasing shipments from 3,100 tons to 7,300 tons and SIBUR-Khimprom increasing shipments from 200 tons to 6,400 tons. At the same time Plastik at Uzlovaya reduced merchant sales from 8,900 tons to 126 tons. Main Russian consumers for merchant styrene include Styrovit and rubber producers such as Voronezhsintezkaucuk.

Bulk Polymers

Russian HDPE Production (unit-kilo tons)		
Producer	***Jan-Feb 19***	***Jan-Feb 18***
Kazanorgsintez	90.6	86.0
Stavrolen	45.0	49.3
Nizhnekamskneftekhim	0.0	0.0
Gazprom n Salavat	20.1	19.4
Total	155.7	154.7

Russian polyethylene production, Jan-Feb 2019

HDPE production increased 1% in the first two months in 2019 to 155,800 tons, although dropping in February due to an outage at Salavat. Kazanorgsintez produced 90,600 tons in the first two months in 2019 versus 90,000 tons in the same period whilst Stavrolen increased production by 9% to 45,100 tons. Gazprom neftekhim Salavat increased production by 4% in the first two months to 20,100 tons whilst Nizhnekamskneftekhim focused solely on LLDPE production in January and February. Regarding HDPE trade, Russia remains a net importer shipping 147,000 tons for export in 2018 versus 251,000 tons of imports.



Of the Russian producers Nizhnekamskneftekhim (plans to fully switch to the production of LLDPE by 2020. The company wants to focus on development of export markets, as well as the development of brand assortment. The company plans to develop the production of medium-density polyethylene for rotary moulding, copolymers of ethylene, etc.

Kazanorgsintez intends to launch industrial production of metallocene linear low-density polyethylene in April 2019. This would be the first production of such products in Russia whereby until now the market needs have been met exclusively by imports. Launching domestic brands on the market will reduce the shortage of metallocene products and make them available to a wide range of polymer processors.

Kazanorgsintez is launching the production of LLDPE using the hexene-1 comonomer. As a co-monomer-modifier, hexene-1 is more effective than butene-1 and provides the best set of operational properties of the product being produced. The resulting products are expected to compete LLDPE metallocene brands from Sabic and ExxonMobil.

Russian polypropylene production, Jan-Feb 2019

Russian polypropylene production decreased by 13.2% in the first two months in 2019 and amounted to 209,700 tons against 245,100 tons in the same period last year. In February 2019, production amounted to 111,800 tons against 100,900 tons in January. SIBUR Tobolsk increased its production in February to 39,800 tons against 18,600 tons in the preceding month which meant overall the plant reduced polypropylene production by 28% for the first two months to 58,300 tons.

Russian Polypropylene Production (unit-kilo tons)		
Producer	***Jan-Feb 19***	***Jan-Feb 18***
Ufaorgsintez	22.3	22.1
Stavrolen	15.1	19.7
Neftekhimya	23.6	23.0
Nizhnekamskneftekhim	35.3	34.1
Polyom	33.9	35.7
Tomskneftekhim	21.2	23.8
SIBUR Tobolsk	58.3	86.8
Total	209.7	245.2

Polyom at Omsk reduced production by 4% to 33,900 tons whilst Nizhnekamskneftekhim reduced production slightly from 35,700 tons to 35,300 tons. In January-February, Stavrolen stopped its facilities for short-term repairs and thus reduced production from 19,600 tons to 15,100 tons. Tomskneftekhim increased production by 4% to 21,200 tons whilst Ufaorgsintez rose from 21,500 tons to 22,300 tons. Neftekhimya increased production by 2% to 23,600 tons. Polypropylene imports to the Russian market decreased by 18% over January-February 2019 Russian processors have reduced the demand for foreign-made propylene homopolymers. In the first two months of the year, 23,800 tons of polypropylene was imported into the Russian Federation. In February, deliveries increased Turkmenistan and Azerbaijan, as a result of which 15,200 tons of propylene polymer was imported to the market.

The import of propylene homopolymer in two months decreased by 28% to 6,900 tons although in February, there was an increase in deliveries from Turkmenistan and the new SOCAR plant in Azerbaijan. External deliveries of propylene block copolymers decreased from 7,100 tons to 6,800 tons in two months. Imports of stat-copolymers of propylene amounted to 4,400 tons, a year earlier 5,200 tons. External deliveries of other polymers of propylene for the period amounted to 5,600 tons, a year earlier they reached 7,100 tons.

Russian PVC Production (unit-kilo tons)		
Producer	***Jan-Feb 19***	***Jan-Feb 18***
Bashkir Soda	44.0	43.5
Kaustik	14.2	15.5
RusVinyl	58.0	53.8
Sayanskkhimplast	52.8	52.1
Total	169.0	164.9

Russian PVC, Jan-Feb 2019

Russian PVC production rose by 3% in January-February 2019 to 169,500 tons. RusVinyl for January-February produced 58,000 tons of PVC, which is 8% higher than last year. In February, 28,600 tons of PVC were produced, of which 2,000 tons comprised emulsion brands. Sayanskkhimplast produced 52,800 tons of resin versus

52,000 tons, whilst Bashkir Soda Company produced 44,400 tons which is 1.4% higher than last year. Kaustik at Volgograd produced 14,200 tons of PVC, which is 8.4% lower than last year.

Exports of PVC from Russia rose 5% in the first two months in 2019 to 37,900 tons against 36,000 tons, whilst imports fell five-fold to 800 tons. The main destination for Russian PVC exports in 2019 so far has been India, accounting for 15,100 tons at a total cost of $11.8 million. Belarus was the second largest destination, accounting for 6,790 tons for the value of $6.2 million.

PX-PTA chain

Russian PTA imports, Jan-Feb 2019

Russian PTA imports amounted to 68,900 tons in the first two months in 2019 against 33,100 tons in the same period last year, the rise due to the necessity to cover the shutdown of the Polief plant. The main destination for PTA imports is Kaliningrad which accounted for 54,300 tons in January and February, all of which went to Alko-Naphtha. China accounted for 70% of shipments in the first two months, or 48,900 tons versus only 16,700 tons in the same two months in 2018. Imports costs for Chinese PTA imports so far in 2019 have totalled $44.3 million.

Russian PTA Imports (unit-kilo tons)

Country	*Jan-Feb 19*	*Jan-Feb 18*
Belgium	2.0	1.6
India	1.0	3.9
China	48.9	16.7
South Korea	14.0	4.8
Poland	0.0	0.0
Thailand	3.0	6.0
Total	68.9	33.1

Polief PTA expansion and extended outage 2019

Polief has scheduled a four-month stoppage of the PTA plant from February 2019 for modernisation. During the scheduled shutdown the plant capacity at Blagoveshchensk is to be increased from 272,000 tpa to 350,000 tpa. PTA production is expected to be resumed in June 2019, whilst new reactors for the plant will be started in August and possibly increased output could be seen by the fourth quarter. Production of PET by Polief will continue during the modernisation period. An estimated amount of 40,000 tpa of PTA has been arranged provisionally with Chinese suppliers to cover the extended outage.

During the shutdown period Polief's paraxylene suppliers Ufaneftekhim and Gazprom Neft at Omsk are both expected to increase export activity in the first half of 2019. After the restart of the PTA plant, normal deliveries will be resumed but availability for paraxylene export should fall after the completion and commissioning of the PTA plant. Polief's paraxylene requirements are expected to rise subsequently from around 180,000 tpa to 235,000 tpa.

During March Polief installed large-sized equipment, including an air-cooling apparatus. The use of new equipment will make it possible to eliminate the emission into the atmospheric air of excess steam resulting from the release of a large amount of heat during the synthesis of PTA. Furthermore, on one of the production buildings, a new regeneration column was installed. Modernisation covers 11 existing production buildings. Within the project, it is planned to upgrade 150 units of main technological equipment.

Titan-Polymer Pskov

According to Titan, the Russian market of BOPET films will grow to 75,000 tons in the next few years justifying the investment in the new plant at Pskov in western Russia. Currently, the country imports up to 50,000 tons of this product per annum. Raw materials for the plant will be purchased in Kazan, Nizhnekamsk. If Russian raw materials prove unprofitable, the Pskov plant is well located to import from other sources. In June 2020 the first line will be ready and full capacity is expected after six months.

The investment project Titan-Polymer will be implemented in four stages. Within the framework of the first stage, it is planned to create two lines of biaxially oriented polyethylene terephthalate film (BOPET) with a capacity of up to 70,000 tpa. In the future, it is planned to organise a large industrial complex for the production of polyethylene terephthalate (PET) in the amount of up to 170,000 tpa.

Aromatics

Russian benzene production, Jan-Feb 2019

Russian benzene production dropped to 225,300 tons in the first two months in 2019 versus 248,400 tons in the same period in 2018. Reductions in production were recorded by Gazprom Neft and Lukoil due to maintenance. Uralorgsintez began maintenance on its aromatic's division on 8 April, scheduled for completion on 26 April. Uralorgsintez, which is located at Chaikovsky in the Perm region, produces 90,000 tpa of benzene. The last time that repair work at the Tchaikovsky plant was carried out was in April 2017.

Russian Benzene Production (unit-kilo tons)		
Producer	***Jan-Feb 19***	***Jan-Feb 18***
Rosneft	25.3	28.3
Gazprom Neft	14.0	23.7
Lukoil	9.5	16.4
Magnitogorsk MK	9.4	9.5
Nizhnekamskneftekhim	46.5	37.9
Novolipetsk MK	1.8	1.9
Gazprom n Salavat	27.9	38.1
Kirishinefteorgsintez	13.8	13.8
Slavneft	11.7	10.6
Severstal	6.2	6.3
Bashneft	15.6	16.0
Ural Steel	1.6	1.2
Uralorgsintez	14.6	16.6
Zapsib	12.9	12.8
SIBUR	14.5	15.3
Total	225.3	248.4

Benzene sales on the Russian merchant market totalled 132,000 tons in the first two months in 2019, down from 154,050 tons in the same period last year due to lower production. Russia's largest merchant consumer of benzene Kuibyshevazot purchased 30.203 tons in the first two months versus 26,500 tons, sourcing product from SIBUR-Kstovo, Gazprom Neft at Omsk, the refineries at Slavneft and Ryazan, in addition to the coal-based producer West Siberian Metallurgical Plant.

Benzene supply was tight in March due to downtime at Stavrolen. In March, Gazprom neftekhim Salavat sold 2,000 tons of benzene all of which was shipped to Kuibyshevazot. Karpatneftekhim supplied another batch of 4,000 tons, whilst the Atyrau refinery in Kazakhstan reduced shipments due to lower production dropping to 1,500 tons versus 2,600 tons in February.

Russian caprolactam, Jan-Feb 2019

Russian caprolactam production totalled 58,000 tons in the first two months in 2019 against 64,900 tons in the same period in 2018. Kuibyshevazot reduced caprolactam production from 33,500 tons to 29,800 tons in January to February 2019, whilst drops were also recorded for Azot at Kemerovo and Shchekinoazot. Of the three producers Azot at Kemerovo exports nearly all caprolactam, Shchekinoazot around 84% and Kuibyshevazot the smallest at no more than 17%.

Russian Caprolactam Production (unit-kilo tons)		
Producer	***Jan-Feb 19***	***Jan-Feb 18***
Kuibyshevazot	29.8	33.6
Shchekinoazot	9.1	9.4
SDS Azot	19.1	21.9
Total	58.0	64.9

Kuibyshevazot processes caprolactam into polyamide where production is rising and thus exports may fall further in 2019. Caprolactam production for Kuibyshevazot rose from 194,500 tons in 2017 to 210,100 tons in 2018, whilst polyamide-6 production rose from 147,200 tons to 151,300 tons. Kuibyshevazot's subsidiary Kurskkhimvolokno accounts for 70% of the Russian market of polyamide technical fabrics. Kurskkhimvolokno is the only producer of textured polyamide and complex yarns, as well as polyamide staple fibre.

Russian toluene & orthoxy+lene, Jan-Feb 2019

In the first two months in 2019 sales of toluene on the Russian domestic merchant market totalled 23,000 tons against 23,700 tons in the same period in 2018. Gazprom Neft and Kirishinefteorgsintez were the two largest suppliers, with the main consumers distributed amongst the producers of fuels, paints and explosives. Russian orthoxylene domestic sales dropped from 25,100 tons in the first two months in 2018 to 23,300 tons in the same period in 2019.

Russian Phenol Production (unit-kilo tons)		
Producer	***Jan-Feb 19***	***Jan-Feb 18***
Ufaorgsintez	12.4	9.4
Kazanorgsintez	12.5	12.5
Novokuibyshevsk Petrochemical	12.5	10.0
Total	37.3	31.8

Russian phenol, Jan-Feb 2019

Russian phenol production amounted to 19,500 tons in the first two months in 2019 versus 17,100 tons in the same period in 2018. Ufaorgsintez increased production from 7,200 tons to 9,600 tons whilst Novokuibyshevsk Petrochemical increased production from 7.700 tons to 8,400 tons in the first two months in 2019.

Phenol sales on the Russian merchant market totalled 19,500 tons in the first two months in 2019 against 17,100 tons in the same period in 2018. Kazanorgsintez reduced merchant sales in order to increase production of bisphenol A, although this was compensated by an increase in domestic shipments from the Novokuibyshevsk Petrochemical Plant from 7,700 tons to 8,400 tons. Novokuibyshevsk Petrochemical Company, which is owned by Rosneft, is the only phenol producer of the three in Russia that has no internal

processing, and thus sells product to either to domestic or export markets. Ufaorgsintez increased shipments in the first two months from 7,200 tons to 9,600 tons.

Russian Market Phenol Sales by Supplier (unit-kilo tons)		
Producer	***Jan-Feb 19***	***Jan-Feb 18***
Novokuibyshevsk Petrochemical	8.4	7.7
Kazanorgsintez	1.0	1.4
Ufaorgsintez	9.6	7.2
Borealis	0.4	0.8
Total	19.5	17.1

The major domestic phenol consumers in the first two months this year consisted of Metadynea, Shchekinoazot and Uralkhimplast. Metadynea purchased a total of 6,077 tons in January and February, almost a third of all Russian merchant consumption, purchasing all product from Ufaorgsintez and Novokuibyshevsk Petrochemical Company.

For 2019 the Russian phenol market is expected to see important changes as the Titan Group plans to launch start-up operations on phenol-acetone production at Omsk Kaucuk at the end of May or mid-June 2019. The updated capacity will increase the production of phenol to 90,000 tpa and acetone to 56,000 tpa. The start of production was scheduled for the end of 2018, but the deadlines for entry were shifted.

Synthetic Rubber

Russian C4s, Jan-Feb 2019

C4 sales for Russian synthetic rubber producers totalled 73,200 tons in the first two months in 2019 against 74,700 tons in the same period in 2018. Production of synthetic rubber in Russia dropped from 282,000 tons in the first two months to 264,000 tons in the same period this year. Regarding C4 shipments, SIBUR Togliatti was the largest consumer, purchasing 33,200 tons versus 34,700 tons last year. SIBUR Togliatti buys most of its C4s from SIBUR-Kstovo and Stavrolen.

Russian C4 Purchases (unit-kilo tons)		
Consumer	***Jan-Feb 19***	***Jan-Feb 18***
Omsk Kaucuk	7.9	8.2
Nizhnekamskneftekhim	32.1	31.8
SIBUR Togliatti	33.2	34.7
Total	73.2	74.7

Nizhnekamskneftekhim, which purchased 32,100 tons in January to February 2019 versus 31,800 tons, sources C4s not only from SIBUR-Kstovo but also the plants in the Volga-Urals region including Kazanorgsintez, Ufaorgsintez and Gazprom neftekhim Salavat augmented by import deliveries from Naftan in Belarus and Karpatneftekhim in Ukraine. SIBUR-Kstovo was the largest supplier to the Russian market in January to February 2019, followed by Tomskneftekhim and Stavrolen.

Russian synthetic rubber exports, Jan-2019

Export volumes for Russian synthetic rubber in January in 2019 totalled 91,500 tons against 91,400 tons in 2018. Average product prices amounted to $1591 per ton against $1558 per ton in January 2018. Nizhnekamskneftekhim was responsible for 65% of total export sales from Russia. By product category, isoprene rubber exports totalled 26,400 tons in January against 28,300 tons. Isoprene rubber prices rose to $1647 per ton in January 2019. Export sales of butyl rubber from Russia dropped slightly from 11,800 tons to 11,400 tons in January 2019, whilst exports of halogenated butyl rubber (HBR) rose to 13,200 tons against 12,900 tons. Export prices of butyl rubber amounted to $1464 per ton in January from $1508 last year and for halogenated butyl rubber $2430 per ton from $2039 per ton in January 2018.

Russian Synthetic Rubber Exports (unit-kilo tons)		
Product	***Jan-19***	***Jan-18***
E-SBR	4.6	2.6
Block	1.9	1.6
SSBR	1.4	0.7
SBR	6.0	7.9
Polybutadiene	20.4	19.4
Butyl Rubber	11.4	11.8
Halobutyl Rubber	13.2	12.9
Nitrile Butadiene Rubber	2.8	3.1
Isoprene Rubber	26.4	28.3
Others	3.4	3.1
Total	91.5	91.4

Regarding export destinations, China was the largest recipient of Russian rubber shipments in the first month this year accounting for 14.1%, followed by Hungary with 10.5% and India with 9.7%. Other leading markets included Poland, Romania and Mexico.

Nizhnekamskneftekhim synthetic rubber exports, Jan-Dec 2019

Nizhnekamskneftekhim exported 648,000 tons of synthetic rubber in 2018 against 639,000 tons in 2017. Revenues from rubber exports for Nizhnekamskneftekhim dropped in 2018 to $778 million versus $799 million in 2017, signifying a fall in overall average prices from $1803 per ton to $1616 per ton. The largest category of rubber exports from Nizhnekamsk is isoprene rubber, which amounted to 211,600 tons in 2018 against 217,000 tons in 2017. Nizhnekamskneftekhim is responsible for almost all Russian exports of halogenated butyl rubber, rising to 136,900 tons in 2018 against 134,000 tons in 2017.

Nizhnekamskneftekhim Synthetic Rubber Exports Jan-Dec 2018		
Product	***Vol (kilo tons)***	***Price Per Ton ($)***
Isoprene Rubber	211.6	1422.6
Butyl Rubber	73.7	1806.3
HBR	136.9	2363.3
Polybutadiene	168.9	1655.8
Others	0.9	1592.6
Totals	592.0 ktons	1616 per ton

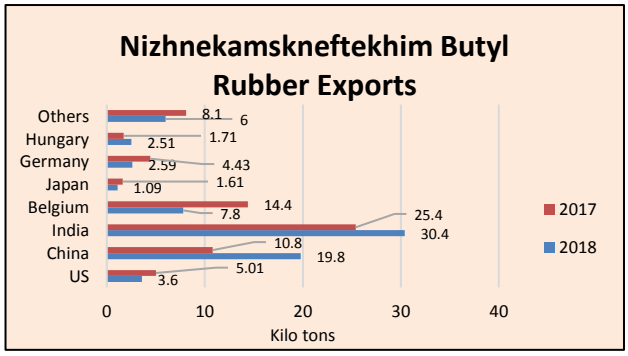
Nizhnekamskneftekhim-isoprene rubber

By the end of 2018 Nizhnekamskneftekhim had increased the production capacity of isoprene rubber by 18% to 330,000 tpa. In the fourth quarter last year the construction of new formaldehyde and isobutylene production facilities and the reconstruction of the existing production of isoprene monomer were completed. This made it possible to increase the production capacity of isoprene rubber SKI-3 from 280,000 tpa. The company may in future consider an expansion of isoprene rubber capacity to 420,000 tpa, and this would require an expansion of capacity for formaldehyde to 250,000 tpa.

Nizhnekamskneftekhim is currently completing commissioning works at the isoprene monomer plant which will result in an increase in capacity to support the expansion of capacity for isoprene rubber. Nizhnekamskneftekhim commissioned a new isobutylene production plant in 2018, raising capacity by 160,000 tpa. At the plant Nizhnekamskneftekhim isobutylene is obtained from the isobutane fraction by the method of dehydrogenation.

Nizhnekamskneftekhim-butyl rubber food grade exports to the US

Nizhnekamskneftekhim organised its first shipment of food grade butyl rubber to the US for April. The company recently completed a recertification audit of rubber production for compliance with the requirements of the US food industry. In March a recertification audit of rubber production was conducted, which confirmed the compliance of the products with the safety requirements of the food industry. In April, a batch of products weighing 350 tons was sent to consumers in the US.



The production of food rubbers was introduced by Nizhnekamskneftekhim several years ago after the first brand BK 1675P was produced for a foreign company which used it as a connecting base for chewing gum.

The production of halobutyl rubbers, which are also used for the food industry, was launched by Nizhnekamskneftekhim in March 2004. In May 2004, Nizhnekamskneftekhim launched the production of bromobutyl rubber. By 2017, the capacity for halobutyl rubbers had been established at 150,000 tpa.

SIBUR Togliatti, rubber exports 2018 & modernisation

SIBUR Togliatti increased synthetic rubber exports to 121,400 tons in 2018 against 116,000 tons in 2017. SIBUR completed at its Togliatti site a large-scale project in 2018 for the technical re-equipment of the production of isoprene. Technical re-equipment has fundamentally changed the process of production management of isoprene which is now is fully automated. SIBUR Togliatti started production of two environmentally friendly brands of styrene-butadiene rubber in 2018, which fully meet the European Union's requirements. The production of butyl rubber has

SIBUR Togliatti Synthetic Rubber Exports Jan-Dec 2018		
Product	***Vol (kilo tons)***	***Price Per Ton ($)***
Isoprene Rubber	22.1	1333.8
Butyl Rubber	58.1	1700.8
SBR	41.2	1366.6
Total	121.4 ktons	1467.1 per ton

developed a technology for obtaining a new brand BK-351, which will expand the market and increase the competitiveness of products.

Voronezhsntezkaucuk synthetic rubber production & exports, Jan-Dec 2018

SIBUR increased the production of rubber and thermoplastic elastomers at Voronezh by 3,800 tons in 2018 whereby the plant produced 267,120 tons of synthetic rubber and TEP. The company was able to increase production volumes despite maintenance requirements.

Voronezhsintezkaucuk-TEP/SBS (unit-kilo tons)		
	2018	2017
Production	79.3	77.8
Exports	29.7	35.1
Domestic Sales	49.2	43.6

The major project undergoing at Voronezh comprises the increase in capacity for TEPs from 85,000 tpa to 135,000 tpa. Last year it was possible to increase the capacity of standard brands of SKD-ND, CWR and TEP rubber at Voronezh by a total of 13,500 tpa. In order to save energy, a number of measures were undertaken in 2018 as a result of which the company saved on consumption. In particular, technical re-equipment of refrigeration equipment was carried out, whilst process control at TEP-50 and DSSK productions was improved.

Krasnoyarsk Synthetic Rubber Plant 2018

Regarding butadiene nitrile rubber (NBR) the Krasnoyarsk plant exported 32,800 tons in 2018 against 26,800 tons in 2017. Higher production volumes have resulted from technology improvements under the jv between SIBUR and Sinopec, whilst enabling the production of new grades which has opened up growth in new markets. In August 2013 SIBUR and Sinopec setup a joint venture for the production of nitrile butadiene rubber SIBUR-Sinopec Rubber Holding Company Limited. Sinopec share's in the authorized capital of the joint venture is 25% plus one share, SIBUR 75% minus one share.

Krasnoyarsk Synthetic Rubber Plant-NBR (unit-kilo tons)		
	2018	2017
Production	38.3	34.7
Exports	32.8	26.8
Domestic Sales	5.5	7.9

Russian Methanol Production (unit-kilo tons)		
Producer	*Jan-Feb 19*	*Jan-Feb 18*
Shchekinoazot	159.3	74.1
Sibmetakhim	166.0	166.1
Metafrax	199.8	197.0
Akron	17.7	17.4
Azot, Novomoskovsk	47.9	44.8
Angarsk Petrochemical	3.9	0.2
Azot, Nevinnomyssk	22.8	18.0
Tomet	134.8	145.8
Ammoni	26.9	36.6
Totals	779.1	699.9

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	*Jan-Feb 19*	*Jan-Feb 18*
Azot Nevinnomyssk	6.4	1.8
Azot Novomoskovsk	33.0	24.6
Metafrax	41.4	37.9
Sibmetakhim	104.1	60.1
Tomet	69.0	94.5
Shchekinoazot	17.6	8.6
Ammoni (Mendeleevsk)	11.9	30.0
Others	0.0	0.3
Total	283.4	257.8

Deliveries of rubber to China are carried out from the Krasnoyarsk plant, accounting for more than half of total NBR exports in 2017 and 2018. Production capacity at Krasnoyarsk Synthetic Rubber comprises 42,500 tpa involving up to 85 grades of rubber.

Methanol & related products

Russian methanol production & sales, Jan-Feb 2019

Methanol production in Russia increased by 10% in the first two months in 2019 to 779,100 tons. The rise was largely down to Shchekinoazot which following the introduction of new capacity increased production from 74,100 tons to 159,300 tons. Shchekinoazot was able to increase export activity by more than double from 49,900 tons in January and February 2018 to 117,800 tons.

Demand for methanol on the Russian domestic market has strengthened slightly so far in 2019, with domestic sales totalling 283,400 tons in the first two months versus 257,800 tons in the same period in 2017. Ammoni at Mendeleevsk reduced domestic sales in January to February from 30,000 tons last year to 11,900 tons, Azot at Novomoskovsk increased from 24,600 tons to 33,000 tons and Tomet reduced shipments from 94,500 tons to 69,000 tons.

Nizhnekamskneftekhim remains the largest individual buyer of merchant methanol on the Russian market, purchasing 39,700 tons in the first two months versus 43,700 tons in the same period in 2018. SIBUR Togliatti increased purchases from 19,900 tons to 31,800 tons, whilst Metadynea and Kronospan both increased inward shipments.

Russian Methanol Exports (unit-kilo tons)		
Producer	***Jan-Feb 19***	***Jan-Feb 18***
Azot Novomoskovsk	12.6	32.0
Akron	1.7	3.1
Metafrax	80.9	72.5
Sibmetakhim	71.2	98.5
Tomet	52.9	53.0
Shchekinoazot	117.8	49.9
Ammoni	7.6	1.6
Total	344.8	309.1

Russian exports of methanol increased in the first two months in 2019 to 344,800 tons from 309,100 tons in the same period in 2018. Shchekinoazot increased exports from 49,900 tons to 117,800 tons whilst the only other producer to export volumes was Metafrax which increased from 72,500 tons to 80,900 tons.

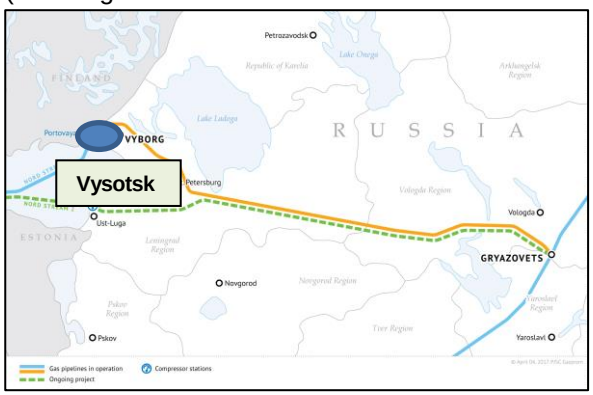
Nakhodka methanol project update

Nakhodka Plant of Mineral Fertilisers is implementing an investment project for the construction of a gas-chemical complex in the village of Kozmino, in the Nakhodka urban district of Primorsky Krai. The project now includes the production of methanol and ammonia each with a capacity of 1.8 million tpa. Commissioning of the methanol production plants was postponed from an earlier date of 2019 to 2022, and ammonia to 2024. To date, a contract has been signed for the design and construction of the plant.

The total cost of the project is estimated at $6.3 billion. In September 2015, the National Chemical Group entered into a 20-year contract for the supply of 3.15 billion cubic metres of gas with Gazprom Mezhregiongaz. The Asian Investment Fund Generations Fund (GenFund) has agreed to invest $440 million in the Nakhodka Mineral Fertiliser project.

Lukoil-methanol project idea for Vysotsk, NW Russia

Lukoil has outlined plans to build a plant for methanol production and a sea terminal for transhipment in Vysotsk. Gazprom and Novatek are competing to supply gas to the site, whilst two design institutes (including the Research Institute of Carbamide and Organic Synthesis Products and the Research Institute of the Nitrogen Industry) recently set about calculating costs for methanol production plant from natural gas combined with a marine terminal for its transhipment. Both hypothetical concepts are based on 50 hectares of land in the port of Vysotsk near Vyborg on the Gulf of Finland. The capacity of the complex is estimated at 1.6 million tpa, the volume of investments is $ 1.5 billion.



If proceeding to the investment plan, the methanol complex would become the second part of the Vysotsk Dry Cargo Handling Complex project. This involves the construction of a terminal for coal transhipment with a capacity of 15 million tpa in the same port, which represents about 40% of all coal transhipment in the Russian ports of the Baltic Sea. Novatek is the main owner of the Leningrad-Vyborg-State Border gas pipeline to Vysotsk, which would supply the methanol plant, but faces competition from Gazprom.

Organic chemicals

Russian butanol production, Jan-Feb 2019

In the first two months in 2019 Russian normal butanol production amounted to 24,800 tons, versus 27,700 tons in the same period in 2018 whilst isobutanol production rose from 18,000 tons to 18,100 tons. Angarsk Petrochemical reduced production of normal butanols from 6,000 tons in January to February 2018 to 4,400 tons this year, whilst isobutanol production dropped from 3,400 tons to 2,600 tons. Sales of butanols on the domestic market dropped from 14,900 tons in January and February 2018 to only 8,700 tons this year.

Russian N-Butanol Production (unit-kilo tons)		
	Jan-Feb 19	***Jan-Feb 18***
Angarsk Petrochemical Company	4.4	6.0
Azot, Nevinnomyssk	2.7	2.1
Gazprom neftekhim Salavat	10.8	11.6
SIBUR-Khimprom, Perm	6.9	8.0
Total	24.8	27.7
Russian Isobutanols Production (unit-kilo tons)		
	Jan-Feb 19	***Jan-Feb 18***
Angarsk Petrochemical Company	2.6	3.4
Gazprom neftekhim Salavat	6.0	6.0
SIBUR-Khimprom, Perm	9.5	8.7
Total	18.1	18.0

Russian Butanol Consumption (unit-kilo tons)		
Consumer	***Jan-Feb 19***	***Jan-Feb 18***
Akrilat	3.3	3.6
Dmitrievsky Chemical	2.3	4.6
Volzhskiy Orgsintez	1.6	1.4
Others	1.4	5.3
Total	8.7	14.9

Eurasian Organic Chemical Exports (unit-kilo tons)		
Product	***Jan-19***	***Jan-18***
Propylene	5.9	15.4
Orthoxylene	4.3	4.4
Paraxylene	5.3	5.8
Styrene	0.8	8.8
Methanol	207.0	167.7
N-Butanol	0.9	2.5
Iso-butanol	1.0	1.7
2-EH	0.3	1.9
Pentaerythritol	0.7	0.9
Phenol	0.8	2.6
Ethylene Oxide	1.1	1.4
Formaldehyde	1.9	1.2
Acetone	2.3	2.0
Acetic Acid	1.7	5.4
VAM	4.3	1.0
Butyl Acetate	1.4	2.0
Phthalic Anhydride	6.7	6.3
Acrylonitrile	24.7	23.4
Melamine	0.9	0.6
Caprolactam	19.4	15.4

SIBUR-Khimprom increased isobutanol production from 8,700 tons to 9,500 tons whilst reducing production of normal butanols from 8,000 tons to 6,900 tons.

Major producers Gazprom neftekhim and Salavat and SIBUR-Khimprom focused more product on internal requirements, which explains lower availability for the domestic market. Both Akrilat and Dmitrievsky Chemical Plant reduced purchases in the first two months, dropping from 3,600 tons to 3,300 tons and 4,600 tons to 2,300 tons respectively.

SIBUR and Gazprom neftekhim Salavat are considering ways that they can develop the domestic butanols and acrylate markets. Gazprom neftekhim Salavat's acrylic division operates 80,000 tpa of acrylic acid, 80,000 tpa of butyl acrylate and 35,000 tpa of glacial acrylic acid.

SIBUR-Khimprom-DOTP project

SIBUR-Khimprom has completed the construction of dioctyl terephthalate production (DOTP) and the commissioning process has been started. Production capacity of the mew plant has been designed at nameplate 100,000 tpa, with the Korean company Aekyung providing the technology. Russian engineering company NIPIGAZ has been in charge of the general design, whilst construction, installation and commissioning work has been performed by Russian contractors.

The implementation of the project will make it possible to largely replace the import of similar products and begin supplying plasticizers to export markets, where the demand for DOTP is also actively growing. Most of the products are planned to be sold on the domestic market.

Russian organic chemical trade, Jan-2019

Butanol exports from Russia dropped in January, falling to 900 tons for normal butanol against 2,500 tons in January 2018 and isobutanol from 1,700 tons to 1,000 tons. Exports of 2-ethylhexanol (2-EH) amounted to 300 tons, down from 1,900 tons in 2017. Phthalic anhydride exports amounted to 6,700 tons in January 2019 versus 6,300 tons, whilst butyl acetate shipments dropped to 1,400 tons from 2,000 tons.

Caprolactam exports increased from 15,400 tons to 19,400 tons, with most of the shipments from Russia being directed towards the Asian markets.

Russian phthalic anhydride production Jan-Feb 2019 & future prospects

Russian production of phthalic anhydride amounted to 15,800 tons in the period January to February 2019 against 17,300 tons in the same period in 2017. Kamteks-Khimprom increased production from 15,300 tons to 13,400 tons whilst Gazprom neftekhim Salavat increased production from 2,100 tons to 2,500 tons. Regarding demand patterns, domestic consumption of phthalic anhydride is expected to fall in 2019 following the launch of the new SIBUR plasticizer production plant, dioctyl terephthalate (DOTP), with a capacity of 100,000 tpa. In order to combat

Russian Phthalic Anhydride Production (unit-kilo tons)		
Producer	***Jan-Feb 19***	***Jan-Feb 18***
Gazprom n Salavat	2.5	2.1
Kamteks	13.4	15.3
Total	15.8	17.3

lower phthalic consumption Kamteks-Khimprom will almost certainly have to increase exports and compete with the Belarussian producer Lakokraska which is already on the European market.

Saratovorgsintez-acrylonitrile shutdown

Saratovorgsintez plans to stop for a major overhaul in the autumn of 2019. The company's plans include the overhaul of technological installations, involving the execution of construction and installation works. The first block of works is expected to be completed in September-October 2019. The second block of works is designed for a longer period: from the moment of the conclusion of the contract with the contractor to December 2019. Saratovorgsintez produces acrylonitrile with a capacity of 170,000 tpa and sodium cyanide with a capacity of 36,000 tpa. Saratovorgsintez reduced propylene purchases from 172,800 tons in 2017 to 141,200 tons in 2018.

Saratovorgsintez Production (unit-kilo tons)			
Product	***2016***	***2017***	***2018***
Acrylonitrile	158.1	157.4	128.4
Acetonitrile	3.4	3.3	3.3
Sodium cyanide	26.6	26.2	26.5

Nizhnekamskneftekhim-methyloxyethylated polyethylene glycol

Nizhnekamskneftekhim received the first batch of methyl-oxyethylene polyethylene glycol (MPEG) from its new plant of 25,000 tpa. This production is based on the existing unloaded production of neonols. MPEG is used in the production of various detergents and cleaning products as a stabilizer for viscosity regulators, antistatic agents, and as superplasticizers in concrete mixes. In February 2018, NKNH established a plant of oligomers and glycols, which included the production of two plants including oligomers and ethylene oxide.

Other products

Russian TDI Imports (unit-kilo tons)		
Country	***Jan-Feb 19***	***Jan-Feb 18***
Hungary	1.9	1.5
Germany	3.2	3.3
China	0.1	0.0
South Korea	0.2	0.3
Saudi Arabia	1.2	0.7
UK	0.0	0.1
US	1.4	0.2
Japan	0.3	0.4
Iran	0.0	0.1
Total	8.4	6.7

Russian TDI-MDI imports, Jan-Feb 2019

Russia imported 8,400 tons of TDI in the first two months in 2019, against 6,700 tons in the same period in 2018. Germany supplied 3,200 tons versus 3,300 tons in January and February 2018, followed by Hungary and Saudi Arabia. TDI costs totalled $14.4 million for the first two months, with prices continuing to weaken.

MDI imports into Russia totalled 19,800 tons in the first two months in 2019, against 13,300 tons in the same period in 2018. Average prices for MDI imports dropped from $2714 per ton to $1707 per ton. Saudi Arabia increased shipments to the Russian market to 5,500 tons versus 3,900 tons, although revenues from sales dropped from $10.7 million to $8.7 million. The Netherlands accounted for 5,100 tons of MDI imports against 3,600 tons in the same period in 2018, with revenues remaining unchanged at $8.5 million.

Russian MDI Imports (unit-kilo tons)		
Country	***Jan-Feb 19***	***Jan-Feb 18***
Hungary	0.8	0.2
Germany	2.4	1.9
Italy	0.0	0.0
China	2.9	1.6
South Korea	0.3	0.0
Lithuania	0.0	0.1
Saudi Arabia	5.5	3.9
Japan	0.2	0.3
Belgium	2.6	1.3
Netherlands	5.1	3.6
Others	0.0	0.4
Total	19.8	13.3

Aerosolex-REACH registration

Aerosolex, which launched the production of dimethyl ether (DME) of perfumery quality in Dzerzhinsk last year, continues to expand its presence in export markets. To this end, REACH certification was completed. The first deliveries to export Aerosolex held in December 2018, the products were sent to Poland. We are primarily exporting to East Europe, where we are most competitive in terms of delivery speed and logistics costs.

In August 2018, Aerosolex launched the production of dimethyl ether at an industrial site at Dzerzhinsk (Nizhny Novgorod Region). The capacity of the enterprise is 10,000 tpa. Investment in the project, the implementation of which took about two years, amounted to 650 million roubles. Dimethyl ether can be used as a propellant to produce aerosols in the food and cosmetic industries.

Kuibyshevazot production 2018

Kuibyshevazot increased revenues by 18.4% in 2018 to 59.7 billion roubles, of which 28.2 billion came from domestic sales. The cost of sales of the company increased by 22%, reaching 45.11 billion roubles. Gross profit increased from 10.72 to 18.72 billion roubles. The company's net profit for 2018 amounted to 7.1 billion roubles, three times higher than in 2017. Over 2018 ammonia production increased by 25.6% to 1.106 million tons due to the commissioning of the Linde Azot Togliatti joint venture which accounted for 448,000 tons. Ammonium nitrate production rose 1.6% to 625,400 tons, urea by 15.2% to 356,500 tons, and ammonium sulphate increased to 530,300 tons from 485,300 tons. Proceeds from the sale of caprolactam and its products increased by 25% to 35.76 billion roubles. Sales of ammonia and nitrogen fertilisers brought revenue in the amount of 21.84 billion roubles, which is 42.4% higher than the previous year.

Tomskneftekhim-catalyst production

Tomskneftekhim has recently completed a project to upgrade compressor equipment, which made it possible to increase the production capacity of triethylaluminium (TEA) by 35%. TEA is a component of a catalyst that is used to produce polypropylene, LLDPE and HDPE. Tomskneftekhim provides TEA to its own production of polypropylene, as well as SIBUR Tobolsk, Neftekhimiya at the Moscow refinery and Polyom.

The completion of the project allowed the company to increase the production capacity of triethylaluminium from 170 to 230 tpa. The production technology used at Tomskneftekhim and the high-tech product cleaning method allow producing triethylamine with a high, up to 99.6%, content of the main substance, which in turn affects the minimisation of the cocatalyst consumption during polymerisation and, of course, the quality of the finished products. Currently, most Russian petrochemical companies import TEA.

Ukraine

Ukrainian polymer imports, Jan-Feb 2019

Polyethylene imports into Ukraine rose 2% in the first two months in 2019 to 41,900 tons versus 41,200 tons. February imports of HDPE decreased to 6,500 tons against 7,100 tons in January, the reduction in supplies accounted on injection moulding and blow moulding polyethylene, while imports of film HDPE increased.

Ukrainian Polymer Imports (unit-kilo tons)

Product	*Jan-Feb 19*	*Jan-Feb 18*
PVC	7.9	13.7
LDPE	12.8	13.0
LLDPE	13.1	11.6
HDPE	13.8	14.4
Ethylene Vinyl Acetate	2.3	2.2
Polypropylene	19.5	18.7

Overall HDPE production reached 13,600 tons in the first two months of 2019, compared to 14,400 tons a year earlier. February imports of LDPE rose to 6,700 tons from 6,100 tons a month earlier, local companies increased their LDPE purchases in Russia. Overall LDPE imports amounted to 12,800 tons, down by 1%. February imports of LLDPE into the country were about 6,600 tons, which was close to the previous month level. LLDPE imports into Ukraine increased to 13,100 tons into the first two months compared with 11,600 tons. Imports of other grades of polyethylene, including EVA for the period under review totalled 2,300 tons against 2,200 tons a year earlier.

Polypropylene imports to the Ukrainian market totalled 19,600 tons in the first two months of 2019, up by 5% from 18,700 tons. Demand for all grades of propylene polymers increased, apart from some propylene copolymers being the exception. Imports in February rose to 11,400 tons from 8,100 tons in January, with propylene homopolymer accounting for the main increase.

Imports of homopolymer polypropylene totalled 14,900 tons in the first two months of 2019 versus 14,000 tons whilst block copolymers dropped from 11,900 tons to 2,200 tons. Imports of propylene copolymers amounted to 2,200 tons in January-February 2019, down from 2,400 tons.

Imports of PVC into Ukraine decreased by 42% in the first two months of this year, down to 7,900 tons against 13,700 tons. Imports from the US totalled 2,900 tons compared to 8,700 tons a year earlier, whilst imports from Europe rose to 4,800 tons from 3,800 tons in the same period in 2018. Due to the reduction in capacity utilisation, which was caused by the shutdown of its own ethylene production after a fire, Karpatneftekhim reduced export sales of PVC to 6,200 tons in February against 14,800 tons in January. Exports of PVC in the first two months of the year exceeded 21,000 tons, down 21% on the same period last night.

Ukrainian chemical imports, Jan-Feb 2019

Ukraine imported 8,572 tons of methanol in the first two months in 2019, similar to last year's amount, and sourced from Russia and Belarus. The major consumers include the gas company Ukrdobicha and the resin producer KarpatSmol at Kalush.

DOP imports rose from 684 tons in the first two months in 2018 to 756 tons, *with the* Polish producer Boryszew providing the largest share of supply whilst the largest buyer was Lvivmetalplast at Lviv. Imports of phthalic anhydride dropped from 491 tons to 433 tons in the first two months this year. From January 2019, Ukraine has introduced a zero duty on the import of phthalic anhydride from European countries (in 2018, the duty rate was 1.6%). Players expect an increase in the supply of European products to the domestic market this year.

Azot Grodno Production (unit-kilo tons)		
Product	***Jan-Feb 19***	***Jan-Feb 18***
Methanol	16.0	14.9
Caprolactam	22.3	23.3
Polyamide primary	19.4	18.7
Polyamide filled	2.0	1.9
Ammonia	193.1	192.2
Urea	188.2	185.9
Fertilisers	141.6	135.8
Fibres	7.4	7.1

Belarus

Azot Grodno production, Jan-Feb 2019

Azot at Grodno produced 16,000 tons of methanol in the first two months in 2019 against 14,900 tons in the same period in 2018 and 22,300 tons of caprolactam versus 23,300 tons. Azot produced 83,900 tons of technical methanol in 2018, similar to 2017, whilst caprolactam production volumes increased by 12.1% to 124,680 tons.

Ammonia output rose slightly from 192,200 tons to 193,100 tons in January and February 2019 and urea rose to 188,200 tons from 185,900 tons. Azot has recently held talks with the Belgian company Tessenderlo Kerley International regarding the supply of mineral fertilisers.

Belarussian Amino Acid Project	
Product	**Capacity (ktpa)**
Lysine	64.7
Gluten	23.0
L-threonine	5.9
L-tryptophan	1.3

Belarussian amino acid project

A major event taking place in the Belarussian chemical industry involves the construction of the Belarusian-Chinese industrial complex in the Pukhovichsky district near Minsk which will result in the production of a wide range of amino acids and up to 1 million tpa of animal feed. The project started in July 2018; investments will amount to $733 million.

Belarussian Amino Acid Imports (unit-tons)		
Product	***2018***	***2017***
Lysine	9,763	10,106
L-threonine	1,904	1,825
L-tryptophan	1,824	1,408

The Chinese company CITIC Group acts as the general contractor and shareholder. For the implementation of the project, the Export-Import Bank of China has already provided a loan of $648 million. The company plans to produce 99,000 tons of lysine-containing feed, 64,700 tpa of lysine, 23,000 tpa of gluten, 5,900 tpa of L-threonine, and 1,300 tpa of L-tryptophan. For the production of amino acids will be introduced Chinese technology, using fourth-generation bacteria. This product is enough not only for the domestic market, but also for deliveries to the markets of the Russian Federation, China, Ukraine and EU countries. The company plans to export about 80% of the released amino acids and animal feed.

Belarus currently imports around $200 million worth of amino acids for agriculture. The cost of producing amino acids will be low as Belarus already produces one of the main raw materials for the production of lysine is triticale. The entire complex is planned to be commissioned in 2021 and is of significant economic importance to Belarus.

Central Asia/Caucasus

Borealis-Atyrau Polyolefin Complex

Borealis and Kazakhstan Petrochemical Industries continue negotiations regarding the polyethylene jv project at Atyrau in Kazakhstan which will amount to 1.25 million tpa, but equity shares in the investment still remain undecided and questions about state control involvement are yet to be resolved. In August this year

the feasibility study is expected to be completed, which will be followed by the development of design and estimate documentation with construction of the complex to start in 2021.

The polypropylene project at Atyrau is already under construction with a capacity of 500,000 tpa and where production is expected to start in 2021. The State Development Bank of China (GBRK) approved a loan for the construction of polypropylene production several years ago worth around $1.795 billion (excluding VAT). The PDH unit at Atyrau is using CB&I's proprietary CATOFIN propane dehydrogenation technology and the polypropylene plant will use Novolen advanced gas-phase polypropylene technology. The Atyrau integrated gas chemical complex will use natural gas from the Tengiz and Kashagan oil fields as the feedstock for petrochemical products for domestic and export markets.

Uzkhimprom, Samsung& Mitsubishi

Uzkhimprom and Samsung Engineering are planning to launch production of ammonia and urea in Uzbekistan. Investments in the project will amount to $600 million, involving 400,000 tpa of ammonia and 600,000 tpa of urea.

Uzkhimprom and Mitsubishi Heavy Industries are working on the construction of another fertiliser plant in which the capacity is 660,000 tons of ammonia and 577,500 tpa of urea. The project worth $985.7 million is being implemented at the Navoiazot chemical complex.

Uzbek chemical industry news

Uzbekistan outlined a framework strategy in March 2019 to invest $12.1 billion in the chemical industry over a period of the next decade and at the same time to sell off state shares in a number of chemical enterprises. The aim is to make the industry attractive for foreign investors, mostly by reducing the state shares in enterprises to allow private ownership. The government is also keen to use advanced technologies to produce new polymer products such as PET, PVC, synthetic rubber, polystyrene, polyurethane, etc.

Uzbek State Joint Stock Company Uzkhimprom produced marketable products in value terms at 1.64 trillion soums (12.72 billion roubles) for January-March 2019. For three months, the company produced 334,960 tons of mineral fertilisers. 252,170 tons of nitrogen, 37,770 tons of phosphate and 45,020 tons of potash fertilisers.

Turkmenistan plastics & petrochemical news, Q1 2019

In the first quarter of 2019, the Turkmenabat Chemical Plant significantly increased the production of polyethylene pipes to 20,000 tons, more than the whole of 2017. The key role in this was played by the commissioning of the polymer complex in Kiyanly, which is allowed raw materials for the production of polyethylene pipes to be sourced locally. The gas-chemical complex at Kiyanly can produce 381,000 tpa of low-pressure polyethylene and 81,000 tpa of polypropylene.

Another development taking place in Turkmenistan in 2019 involves the opening of a new plant producing plastic bags and polypropylene pipes at Bayramaly. The plant is designed to produce 1.800 tpa of various polyethylene films and 257 tons of high-quality polypropylene water pipes with a diameter of 20-60 millimetres. Raw materials are sourced from the Kiyanly polymer plant despite being located around thousand kilometres from Bayramaly.

Turkmenistan is nearing completion of constructing its first gas-to-liquids (GTL) plant, which is expected to process natural gas to liquid fuel, or gasoline, in the town of Ovadan Depe, near the capital of Ashgabat. Moreover, Turkmenistan and Japan are in close discussions regarding further cooperation in the fuel and energy complex. The construction of the second stage of the GTL gasoline production plant at Ovadan Depe is envisaged whilst the development of the Galkynysh field and the export of Turkmen oil and gas and chemical products to Japan are on the agenda. Proposals for the development of a new ammonia and urea production plant in Turkmenistan are also under discussion with Mitsubishi.

Relevant Currencies

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

Contents Issue No 341