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MONTHLY NEWS

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

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Features from this issue

Central European petrochemical markets

- Oil throughput at PKN's refineries increased to 8.3 million tons in the second quarter from 7.5 million tons in the same period in 2018
- Propylene production in the Central European countries of Czech Republic, Hungary, Poland and Slovakia totalled 560,300 tons in the first half in 2019 against 469,600 tons in the same period last year
- PKN Orlen achieved an EBITDA of zł 2.7 billion in the second quarter this year which was zł 600 million higher than in the same period last year.

Russian chemical production

- Russian chemical production increased by 2.8% in the first half of 2019. Ethylene production rose 3.8% to 1,578 million tons in the first half of 2019 whilst benzene rose 1.8% to 743,000 tons
- Russia produced 389,300 tons of styrene in the first six months in 2019 which is 3% more than in the same period in 2018
- Methanol production in Russia totalled 2.271 million tons in the first six months in 2019 against 2.115 million tons in same period in 2018

Russian chemical trade

- Imports of chemical products into Russia dropped from \$19.7 billion in the first half last year to \$19.1 billion in the same period in 2019
- Export volumes for Russian synthetic rubber in the first five months in 2019 totalled 434,000 tons against 432,100 tons in the same period in 2018. Average product prices for synthetic rubber rose in the first three five from \$1603 per ton to \$1618 per ton
- Russian methanol exports totalled 1,095,900 tons in the first six months in 2019 against 923,000 tons
- Russia imported 18,800 tons of TDI in the first five months in 2019 against 21,300 tons in the same period in 2018. Around 25% of supplies came from Germany, followed by Hungary, the US and Saudi Arabia
- Russian PTA imports totalled 185,600 tons in the first five months in 2019 against 117,700 tons in the same period in 2018

Russian & regional chemical projects

- SIBUR's revenue increased by 3.3% in the first half of 2019 to 266.3 billion roubles whilst the EBITDA decreased by 3.4% to 86.1 billion roubles
- SIBUR has completed the construction of ZapSibNeftekhim and the complex is currently it is being commissioned. Full start-up is projected for the third and fourth quarters this year
- SIBUR is carrying out preparatory work at the site for the maleic anhydride plant at Tobolsk, which is expected to be ready to start construction in the third quarter of 2019
- GTM ONE, Haldor Topsoe, and Mitsubishi Heavy Industries Engineering Ltd have entered into a tripartite licensing agreement for a methanol plant at Volgograd
- The first petrochemical cluster in Uzbekistan is being created in Kashkadarya on the basis of the Shurtan gas chemical complex.

CENTRAL & SOUTH-EAST EUROPE

Central European oil supply, first half of 2019

Oil throughput at PKN Orlen's refineries in Poland, Lithuania and Czech Republic increased to 8.3 million

Orlen Group Crude Refining (unit-kilo tons)						
Quarter	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
Volume	8,529	7,461	8,694	8,696	8,225	8,289

tons in the second quarter this year from 7.5 million tons in the same period in 2018. Currently, around 50% of the oil processed at PKN Orlen's Plock refinery comes from sources other than

Central European Refining Volumes (unit-mil tons)		
Company	Jan-Jun 19	Jan-Jun 18
INA Croatia	1.9	1.6
Lotos Poland	5.1	5.2
Lukoil Bourgas	2.1	2.6
Lukoil Ploiesti	1.2	1.3
MOL Hungary	4.8	4.7
NIS Serbia	1.7	1.8
Orlen-Lietuva	4.2	4.3
Orlen-Plock	8.7	8.2
Petrom Romania	2.6	1.7
Rompetrol	2.7	3.3
Slovnaft	2.0	3.5
Unipetrol	3.7	3.5
Total	40.6	41.7

Russia, while for the whole group the share amounts to around 30%. In 2012, by contrast the share of non-Russian crude processed by the group amounted to only around 5%. PKN Orlen confirmed that due to efforts to diversify deliveries in recent years, the chloride contamination issue and subsequent suspension of supplies via Druzhba had no significant impact on the group's results in the second quarter.

In Lithuania Orlen Lietuva has continued to face problems of Russian oil contaminated with chlorine through delivery from Klaipeda. Orlen Lietuva usually imports the raw material for the Mazeikiai Refinery via the company's Butinge Oil Terminal. Currently contaminated oil is being offered at a discount of \$10-15 to \$65 a barrel in order to avoid increasing losses due to tanker downtime which means for a typical tanker, the discount is about \$10-15 million. To date a few refineries in Europe have agreed to accept the contaminated oil, including Repsol, Spain, Preem, Sweden and Neste Oil in Finland. Chlorine-contaminated oil can be recycled but must be diluted with clean oil, and this can take several months to process the contaminated oil.

Central European Olefin & Polyolefin Production (unit-kilo tons)						
Product	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
Ethylene	394.4	387.6	411.4	417.4	413.6	408.5
Propylene	223.6	236.0	237	248.7	257.1	303.2
Polyethylene	394.4	387.6	411.4	417.4	413.6	321.7
Polypropylene	283.7	309	312.3	303	322.1	273.0

Central European olefin and polyolefin supply Q2 2019

Propylene production in the Central European countries of Czech Republic, Hungary, Poland and Slovakia totalled 560,300 tons in the first half in 2019 against 469,600 tons in the same period last year. Polypropylene production in the first half of 2019 against 592,700 tons in the first half in 2018, whilst polyethylene production dropped from 782,000 tons to 735,300 tons.

Central Europe comprised 585,100 tons in the first half against 592,700 tons in the first half in 2018, whilst

PKN Orlen Group Chemical Sales (unit-kilo tons)				
Product	Q3 18	Q4 18	Q1 19	Q2 19
Monomers	229	161	259	270
Polymers	131	120	139	136
Aromatics	90	75	115	116
Fertilisers	308	244	280	223
Plastics	94	69	106	99
PTA	120	98	151	163
Other	1,175	1,250	1,187	1,207
PKN Orlen Group Chemical Production (unit-kilo tons)				
Product	Q3 18	Q4 18	Q1 19	Q2 19
Monomers	221	181	253	284
Polymers	111	136	146	139
Aromatics	90	75	112	116
Fertilisers	295	227	297	205
Plastics	96	83	97	107
PTA	127	82	158	164
Other	673	630	693	640

Propylene production in Poland is expected to rise in the second half of 2019 due to the introduction of the metathesis plant at Plock which is in the early phases of operation. As a consequence of expanded capacity Basell Orlen Polyolefins (BOP) is increasing polypropylene production at Plock by around 20%. In Lithuania propylene production has started at the Mazeikiai refinery from the PPF splitter.

PKN Orlen Q2 2019

PKN Orlen achieved an EBITDA of zł 2.7 billion in the second quarter this year which was zł 600 million higher than in the same period last year. The increase of sales revenues of the Orlen

Group by zł 4,532 million to zł 54,474 million reflects mainly increase in volume sales by 2% to 20.989 million tons in all operating divisions.

PKN Orlen Petrochemical Margins (€/ton)						
Product	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
Polyethylene	286	263	282	288	311	308
Polypropylene	447	414	392	392	421	423
Ethylene	652	630	644	640	578	593
Propylene	510	503	552	568	516	511
Toluene	166	192	213	195	172	218
Benzene	335	255	262	189	103	174
Butadiene	415	583	657	571	453	422
Paraxylene	387	362	431	628	534	487

Although oil supplies via the Druzhba pipeline were temporarily halted for Orlen, the group's crude throughput in the second quarter amounted to 8.3 million tons, resulting in a 9% increase in refinery runs. This was achieved largely on the back of consistent efforts to diversify oil supply sources, giving the group more flexibility in its procurement decisions.

gasoline, 2% for diesel oil, 30% for olefins and 10% for PTA. Earnings were helped by stronger refinery margins on light and heavy distillates combined with wider petrochemical margins on olefins, polyolefins, PTA and fertilisers. The decrease of crude oil by approximately \$5 per barrel helped reduce ethylene prices in the second quarter by 5% with a slight increase of propylene by 1%.

In the second quarter, the downstream division's EBITDA amounted to zł 2 billion, with sales volumes up 2% including 11% for

The operating expenses for Orlen increased in the second quarter by zł (4,897) million to zł (51,542) million. The increase in the costs of materials and energy consumption by 11% resulted mainly from the higher crude oil processing in the Orlen Group by 524,000 tons and higher share of more expensive low-sulphur crude delivered by sea as a result of contamination with organic chlorides of crude oil sent via the Druzhba

Czech Petrochemical Exports (unit-kilo tons)		
Product	Jan-Jun 19	Jan-Jun 18
Ethylene	46.2	41.9
Propylene	6.0	7.4
Butadiene	2.0	0.2
Benzene	31.9	15.5
Toluene	6.4	8.8
Ethylbenzene	78.2	70.1

pipeline and temporary suspension of supply via this pipeline.

In the second quarter the metathesis plant in Płock was finally brought on-stream, giving Orlen a lead in the regional propylene production market. The group also commissioned a PPF splitter with a capacity of 80,000 tpa of propylene. The project will deliver the first petrochemical stream of the group's Lithuanian refinery in Mazeikiai, extending its value chain.

Czech Polyethylene Trade (unit-kilo tons)		
Exports	Jan-Jun 19	Jan-Jun 18
LDPE	33.0	37.4
HDPE	115.7	131.9
EVA	0.6	0.8
Other	7.3	6.6
Total	156.5	176.6
Imports	Jan-Jun 19	Jan-Jun 18
LDPE	82.4	79.4
HDPE	60.8	65.1
EVA	4.3	5.5
Other	39.5	14.8
Total	187.0	164.8

Unipetrol, Q2 2019 & polyolefin trade

Unipetrol increased sales in the second quarter this year by about 10% to Kc 34.1 billion, whilst the operating profit amounted to Kc 1.8 billion. The volume of processed oil by Unipetrol amounted to 1.9 million tons in the second quarter. Sales comprised 1.67 million tons for refinery products and 409,000 tons for petrochemical products.

Ethylene exports from Unipetrol totalled 46,200 tons in the first six months in 2019 against 41,900 tons in the same period in 2018. Propylene exports from Unipetrol dropped to 6,000 tons from 7,400 tons, whilst ethylbenzene exports from the Czech Republic totalled 78,200 tons against 70,100 tons.

Regarding polyethylene exports, Unipetrol shipped 115,700 tons in the first half of 2019 against 131,900 tons in the same period last year. Polypropylene imports into the Czech Republic rose to 155,731 from 150,493 tons against exports of 113,644 tons from Unipetrol dropping from 119,769 tons in January to June 2018.

Unipetrol outlaid a record sum of Kc 1.87 billion in 2018 on investments related to environmental protection. In the past five years, investments in environmental protection has amounted to Kc 6.7 billion. Over the period 2005-2019 Unipetrol has reduced the amount of pollutants emitted by more than 95%, whilst installing technologies for capturing and removing these substances and closed some older installations.

MOL Group Sales of Refined Products and Petrochemical (unit-kilo tons)			
Country	FY 2018	Q1 2019	Q2 2019
Hungary	5,017	1,112	1,285
Slovakia	1,858	431	494
Croatia	2,008	411	552
Italy	2,061	441	503
Other markets	9,216	2,050	2,194
TOTAL	20,160	4,444	5,028

MOL, Q2 2019

MOL's downstream division delivered Ft 76 billion EBITDA in Q2 2019, doubling profitability from the first quarter and recording a small increase versus the same period in 2018. MOL's downstream performance amounted to Ft 3 billion or 4% higher in Q2 2019 primarily due to the deteriorating external environment in refining. The group refinery margin was down by \$2 per barrel driven by the

depressed Brent-Ural spread. The integrated petrochemical margin however, averaged at €422 per ton representing a 15% increase.

Refining throughput for the MOL Group was substantially down in the second quarter due to the turnaround in the Bratislava refinery and the Rijeka shutdown still affected the second quarter. The shortfall was partly offset by running the Százhalombatta refinery at full capacity, utilising inventories and increasing third party purchases.

MOL's Olefin & Polyolefin Production (unit-kilo tons)		
Product	Jan-Jun 19	Jan-Jun 18
Ethylene	418	414
Propylene	215	219
Butadiene	44	36
Raffinate	75	58
Product	Jan-Jun 19	Jan-Jun 18
LDPE	124	129
HDPE	200	203
PP	265	269

In the first six months MOL Group delivered \$1,15 billion EBITDA exactly half of the full-year 2019 guidance. The upstream EBITDA was 10% lower in the first half of 2019 at \$553 million, as higher volumes were more than offset by lower oil and gas prices. Downstream EBITDA amounted to \$403 million, 18% lower than in the first half of 2018.

Ethylene production for the two sites at Tiszaújváros and Bratislava amounted to

418,000 tons in the first half of 2019 against 414,000 tons in the same period in 2018, whilst propylene dropped by the same amount from 219,000 tons to 215,000 tons. Butadiene production rose from 36,000 tons in January to June 2018 to 44,000 tons whilst raffinate production jumped to 75,000 tons from 58,000 tons.

MOL's strategic direction consists largely of moving from commodity polypropylene to semi-commodity polyol. This would allow a 400-500 EUR/t step-up in average margin capture. By 2023, the company estimates that it could gain an additional \$100 million EBITDA uplift from the polyol plant and other strategic

Czech Petrochemical Imports (unit-kilo tons)		
Product	Jan-Jun 19	Jan-Jun 18
Ethylene	1.2	1.2
Propylene	19.1	23.6
Butadiene	10.7	16.0
Benzene	47.4	44.3
Ethylbenzene	0.0	4.4
Styrene	10.0	4.7

projects. Polyol capacity under construction by MOL at Tiszaújváros is 200,000 tpa, including 70,000 tpa for propylene glycol. The EPC partner is Thyssenkrupp Industrial Solutions.

Czech chemical trade, Jan-Jun 2019

Propylene imports into the Czech Republic totalled 19,100 tons in the first six months in 2019 against 23,600 tons in January to June 2018. Benzene imports into the

Czech MDI Imports (unit-kilo tons)		
Country	Jan-Jun 19	Jan-Jun 18
China	0.7	1.3
Belgium	3.9	2.8
Germany	6.1	3.8
Italy	0.2	0.1
Hungary	2.4	4.1
Netherlands	0.5	0.5
Others	0.3	2.0
Total	14.0	14.6

Czech Republic rose to 47,400 tons in the first six months in 2019 from 44,300 tons in the same period in 2018. Almost all of the benzene imported into the Czech Republic was supplied from Poland.

TDI imports into the Czech Republic totalled 4,383 tons in the first six months in 2019 against 7,932 tons in January to June 2018. MDI imports dropped only slightly from 14,600 tons to 14,000 tons. Methanol imports totalled 40,581 tons in January to June 2019 versus 41,833 tons in the same period in 2018. Russia accounted for 23,500 tons of methanol in the first half of 2019.

Czech Methanol Imports (unit-kilo tons)		
Country	Jan-Jun 19	Jan-Jun 18
Germany	7.2	14.5
Norway	6.1	6.0
Russia	23.5	18.7
Slovakia	0.0	1.1
Poland	2.4	1.2
Others	1.4	0.3
Total	40.6	41.8

Regarding exports, shipments of phthalic anhydride from the Czech Republic totalled 7,374 tons in the first six months in 2019 against 8,809 tons in the same period in 2018. Exports of DINP amounted to 21,205 tons versus 20,352 tons. DINP export destinations in the first half of 2019 included Italy with 4,608 tons, Romania with 2,334 tons and Ukraine with 1,198 tons.

Estonian methanol project assesment

Lääne-Harju Municipality launched a spatial plan and environmental impact assessment (EIA) for a large methanol plant planned in the Paldiski area in Estonia. The municipal government received an application for the launch of the establishment of a methanol plant either in the town of Paldiski or elsewhere in the Lääne-Harju Municipality.

Negotiations have taken place with Larkwater group, regarding the financing of the project. Larkwater is to pay not only for the drawing up of the plan, but also for the technical assessment of the EIA. The choice of location is the first state of the spatial plan, after which a concrete solution can follow."

Larkwater Group, an industrial group of Swiss origin, is seeking to build a €1 billion methanol plant in Estonia. Larkwater has been seeking a suitable location for the plant for three or four years already; previous choices

have included Latvia, Lithuania as well as Poland. The plant capacity being considered is 5,000 tons of methanol per day or 1.8 million tpa.

Polish Chemical Production (unit-kilo tons)		
Product	Jan-Jun 19	Jan-Jun 18
Caustic Soda Liquid	182.1	139.7
Caustic Soda Solid	31.2	66.2
Ethylene	266.5	212.6
Propylene	221.3	173.3
Butadiene	31.5	23.6
Toluene	6.7	7.0
Phenol	22.5	23.2
Caprolactam	86.0	84.6
Acetic Acid	3.3	8.5
Polyethylene	192.8	195.7
Polystyrene	32.6	32.1
EPS	44.2	36.0
PVC	147.9	128.3
Polypropylene	167.7	140.6
Synthetic Rubber	143.4	138.5
Ammonia (Gaseous)	1271.0	1362.0
Ammonia (Liquid)	49.9	69.3
Pesticides	28.1	27.6
Nitric Acid	1173.0	1194.0
Nitrogen Fertilisers	1009.0	1019.0
Phosphate Fertilisers	241.6	208.6
Potassium Fertilisers	220.2	201.1

The Estonian end of the Balticconnector undersea gas pipeline reached land at Pakrineeme on Pakri peninsula in north western Estonia on 17 June 2019. As a result, gas is available for the methanol project at Paldiski. Other advantages include the presence of railways and roads, and the convenient Estonian tax system, in which companies do not have income tax.

If this project goes ahead it could provide a serious challenge to Russian methanol projects, particularly at Ust Luga and Vysotsk. The Paldiski plant would almost certainly not receive the same low gas prices as the prospective Russian projects in the Gulf of Finland, but it would have the huge advantage of being based inside the EU which would exclude sales from the trade procedures needed to be followed by non-EU producers.

Ciech Romania, soda ash shutdown

Ciech is beginning preparations to stop production at its Romanian plant from 18 September. The reason for this decision is the termination of the existing contract for the supply of process steam by the CET Govora CHP plant, the only available supplier of this raw material to Ciech Soda Romania. The new offer proposed by CET Govora (the company is in bankruptcy) has a price higher by approximately 135% higher than in 2018. At the same time, it assumes a 20% reduction in supplies. This prevents Ciech Soda Romania from conducting profitable business reports Ciech.

In 2018, the cost of purchasing technological steam exceeded 30% of total costs of Ciech Soda Romania's operations. The group is conducting advanced analysis of exit options from this situation, one of which is to acquire a new, cost-effective source of steam in cooperation with external partners. Apart from Romania, all Ciech plants have their own sources of technological steam.

RUSSIA

Russian Chemical Production (unit-kilo tons)		
Product	Jan-Jun 19	Jan-Jun 18
Caustic Soda	645.0	630.5
Soda Ash	1,695.0	1,754.0
Ethylene	1,577.8	1,522.0
Propylene	1,241.4	1,133.1
Benzene	738.4	725.8
Xylenes	292.3	313.5
Styrene	389.3	371.6
Phenol	110.3	100.9
Ammonia	9,200.0	9,200.0
Nitrogen Fertilisers	5,859.0	5,527.0
Phosphate Fertilisers	2,097.0	2,018.0
Potash Fertilisers	3,971.0	4,277.0
Plastics in Bulk	4,244.0	4,102.0
Polyethylene	1,144.0	1,126.0
Polystyrene	275.2	270.6
PVC	531.8	509.5
Polypropylene	783.1	753.0
Polyamide	79.2	87.7
Synthetic Rubber	777.0	846.0
Synthetic Fibres	83.0	83.3

Russian Chemical Imports by value (\$ million)		
Product Group	Jan-Jun 19	Jan-Jun 18
Organic & inorganic chemicals	3,110.4	2,981.7
Pharmaceuticals	5,156.7	5,165.6
Cosmetics	1,496.6	1,539.8
Soap and detergents	686.5	707.4
Polymers and Rubber	5,931.5	6,021.4
Others	2,712.7	3,314.2
Total	19,094.4	19,730.0

in EBITDA was mainly due to weaker results from plastics, rubber and intermediates. The EBITDA margin for SIBUR comprised 32.3% in the first whilst the net profit increased by 69.2% to 77.6 billion roubles, largely on the back of the revaluation of the company's FX-denominated debt.

SIBUR's Investment Projects (billion roubles)		
Project	Jan-Jun 19	Jan-Jun 18
ZapSibNeftekhim, ZapSib (Tobolsk)	37,965	54,465
Logistic platform (Tobolsk)	2,946	2,758
Diocetyl terephthalate production, DOTP (Perm)	1,111	1,614
PTA expansion (Blagoveshchensk)	1,808	494
Thermoplastic elastomers expansion, TPE (Voronezh)	893	183
Maleic anhydride, MAN (Tobolsk)	387	12
Other	14,934	8,286
Maintenance	7,661	2,495
Capital Expenditures ¹ , total	67,685	70,307

in Omsk. SIBUR and Sinopec signed a distribution agreement to supply polyethylene to China from SIBUR's ZapSibNeftekhim plant, and a term sheet regulating key principals of a potential JV for development and operations of the Amur Gas Chemical Complex (AGCC) if the project is approved.

Russian chemical production Jan-Jun 2019

Russian chemical production increased by 2.8% in the first half of 2019. Ethylene production rose 3.8% to 1,578 million tons in the first half of 2019 whilst benzene rose 1.8% to 743,000 tons. Caustic soda production rose from 630,500 tons in the first half of 2018 to 645,000 tons in the same period this year, whilst soda ash dropped from 1.754 million tons to 1.695 million tons. Bulk plastics' production rose 3.1% to 4.244 million tons, including a rise in polyethylene production from 1.126 million tons to 1.144 million tons.

Regarding trade, imports of chemical products into Russia dropped from \$19.7 billion in the first half last year to \$19.1 billion in the same period in 2019. Most segments recorded slight falls in values, although organic and inorganic chemicals rose from \$2.982 billion to \$3.110 billion in first half this year. PTA imports have risen sharply in 2019 as modernisation and limited production activity has taken place at the Polief plant at Blagoveshchensk. Costs of imports of TDI and MDI isocyanates have dropped this year, although volumes have not changed much. Russia continues to import ethylene and propylene glycol, but amino acid imports is the product sector which accounts for the largest share of organic chemical import values.

Russian Petrochemical Company Performance

SIBUR, Jan-Jun 2019

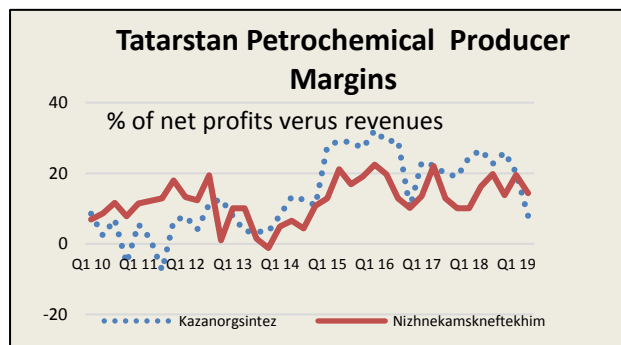
SIBUR's revenue increased by 3.3% in the first half of 2019 to 266.3 billion roubles whilst the EBITDA decreased by 3.4% to 86.1 billion roubles. The fall

At the ZapSibNeftekhim complex, the main construction and installation works have been completed, commissioning is in progress: test volumes of polypropylene are being supplied to customers, the first batches of polyethylene have been received.

In July this year, SIBUR and Gazprom Neft have consolidated 100% of the authorized capital in Polyom, for the polypropylene plant

Nizhnekamskneftekhim & Kazanorgsintez, Jan-Jun 2019

Nizhnekamskneftekhim in January-June 2019 achieved a net profit of 14.5 billion roubles which was 24.4% higher than the same period last year. At the same time, the company's revenue grew only by 3.5% up to 90.6 billion roubles. Nizhnekamskneftekhim increased its profit from sales by 24.8% to 16.9 billion roubles after reducing the cost of production by 0.8% to 65.2 billion roubles. Profit before tax increased by 22.9% to 18.1 billion roubles.



Kazanorgsintez increased its revenue in the first half of the year by 3% to 40.2 billion roubles, whilst the net profit dropped 20% in the second quarter to 7.89 billion roubles. The cost of sales increased by 9.3% to 25.63 billion roubles and the profit from sales decreased by 8% to 11.48 billion roubles.

Net profits were affected by lower margins for polyethylene in the first half of 2019.

Russian petrochemical production & sales

Russian Ethylene Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Angarsk Polymer Plant	107.2	115.4
Kazanorgsintez	328.5	303.2
Stavrolen	168.9	165.0
Nizhnekamskneftekhim	326.3	319.7
Novokuibyshevsk Petrochemical	33.4	28.8
Gazprom n Salavat	189.9	190.7
SIBUR-Kstovo	191.6	171.6
SIBUR-Khimprom	28.7	26.3
Tomskneftekhim	137.8	142.2
Ufaorgsintez	64.1	61.2
Total	1576.5	1524.2

Russian ethylene production, Jan-Jun 2019

Russian ethylene production totalled 1.577 million tons in the first six months in 2019 against 1.524 million tons in the same period in 2018. The major changes took place at Kazan where production rose from 303,200 tons to 328,500 tons, and Nizhnekamskneftekhim where production rose from 319,700 tons to 326,300 tons. These rises helped to reduce the impact of slightly lower production at other plants at Ufa, Tomsk, Budyennovsk and Angarsk. For 2019, ethylene production is forecast to exceed 3 million tons for the first time assuming SIBUR starts its ZapSibNeftekhim complex at Tobolsk in the near future.

From 20 June until the end of August, scheduled maintenance work on the pyrolysis unit is being carried out at the Angarsk Polymer Plant. During this shutdown, the company will not ship benzene, propylene and C4s to the market. Also, the volume of ethylene supplies through the Sayanskhimplast product pipeline was to be reduced. The Angarsk Polymer Plant is a subsidiary of Rosneft, including capacities of 300,000 tpa of ethylene, 139,600 tpa of propylene and 120,000 tpa of benzene.

Russian Propylene Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Angarsk Polymer Plant	59.3	64.3
Kazanorgsintez	25.4	20.1
Lukoil-NNOS	149.0	145.0
Stavrolen	67.6	66.4
Nizhnekamskneftekhim	164.8	163.6
Novokuibyshevsk	20.7	21.0
Omsk Kaucuk	20.3	21.5
Polyom	95.5	98.8
Gazprom n Salavat	84.7	82.9
SIBUR Kstovo	84.6	75.9
SIBUR-Khimprom	33.5	32.4
Tomskneftekhim	73.5	75.9
SIBUR Tobolsk	225.6	199.0
Ufaorgsintez	96.9	89.0
Total	1201.4	1155.6

Regarding feedstocks for ethylene production in Russia naphtha remains the most dominant source followed by LPGs and ethane. The Russian government plans to introduce a reverse excise tax on ethane in 2019 to stimulate its processing, although the logistics of ethane supply mean that from current producers only Gazprom neftekhim Salavat and Kazanorgsintez currently can benefit from this policy change. ZapSibNeftekhim will also benefit from the change in excise policy, if enacted, when it starts production in full.

Russian propylene production, Jan-Jun 2019

Russian plants produced 1.201 million tons of propylene in the first six months in 2019 versus 1.156 million tons in the same period in 2018. SIBUR Tobolsk increased

production from 199,000 tons in January to June 2018 to 225,600 tons in the same period in 2019, whilst SIBUR-Kstovo increased production from 75,900 tons to 84,600 tons.

Russian Propylene Exports (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Lukoil-NNOS	23.5	40.7
SIBUR-Kstovo	6.1	5.6
Stavrolen	12.2	7.9
Total	41.8	51.4

Russian propylene sales & exports Jan-Jun 2019

Russian propylene exports amounted to 41,800 tons in the first six months in 2019 against 51,400 tons in the same period in 2018. Lukoil-NNOS reduced exports from 40,700 tons in January to June 2018 to 23,500 tons this year, whilst SIBUR-Kstovo increased exports from 5,600 tons to 6,100 tons. Stavrolen at Budyennovsk exported 12,200 tons against 7,900 tons.

Russian Propylene Domestic Sales (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Angarsk Polymer Plant	42.6	43.2
Omsk Kaucuk	0.0	1.3
SIBUR-Kstovo	68.7	59.2
Akrilat	5.5	5.0
LUKoil-NNOS	109.8	112.5
Tomskneftekhim	0.0	0.2
Gazprom Neftekhim Salavat	4.6	1.6
Nizhnekamskneftekhim	0.0	0.0
SIBUR-Khimprom	0.0	0.2
Stavrolen	0.0	0.0
Tobolsk-Polymer	0.1	0.3
Ufaorgsintez	0.0	0.0
Total	231.4	223.3

Propylene sales on the Russian domestic market totalled 231,400 tons in the first six months in 2019 versus 223,300 tons in the same period in 2018. Lukoil-NNOS at Kstovo shipped 109,800 tons whilst SIBUR-Kstovo increased sales from 44,500 tons to 46,500 tons. The third largest supplier to the merchant market is Angarsk Polymer Plant which shipped 42,600 tons in the first half versus 43,200 tons. Lukoil-NNOS sends 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.

Saratovorgsintez purchased 97,300 tons of propylene in the first six months in 2019 against 98,500 tons in January to June 2018. SIBUR Tobolsk increased merchant purchases to 53,800

tons from 34,700 tons in the first half of 2018, whilst SIBUR-Khimprom at Perm reduced inward shipments to 31,700 tons from 33,500 tons.

Russian Styrene Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Nizhnekamskneftekhim	153.2	152.0
Angarsk Polymer Plant	20.5	19.6
SIBUR-Khimprom	74.5	64.9
Gazprom n Salavat	116.9	104.3
Plastik, Uzlovaya	24.2	30.7
Total	389.3	371.6

Russian styrene production Jan-Jun 2019

Russia produced 389,300 tons of styrene in the first six months in 2019, 3% more than in the same period in 2018. Gazprom neftekhim Salavat increased styrene production by 9% to 116,900 tons, followed by SIBUR-Khimprom at Perm where production increased from 64,900 tons to 74,500 tons.

Styrene sales on the Russian domestic merchant market totalled 62,400 tons in January to June 2019 against 54,500 tons in the same period in 2018, with Gazprom neftekhim Salavat increasing shipments from 20,900 tons to 26,200 tons and SIBUR-Khimprom increasing shipments from 15,700 tons to 22,700 tons. SIBUR-Khimprom uses styrene for the production of expandable polystyrene.

Russian Styrene Exports (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Angarsk Polymer Plant	6.8	1.9
Plastik Uzlovaya	0.2	3.1
Gazprom neftekhim Salavat	63.1	41.9
Nizhnekamskneftekhim	3.3	0.0
SIBUR-Khimprom	1.2	2.8
Total	74.5	49.6

Russian styrene exports, Jan-Jun 2019

Styrene exports from Russia increased to 74,500 tons in the first six months in 2019 against 49,600 tons in the same period in 2018. Gazprom neftekhim Salavat shipped 63,100 tons in the first six months against 41,900 tons, whilst Angarsk Polymer Plant shipped

6,800 tons this year against 1,900 tons. The main destination for styrene exported from Salavat is Finland, followed by Norway and Turkey. The increase in production at Salavat in the first six months this year enabled a rise in both exports and domestic sales.

Bulk Polymers

Russian HDPE Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Kazanorgsintez	268.8	262.2
Stavrolen	154.2	167.0
Nizhnekamskneftekhim	0.0	5.0
Gazprom n Salavat	61.4	60.2
Total	484.4	494.4

Russian HDPE production, Jan-Jun 2019

Russian producers reduced the production of HDPE by 1% in January-June 2019 to 486,400 tons against the same period last year at 494,400 tons. Kazanorgsintez increased production by 2.5% to 268,800 tons in the first half this year, after producing 50,300 tons in June against 39,500 tons in May. Stavrolen reduced polyethylene production to 154,200 tons from 167,000 tons, whilst Gazprom neftekhim Salavat increased also by 2% to 61,400 tons. This year Nizhnekamskneftekhim produced exclusively linear

polyethylene grades.

Russian polypropylene production, Jan-Jun 2019

Russia's production of polypropylene rose in the first six months of 2019 by 4% to 732,100 compared to 704,400 tons. Four producers out of seven raised their capacity utilisation, with SIBUR Tobolsk and NPP Neftekhimiya at the Moscow refinery accounting for the main increase in production.

Russian Polypropylene Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Ufaorgsintez	66.6	66.6
Stavrolen	56.1	56.9
Neftekhimiya	71.0	45.2
Nizhnekamskneftekhim	105.9	105.0
Polyom	108.2	73.2
Tomskneftekhim	74.8	49.0
SIBUR Tobolsk	249.4	173.3
Total	732.0	704.4

SIBUR Tobolsk increased production by 11% to 249,400 tons in January-June 2019. Polyom (Omsk) produced 108,200 tons of polypropylene which was down by 2%. Nizhnekamskneftekhim produced 105,900 tons in the first six months of 2019, compared to 105,000 tons in 2018. Tomskneftekhim increased production by 1% to 74,800 tons, whilst Ufaorgsintez was unchanged at 66,600 tons. NPP Neftekhimiya (Kapotnya)

produced 71,000 tons over the stated period, up by 6%. Stavrolen reduced output of propylene polymers dropped in the first six months of 2019 to 56,100 tons from 56,900 tons a year earlier.

Polypropylene imports into Russia decreased in the first six months of 2019 by 11% to 86,800 tons. Imports of homopolymer PP to Russia totalled 28,600 tons in the first six months of 2019, compared to 36,000 tons whilst imports of PP block copolymers amounted to 25,500 tons in January-June 2019, compared to 24,200 tons. Total imports of propylene copolymers in Russia were 15,100 tons in January-June 2019, compared with 16,900 tons in the same period in 2018. Russian imports of other polymers of propylene for the period were about 17,500 tons in the first six months of the year, compared with 20,600 tons year on year.

Russian PVC Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Bashkir Soda	137.3	132.6
Kaustik	36.0	46.4
RusVinyl	166.8	155.5
Sayanskkhimplast	162.5	149.8
Total	502.6	484.6

Russian exports of polypropylene totalled 97,200 tons in the first six months in 2019 against imports of 86,800 tons. SIBUR accounted for around 40% of Russian exports from its SIBUR-Tobolsk plant.

Russian PVC, Jan-Jun 2019

Russian PVC production totalled 502,600 tons in the first six months of 2019, up by 4% from 484,600 tons. RusVinyl produced 166,800 tons in January-June 2019, up by 7%, whilst Sayanskkhimplast increased production to 162,500 tons of resin

in January-June compared to 149,800 tons. Bashkir Soda Company increased production to 137,300 tons in the first six months of this year, compared to 132,600 tons in the same period in 2018. Bashkir Soda shut for maintenance on 14 July for two weeks. The capacity of the plant at Sterlitamak is 240,000 tpa.

Kaustik's production of PVC at Volgograd amounted to 36,000 tons in the first six months of 2019 versus 46,400 tons in the same period in 2018. Sayanskkhimplast suspended PVC production for maintenance on 7 July and restarted on 7 August. The capacity of the plant is 350,000 tpa. Regarding trade, Russia exported 97,300 tons of PVC in the first six months, up 42% on the same period in 2018 at 68,500 tons. RusVinyl accounted for around half of the export shipments, whilst half of Russian exports went to India. Imports also

increased by 10% to 13,100 tons. Russian producers have kept fairly high export volumes of PVC, despite scheduled shutdowns for maintenance at two major production capacities. Indian buyers were the main foreign importers of Russian resin this year. Overall sales of resin were 55,200 tons over the first six months.

PX-PTA chain

Russian Paraxylene Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Gazprom Neft	47.0	79.3
Kirishinefteorgsintez	30.0	27.5
Ufaneftekhimi	57.0	75.0
Total	124.0	181.8

Russian paraxylene production & sales Jan-Jun 2019

Russian paraxylene production amounted to 124,000 tons in the first half in 2019 against 181,800 tons in the same period in 2018. The largest drop was recorded by Gazprom Neft which produced 47,000 tons versus 79,300 tons. Gazprom Neft at the Omsk refinery produced 137,000 tons of paraxylene in 2018 against 138,300 tons in 2017.

Paraxylene sales on the Russian domestic market amounted to 56,700 tons in the first six months in 2019 versus 87,800 tons in the same period in 2018. Ufaneftekhimi reduced sales from 59,800 tons to 56,700 tons, whilst Gazprom Neft at Omsk reduced shipments from 28,000 tons to zero tons. Regarding future

Russian Paraxylene Domestic Sales (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Gazprom Neft	0.0	28.0
Ufaneftekhimi	56.7	59.8
Total	56.7	87.8

supply, Taneco at Nizhnekamsk has now started construction of the aromatics complex aimed for completion in 2021. This will eventually result in the construction of a 147,000 tpa plant for paraxylene, intended to be integrated into PTA and PET production.

Russian Paraxylene Exports (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Gazprom Neft	37.8	45.0
Ufaneftekhimi	19.0	25.3
Kirishinefteorgsintez	8.9	14.0
Total	65.7	84.3

Paraxylene exports totalled 65,700 tons in the first six months in 2019 against 84,300 tons in the same period last year. The largest rise was seen in deliveries to the Kotka port in Finland at the Oiltanking terminal.

SIBUR's PTA & PET Production (unit-kilo tons)		
Product	Jan-Jun 19	Jan-Jun 18
Paraxylene Purchases	56.9	86.2
PTA Production	28.7	133.0
PTA Domestic Sales	0.7	3.3
PTA Exports	0.2	2.0
PET Production	129.1	147.4
PET Domestic Sales	134.4	152.5

SIBUR, PTA production in first half of 2019

SIBUR produced only 28,700 tons of PTA in the first half of 2019 against 133,000 tons in the same period in 2018. PET production at the two sites at Blagoveshchensk in Bashkortostan and Tver near Moscow dropped to 129,100 tons from 147,400 tons. SIBUR's EBITDA was affected in the first half of 2019 partly due to purchases of PTA from third parties during the maintenance shutdown at Polief. In late July, Polief released harmful substances into the Izyak river and is now under pressure to pay compensation.

Russian PTA imports, Jan-May 2019

Russian PTA imports totalled 185,600 tons in the first five months in 2019 against 117,700 tons in the same period in 2018. China supplied 75,000 tons in January to May 2019 against 26,200 tons in the same period in 2018, whilst South Korea increased shipments from 39,900 tons to 32,900 tons. Thailand reduced exports to 3,000 tons from 10,000 tons.

Russian PTA Imports (unit-kilo tons)		
Country	Jan-May 19	Jan-May 18
Belgium	12.0	1.6
India	1.0	4.8
China	135.7	61.4
South Korea	32.9	39.9
Poland	1.0	0.0
Thailand	3.0	10.0
Total	185.6	117.7

Import costs for PTA into the Russian market increased to \$166 million in the first five months in 2019 against \$74.9 million in the same period in 2018. Russian main importers Alko-Naphtha at Kaliningrad and the Senezh PET plant near Moscow purchased 130,000 tons and 27,500 tons respectively in the first five months in 2019. Alko Naphtha purchased 66.4% of imports in the first five months this year from China at a cost of \$76.5 million. South Korea provided 22.2% at a cost of \$25.6 million and Belgium 8.5% at a cost of \$9.8 million. Senezh purchased 81.2% of its PTA imports in the first five months in 2019 at a total cost of \$20.4 million. South Korea provided 15.7% for \$3.9 million.

Aromatics

Russian benzene production, Jan-Jun 2019

Benzene production in Russia totalled 683,900 tons in the first six months in 2019 against 690,500 tons in the same period in 2018. Rosneft's plants at Angarsk, Ryazan and Novokuibyshevsk reduced production from 82,900 tons from 69,100 tons, whilst Nizhnekamskneftekhim increased production from 116,100 tons in the first half of 2018 to 144,400 tons. Gazprom neftekhim Salavat also increased production from 84,500 tons to 96,600 tons. Novolipetsk Metallurgical Plant will resume production of benzene for nitration in October or November 2019. Production of the product was stopped in June due to the lack of demand from nitrobenzene producers.

Russian Benzene Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Rosneft	69.1	82.9
Gazprom Neft	41.5	57.2
Lukoil	47.5	58.7
Magnitogorsk MK	26.2	28.3
Nizhnekamskneftekhim	144.4	116.1
Novolipetsk MK	4.7	3.8
Gazprom n Salavat	96.6	84.5
Kirishinefteorgsintez	40.9	32.0
Slavneft	24.0	35.5
Severstal	19.3	18.0
Bashneft	46.3	47.5
Ural Steel	5.1	4.2
Uralorgsintez	42.1	45.2
Zapsib	39.1	38.2
SIBUR	37.1	38.5
Total	683.9	690.5

Russian benzene market, Jan-Jun 2019

Sales of benzene on the Russian domestic market dropped in the first six months to 380,000 tons from 432,000 tons in the same period last year, the fall due partly to lower caprolactam production. Other producers reducing deliveries included Stavrolen falling from 16,100 tons to 7,400 tons whilst Gazprom Neft reduced from 40,400 tons to 27,900 tons and Angarsk Polymer Plant reduced from 19,600 tons to 16,800 tons.

Russian Benzene Domestic Purchases (unit-kilo tons)		
Consumer	Jan-Jun 19	Jan-Jun 18
Kuibyshevazot	75.1	98.5
Azot Kemerovo	66.1	73.0
Shchekinoazot	35.8	36.3
Kazanorgsintez	40.2	31.9
Nizhnekamskneftekhim	0.0	14.8
Uralorgsintez	32.1	35.5
Omsk Kaucuk	6.9	11.7
Samaraorgsintez	21.2	19.4
West Siberian MK	35.5	25.9
SIBUR-Khimprom	53.7	53.2
Promsintez	2.7	2.7
Zavod im Ya M Sverdlova	0.8	5.8
Novolipetsk MK	0.6	0.0
Tyumaz	2.5	0.2
Ufaorgsintez	6.4	3.4
Others	0.4	19.4
Total	380.0	431.6

As Russia's largest merchant consumer of benzene Kuibyshevazot continues to import product to supplement purchases from domestic producers and continues to import from Karpatneftekhim in Ukraine.

Kuibyshevazot reduced total purchases of benzene in the first six months in 2019 to 66,100 tons from 77,200 tons in the same period in 2018, whilst other caprolactam producers also reduced shipments. Nizhnekamskneftekhim has been idle on the market to date due its own increased production, whilst SIBUR-Khimprom at Perm increased purchases from 22,700 tons to 32,900 tons.

Russian caprolactam, Jan-Jun 2019

Russian caprolactam production totalled 186,000 tons in the first six months in 2019 against 201,700 tons in the same period in 2018. Kuibyshevazot reduced caprolactam production from 108,200 tons in January to June 2018 to 98,300 tons in January to June 2019, whilst falls were also recorded for Azot at Kemerovo and Shchekinoazot. Of the three producers Azot at Kemerovo exports nearly all of its caprolactam, Shchekinoazot around 84% and Kuibyshevazot the smallest at no more than 17%.

Russian Caprolactam Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Kuibyshevazot	98.3	108.2
Shchekinoazot	26.4	27.3
SDS Azot	61.3	66.2
Total	186.0	201.7

Kuibyshevazot processes caprolactam into polyamide where production is rising and thus exports may fall further in 2019.

Russian Cumene, Phenol & Acetone Exports, Jan-May 2019 (unit-kilo tons)					
CUMENE					
	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>
Kilo tons	4.8	0.0	3.3	2.7	7.4
\$ million	3.8	0.0	2.3	1.8	5.6
Av price \$	788.4	0.0	694.9	666.7	756.8
PHENOL					
	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>
Kilo tons	0.8	0.1	0.7	2.8	2.7
\$ million	0.6	0.1	0.3	2.2	2.2
Av price \$	779.7	900.0	519.5	794.2	817.8
ACETONE					
	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>
Kilo tons	2.3	1.1	2.6	3	4
\$ million	1.0	0.6	1.1	2	2
Av price \$	468.5	493.8	426.4	572.4	446.5

Russian phenol, Jan-Jun 2019

Russian phenol production increased in the first half of 2019 at all three operational plants. Ufaorgsintez recorded the largest rise in production, rising from 30,600 tons in the first half last year to 38,100 tons. Production for all three plants totalled 110,300 tons in the first six months in 2019 against 100,900 tons in the same period last year. In the past six quarters the largest amount produced took place in the period October to December 2018 when 62,000 tons was produced. In the first half of 2018 production was restricted by shutdowns for maintenance at Novokuibyshevsk and Ufa.

Phenol sales on the Russian merchant market totalled 41,700 tons in the first six months in 2019 against 33,400 tons in the same period in 2018. Kazanorgsintez

reduced merchant sales in the first half of 2019 in order to increase production of bisphenol A, although this was compensated by domestic shipments from the Novokuibyshevsk Petrochemical Plant and Ufaorgsintez.

Kazanorgsintez started scheduled repairs on the production of phenol and acetone, lasting from 5 to 30 August. 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.

Kuibyshevazot Production (unit-kilo tons)		
Product	Jan-Jun 19	Jan-Jun 18
Caprolactam	98.3	9.9
Polyamide	72.2	30.8
Ammonia	513.9	12.7
Urea	179.3	8.0
Ammonium nitrate	332.1	11.9

Kuibyshevazot production Jan-Jun 2019

Kuibyshevazot increased its net profit by 36% in the first half of 2019 against January to June 2018 to 3 billion roubles. The company received revenues worth 28.3 billion roubles, which is 4.6% higher than the same period last year. Gross profit amounted to 3.6 billion roubles, and profit from sales increased by 2.7% to 2 billion roubles. Ammonia production increased by 0.4% to 513,900 tons, ammonium nitrate by 3.8%, and urea by 4.8%.

In partnership with the Maire Tecnimont Group, Kuibyshevazot continues on the construction of a new urea unit. This year a loan agreement was signed with VEB RF and Gazprombank on a project for the construction of a sulphuric acid and oleum plant with a capacity of 500,000 tpa valued at 6.3 billion roubles. In Germany, Kuibyshevazot intends to launch the production of compounds by the middle of 2020 where investments amount to about €3 million. The enterprise plans to launch an installation for the production of engineering plastics with a capacity of 22,000 tpa. The current production of PA-6 filament yarns is also supported by upgrading existing facilities in accordance with the growing quality requirements in the field of technical textiles.

Synthetic Rubber

Russian Synthetic & Natural Rubber Market (unit-kilo tons)		
	Jan-May 19	Jan-May 18
Production	661.0	716.0
Exports	434.0	432.1
Imports	90.1	85.9
Supply/Demand Balance	317.1	369.8

Russian rubber market Jan-May 2019

Russian rubber consumption in the domestic market fell in the first five months in 2019 to 317,100 tons from 369,800 tons in the same period in 2018. Production of synthetic rubber fell nearly by the same amount, although both exports and imports (including natural and synthetic) increased. The main reason for the fall in consumption was lower tyre production where car tyre manufacturing

reduced usage from 107,100 tons in January to May 2018 to 91,800 tons. All sectors of tyre manufacture, including car, lorry and agricultural recorded falls in output volume in the first five months in 2019.

Russian Synthetic Rubber Exports (unit-kilo tons)		
Product	Jan-May 19	Jan-May 18
E-SBR	17.5	12.4
Block	16.8	12.0
SSBR	6.0	3.8
SBR	34.9	39.8
Polybutadiene	103.2	103.1
Butyl Rubber	55.5	53.0
HBR	57.0	58.3
NBR	15.0	14.0
Isoprene	112.8	120.5
Others	15.3	15.2
Total	434.0	432.2

Russian synthetic rubber exports, Jan-May 2019

Export volumes for Russian synthetic rubber in the first five months in 2019 totalled 434,000 tons against 432,100 tons in the same period in 2018. Average product prices for synthetic rubber rose in the first five months from \$1603 per ton to \$1618 per ton. By product category, isoprene rubber exports totalled 112,800 tons in January to May 2019 against 120,500 tons. Isoprene rubber prices fell to \$1366 per ton in the first five months in 2019 from \$1441 in January to May 2018.

Export sales of butyl rubber from Russia rose slightly from 53,000 tons to 55,500 tons January to May 2019, whilst exports of halogenated butyl rubber (HBR) dropped to 57,000 tons against 58,300 tons. Export prices of butyl rubber averaged \$1565 per ton in January to May 2019 and for halogenated butyl rubber at \$2356 per ton from \$2109 per ton in the same period in 2018. Regarding

export destinations, China was the largest recipient of Russian rubber shipments in the first five months in 2019, accounting for 10.2%, followed by Poland with 10.1% and India with 9.9%. Other leading markets included India, Hungary, Poland, and Mexico.

SIBUR-Synthetic Rubber Production (unit-kilo tons)		
	Jan-Jun 19	Jan-Jun 18
Commodity Rubber	160.2	160.7
Speciality Rubber	57.1	59.6
Thermoplastic elastomers	41.2	38.5
Total	258.5	258.8
SIBUR-Synthetic Rubber Domestic Sales (unit-kilo tons)		
	Jan-Jun 19	Jan-Jun 18
Commodity Rubber	55.7	63.4
Speciality Rubber	5.6	6.0
Thermoplastic elastomers	17.5	21.0
Total	78.8	90.4
SIBUR-Synthetic Rubber Export Sales (unit-kilo tons)		
	Jan-Jun 19	Jan-Jun 18
Commodity Rubber	117.2	87.4
Speciality Rubber	53.2	42.2
Thermoplastic elastomers	19.6	14.2
Total	190.0	143.8

SIBUR, synthetic rubber, Jan-Jun 2019

SIBUR produced 258,500 tons of synthetic rubber in the first half of 2019 against 258,800 tons in the same period in 2018. Thermoplastic elastomer production at Voronezh rose from 38,500 tons to 41,200 tons whilst production of speciality rubber dropped from 59,600 tons to 57,100 tons.

In total 69.3% of synthetic rubber sales came from exports in the first half of 2019, rising from 62.6% in the first half last year. Exports of synthetic rubber rose from 143,800 tons in the first half of 2018 to 190,000 tons in the same period this year. The largest rise was recorded for commodity rubber exports, comprising 117,400 tons versus 87,400 tons. Domestic sales for SIBUR dropped from 37.4% in the first half of 2019 to 30.7%, dropping from 9.723 billion roubles to 8.912 billion roubles. In volume terms, domestic synthetic rubber sales for SIBUR dropped from 90,400 tons to 78,800 tons. Domestic sales of thermoplastic elastomers for SIBUR decreased from 21,000 tons to 17,500 tons, or from 57% of production to 49%.

SIBUR Togliatti Rubber Exports (unit-kilo tons)		
Product	Jan-May 19	Jan-May 18
Isoprene Rubber	12.6	9.5
Butyl Rubber	28.0	21.6
SBR	21.8	18.5
Others	0.5	0.0
Total	62.9	49.5

SIBUR Togliatti, butyl rubber repairs and rubber exports, Jan-May 2019

During repairs at SIBUR-Togliatti's butyl rubber plant in June and July repairs three lines was undertaken. Upgrading equipment should lead to a reduction in expenditure levels and reduced risks of unplanned shutdowns. Thus, the completed maintenance should therefore lead to more stable production, and less energy consumption. SIBUR Togliatti is the only

SIBUR site where isoprene monomer is produced as raw materials for isoprene and butyl rubber, used in the tyre and rubber industry. In 2018, the company produced 182,500 tons of rubber. In the first five months

in 2019 SIBUR-Togliatti exported 28,000 tons of butyl rubber against 21,600 tons in the same period in 2018, whilst isoprene rubber exports rose from 9,500 tons to 12,600 tons.

SIBUR Togliatti currently includes capacities for butyl rubber (75,000 tpa), copolymer rubbers with a capacity of 60,000 tpa, butadiene (80,000 tpa), isoprene (90,000 tpa) and isoprene rubbers (82,000 tpa). The capacity for the production of isobutylene-isobutane fraction stands at 165,000 tpa and isobutylene at 60,000 tpa. About 70% of products are exported. The main consumers are well-known tyre companies such as Bridgestone, Pirelli, Nokian, Cordiant, Kenda, and Nexen, etc.

Voronezhsintezkaucuk-rubber exports in Jan-May 2019

Voronezhsintezkaucuk increased rubber exports to 68,000 tons in January to May 2019 against 56,800 tons in the same period last year. Voronezhsintezkaucuk was recognized as the best company of the SIBUR Group based on the results of production activities for 2018. The total production of rubbers and thermoplastic elastomers last year amounted to 267,120 tons, which exceeded the 2017 by 3,800 tons. Due to a number of organisational measures, the available capacities for standard rubber brands SKD-ND, DSSK and TEP were increased by 13,500 tons. In 2018,

Voronezhsintezkaucuk launched two of its largest investment projects including the modernisation of production of butadiene rubbers (SKD-ND), which will increase operational efficiency and increase production capacity up to 48,000 tpa.

Nizhnekamskneftekhim expansion of rubber production

Nizhnekamskneftekhim produced 454,000 tons of synthetic rubber in the first half of 2019, whilst the company continues to work on the expansion of new product grades and modernisation of existing synthetic rubber plants, combined with the construction of new units. Some of the ongoing tasks include the technical re-equipment of the SKD-777 unit and installation of returning metal packaging for synthetic rubbers.

Nizhnekamskneftekhim Rubber Exports (unit-kilo tons)		
Product	Jan-May 19	Jan-May 18
Isoprene Rubber	89.8	89.9
Butyl Rubber	28.4	31.7
HBR	57.7	58.7
Polybutadiene	76.2	75.1
Total	252.1	255.4

Nizhnekamskneftekhim also continues to implement a project to modernise the production of polybutadiene rubber SKDN. By the end of 2019, Nizhnekamskneftekhim intends to begin work on the construction of the production of DSSK rubber with a capacity of 60,000 tpa.

The investment programme of Nizhnekamskneftekhim also includes a project to increase the capacity for isoprene rubber from 270,000 tpa to 420,000 tpa. For halogenated and butyl rubbers, the company is capable at present of producing 200,000 tpa and wants to increase up to 220,000 tpa by 2021. A programme to increase the production of isoprene rubber SKI-3 to 330,000 tpa would be completed with the launch of isoprene monomer and isobutylene production at the plant.

Russian Methanol Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Shchekinoazot	469.4	229.7
Sibmetakhim	472.8	474.3
Metafrax	614.8	611.0
Akron	50.8	54.0
Azot, Novomoskovsk	127.2	143.3
Angarsk Petrochemical	21.8	0.8
Azot, Nevinnomyssk	59.7	50.9
Tomet	363.7	439.1
Ammoni	90.5	112.0
Totals	2270.7	2115.2

In the first five months in 2019 Nizhnekamskneftekhim exported 89,800 tons of isoprene rubber against 89,900 tons in the same period in 2018. Polybutadiene exports amounted to 76,200 tons versus 75,100 tons whilst halogenated butyl rubber exports dropped slightly from 58,700 tons to 57,700 tons. In total Nizhnekamskneftekhim exported 252,100 tons in the first five months against 255,400 tons in the same period last year.

Methanol & related products

Russian methanol production, Jan-Jun 2019

Methanol production in Russia totalled 2.271 million tons in the first six months in 2019 against 2.115 million tons in same period in 2018. The largest proportional

rise was recorded by Shchekinoazot which increased production from 229,700 tons to 469,400 tons whilst Tomet at Togliatti reduced production from 439,100 tons to 363,700 tons. Metafrax increased production to 614,800 tons in the first half of 2019 against 611,000 tons last year whilst Sibmetakhim reduced production from 474,300 tons to 472,800 tons.

Russian methanol sales, Jan-Jun 2019

Consumption of methanol on the Russian domestic merchant market dropped in the first six months in 2019, with domestic sales totalling 736,600 tons versus 769,600 tons in the same period in 2018. Ammoni at

Russian Methanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Azot Nevinnomyssk	15.5	5.4
Azot Novomoskovsk	76.7	73.4
Metafrax	127.4	131.8
Sibmetakhim	190.7	182.9
Tomet	201.2	267.9
Shchekinoazot	69.0	24.9
Ammoni (Mendeleevsk)	52.7	82.5
Others	3.3	1.0
Total	736.3	769.6

Mendeleevsk reduced domestic sales from 57,700 tons to 27,000 tons, whilst Azot at Novomoskovsk increased from 73,400 tons to 76,700 tons and Tomet dropped from 267,000 tons to 201,200 tons. Metafrax reduced shipments from 131,800 tons to 127,400 tons.

increased inward shipments from 33,100 tons to 39,400 tons. Regarding recent domestic contracts Y.M. Sverdlov at Dzerzhinsk is arranging for methanol deliveries valued at 73.440 million roubles and Bashneft

Nizhnekamskneftekhim remains the largest individual buyer of merchant methanol on the Russian market, purchasing 122,900 tons in the first six months against 137,400 tons in the same period in 2018. SIBUR Togliatti increased purchases from 62,700 tons to 80,400 tons, whilst Uralorgsintez has arranged to purchase 20,400 tons of methanol on the domestic market for Ufaneftekhim. The company needs approximately 1,700 tons of methanol per month.

Russian Methanol Consumption (unit-kilo tons)		
Consumer	Jan-Jun 19	Jan-Jun 18
Nizhnekamskneftekhim	122.9	137.4
SIBUR Togliatti	80.4	62.7
Uralorgsintez	39.4	33.1
SIBUR-Khimprom	13.2	8.3
SIBUR Tobolsk	16.4	26.2
Ektos-Volga	27.2	24.8
Omsk Kaucuk	50.2	43.0
Novokuibyshevsk NPZ	25.3	44.2
Uralkhimplast	14.6	10.9
Slavneft-Yanos	8.1	6.4
Others	339.0	372.6
Total	736.6	769.6

June 2018.

Russian methanol exports, Jan-Jun 2019

Russian methanol exports totalled 1,095,900 tons in the first six months in 2019 against 923,000 tons in the same period in 2018. Finland accounted for 317,000 tons in the period January to June 2018, followed by Poland with 136,000 tons. Shchekinoazot recorded the largest rise in export activity in the first half of 2019, shipping 386,000 tons against 170,000 tons in the same period in 2018. Azot at Novomoskovsk reduced exports from 81,000 tons to 33,900 tons in the same period in 2018. Metafrax exported 254,600 tons in the first half of 2019 versus 271,000 tons in January to

Skovorodino methanol project

Saudi investors have shown interest in taking an equity stake in the Skovorodino methanol project in the Amur Oblast where construction is scheduled to start in 2019. Russian state support for the methanol project at Skovorodino already has been allocated at 4.9 billion roubles which will be used for the spending on infrastructure.

Russian Methanol Exports (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Azot Nevinnomyssk	0.0	0.0
Azot Novomoskovsk	33.9	81.0
Akron	3.8	8.1
Metafrax	254.6	271.5
Sibmetakhim	232.8	254.6
Tomet	170.8	136.1
Shchekinoazot	386.5	170.0
Ammoni	13.5	1.6
Total	1095.9	923.0

The Tekhnolizing project claims the status of a resident of TOR Svobodny, which covers the territory of Svobodny and Skovorodino of the Amur Region. In May 2018, Vnesheconombank committed to providing financial support to the Tekhnolizing complex, estimated at \$900 million. The UST group in which Tekhnolizing belongs has also undertaken negotiations with Chinese partners concerning an off-take contract for methanol from the Skovorodino plant.

Transport links would allow large volumes to be transported from the Amur Oblast to the Chinese market.

Nizhnekamskneftekhim-methanol plant preparations

Nizhnekamskneftekhim is conducting preparatory work at the site for the future construction of the methanol plant. Buildings of the isoprene monomer plant are almost completely dismantled, which have been taken out of production. Project documentation could be submitted for state examination in the autumn of 2019.

Vysotsk methanol project

Russian company Gas Sintez is working on plans to build a methanol production plant with a capacity of 1.83 million tpa at the port of Vysotsk (Leningrad Region). At the end of April, Gas Sintez signed a contract with Hyundai Engineering for design, with a contract price was \$12 million. Methanol from the plant is to be exported through Lukoil's petroleum terminal at Vysotsk. Currently, the complex at Vysotsk includes a capacity of 16 million tpa specializing in the transshipment of diesel fuel, naphtha, fuel oil and vacuum gas oil. In terms of market direction, the Vysotsk project may be seen as competition for the Ust Luga projects. Construction of the methanol plant could start in the third quarter in 2020, after Hyundai finishes its design work for the plant and related infrastructure has been completed. Local people are extremely unhappy about the prospects of a new methanol plant being constructed in what was once a beautiful untouched area on the Finnski Zaliv (Gulf of Finland).

In January this year, Haldor Topsoe was selected as the licensor. Under the terms of the agreement, the Danish company will provide a license and provide engineering services for the project. The methanol plant will be built to reduce the cost of production of isoprene rubber through reducing production costs for formaldehyde.

Volgograd methanol project-licensing agreement

GTM ONE, Haldor Topsoe, and Mitsubishi Heavy Industries Engineering Ltd have entered into a tripartite licensing agreement to provide technology for the design, construction and operation of methanol production as part of the construction of a production facility based on Khimprom at Volgograd. According to the document, Haldor Topsoe provides methanol production technology and the right to use it for the development of project documentation.

Mitsubishi Heavy Industries Engineering will be engaged in design and construction, as well as it will launch and bring the plant to its design capacity with the support of investing companies, including GTM ONE.

Metafrax, Jan-Jun 2019

Metafrax increased revenues by 7% in the first half of 2019 to 13.160 billion roubles, of which exports comprised 43%. The company undertook maintenance at the methanol plant in the second quarter, in addition to laying the foundations for the construction of the Ammonia-Urea-Melamine (AKM) plant. This

Metafrax-Production (unit-kilo tons)		
Product	Jan-Jun 19	Jan-Jun 18
Methanol	614.8	611.0
Formaldehyde 55%	133.9	132.0
Urea-formaldehyde concentrate	94.4	92.0
Pentaerythritol	12.1	12.0
Utropin	18.0	18.0

project construction forms the main plank of the strategic programme for investment in the period 2020-2025.

In the first half of 2019 Metafrax produced 614,800 tons of methanol against 611,000 tons in the same period in 2018. The production of concentrated formaldehyde totalled 133,900 tons against 132,000 tons, whilst the production of urea formaldehyde concentrate rose to 94,400 tons. Other products included pentaerythritol where 12,100 tons was produced and utropin where 18,000 tons.

Russian N-Butanol Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Angarsk Petrochemical	13.6	14.2
Azot, Nevinnomyssk	7.0	5.0
Gazprom n Salavat	28.8	24.0
SIBUR-Khimprom	20.8	18.5
Total	70.3	61.8

Russian Isobutanols Production (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Angarsk Petrochemical	8.1	9.2
Gazprom n Salavat	16.8	18.7
SIBUR-Khimprom	30.0	24.1
Total	54.9	52.0

tons to 28,800 tons, primarily to meet demand from the acrylates' division. In workshop for the production of butanols at Salavat, a scheme was implemented for receiving propylene directly from the refinery. This

Organic chemicals

Russian butanol production, Jan-Jun 2019

Russian normal butanol production amounted to 70,300 tons in the first six months in 2019, versus 61,800 tons in the same period in 2018 whilst isobutanol production rose from 52,000 tons to 54,900 tons.

SIBUR-Khimprom at Perm increased the production of isobutanol from 24,100 tons in January to June 2018 to 30,000 tons in 2019 whilst Gazprom neftekhim Salavat produced 16,800 tons versus 18,700 tons. The Salavat plant increased production of normal butanol from 24,000

scheme will reduce the loss of propylene during storage, as well as ensure stable operation of pumping equipment.

Russian Butanol Domestic Sales (unit-kilo tons)		
Producer	Jan-Jun 19	Jan-Jun 18
Gazprom n Salavat	2.6	4.4
SIBUR-Khimprom	15.0	14.2
Angarsk Polymer Plant	9.9	11.9
Azot Nevinnomyssk	0.8	0.3
Others	0.7	5.3
Totals	29.0	36.1

Dmitrievsky Chemical increased inward shipments from 8,400 tons to 9,400 tons. Aktilat purchases most of its butanols from SIBUR-Khimprom, whilst Dmitrievsky Chemical Plant buys largely from Angarsk and Salavat. The problem facing consumers for 2019 and 2020 may possibly be one of supply on the domestic market as domestic producers focus more on captive consumption and internal processing.

Russian butanol sales, Jan-Jun 2019

Russian sales of butanols on the domestic merchant market amounted to 29,000 tons in the first six months in 2019 against 36,100 tons in the same period in 2018. The share of n-butanol in the total supply was 86%, and isobutanol 14%.

Aktilat at Dzerzhinsk remained the largest consumer of butanols on the domestic market, taking 9,700 versus 10,100 tons in January to June 2018, whilst

Russian & Eurasian Organic Chemical Exports (unit-kilo tons)		
Product	Jan-May 19	Jan-May 18
Propylene	29.3	36.4
Orthoxylene	43.1	44.2
Paraxylene	54.8	57.2
Styrene	57.6	61.1
Methanol	900.5	752.7
N-Butanol	12.0	16.0
Iso-butanol	15.7	18.3
2-EH	3.0	11.0
Pentaerythritol	3.8	4.9
Phenol	19.8	10.4
Ethylene Oxide	4.7	5.2
Formaldehyde	4.9	7.8
DEG	4.9	5.3
MEG	18.8	14.3
Acetone	20.1	11.7
Acetic Acid	17.7	12.5
VAM	16.9	11.2
Butyl Acetate	10.7	7.2
Acrylic Acid	6.9	12.3
Butyl Acrylate	19.6	27.7
Phthalic Anhydride	30.8	28.2
Acrylonitrile	80.4	82.1
Melamine	7.9	4.8
Caprolactam	81.8	89.1

Russian phthalic anhydride production Jan-Jun 2019

Russian production of phthalic anhydride amounted to 51,500 tons in the period January to June 2019 against 52,500 tons in the same period in 2018. Kamteks-Khimprom produced 46,000 tons against 46,800 tons whilst Gazprom neftekhim Salavat increased production from 5,400 tons to 5,600 tons.

The Russian market for phthalic anhydride is undergoing changes regarding both import competition and future consumption patterns, which should affect Kamteks-Khimprom directly. Domestic consumption of phthalic anhydride is expected to fall this year following the launch of the new SIBUR DOTP plant, which is phthalate based rather than phthalic. Exports of phthalic anhydride amounted to 30,800 tons in the first five months in 2019 against 28,200 tons in January to May 2018.

Russian organic chemical trade, Jan-May 2019

Butanol exports from Russia dropped in the first five months this year to 27,700 tons from 34,300 tons in the same period in 2018. Normal butanol export shipments dropped from 7,900 tons to 6,100 tons and isobutanol shipments fell from 10,100 tons to 5,800 tons. 2-EH exports dropped from 11,000 tons to 3,000 tons. Pentaerythritol exports from Russia dropped from 4,900 tons to 3,800 tons. DOP imports dropped to 600 tons from 3,400 tons in the first five months last year, and demand for this product will continue to decline.

By far the largest organic chemical to be imported into Russia this year, at least in terms of volume, is PTA where inward shipments rose from 97,700 tons to 186,000 tons. However, this trend should slow in the second half of 2019 as the expanded Polief plant.

SIBUR maleic anhydride project-Tobolsk

SIBUR and Uralkhimash signed a contract in July for the supply of column equipment for the future production of maleic anhydride at Tobolsk. Under the contract, Uralkhimash is to manufacture and ship

three units of column equipment by the end of February 2020. The enterprise will also ship to the SIBUR address a solvent regeneration column with a built-in capacitor.

Russian Organic Chemical Imports (unit-kilo tons)		
Product	Jan-May 19	Jan-May 18
Ethylene glycol	26.1	20.5
Propylene glycol	9.2	10.9
Acetic Acid esters	0.0	0.6
Isopropanol	5.9	8.5
Maleic anhydride	2.3	2.8
DINP	11.9	9.4
DOP	0.8	4.9
Phthalic anhydride	5.6	7.1
PTA	186.0	97.7
TDI	19.1	21.7
Lysine	24.7	41.7
Methionine	12.9	9.2

increase the volume of its products (solvents, thinners, vat residue, absorbents, etc) up to 3,000 tons per month. In particular, the company plans to modernize equipment for the production of crystalline hydroxylamine sulphate which is used in the manufacture of affordable products in medicine, film and photo industries and other areas. CYCLEN is located on the territory of Kuibyshevazot. Raw materials for production are provided through major petrochemical companies Nizhnekamskneftekhim, Stavrolen, etc.

Russian TDI Imports (unit-kilo tons)		
Country	Jan-May 19	Jan-May 18
Hungary	4.0	4.9
Germany	4.3	8.4
China	0.9	0.0
South Korea	0.4	0.6
Saudi Arabia	4.1	4.0
UK	0.0	0.1
US	3.6	1.5
Turkey	0.1	0.0
Japan	0.7	1.1
Belgium	0.2	0.2
Netherlands	0.4	0.0
France	0.1	0.2
Poland	0.0	0.1
Iran	0.0	0.1
Total	18.8	21.3

Russian Imports of MDI (unit-kilo tons)		
Country	Jan-May 19	Jan-May 18
Hungary	3.2	1.6
Germany	6.1	5.9
China	14.7	5.8
South Korea	1.0	0.5
Lithuania	0.0	0.2
Saudi Arabia	15.5	12.8
Japan	0.9	0.7
Belgium	7.1	5.2
Netherlands	12.5	15.2
Others	0.2	2
Total	61.2	49.8

propylene oxide in 2022-2023. Currently, the company imports propylene oxide from Romania and Poland.

Although the licence for the new plant is being imported from Conser, large parts of the auxiliary equipment is being produced in Russia. Conser was selected as a licensor for production with the plant being designed at a capacity of 45,000 tpa. Commissioning of the installation is scheduled for 2021. NIPIGAZ was involved in the development of working documentation. In the third quarter of 2019, work on site preparation for construction should be completed.

Other products

CYCLEN-Togliatti

CYCLEN at Togliatti opened a loan worth 100 million roubles that will allow the company to increase the volume of its products (solvents, thinners, vat residue, absorbents, etc) up to 3,000 tons per month. In particular, the company plans to modernize equipment for the production of crystalline hydroxylamine sulphate which is used in the manufacture of affordable products in medicine, film and photo industries and other areas. CYCLEN is located on the territory of Kuibyshevazot. Raw materials for production are provided through major petrochemical companies Nizhnekamskneftekhim, Stavrolen, etc.

Lipetsk-plant production agents

Chance Enterprise LLC completed the construction of a plant for the production of plant protection products on the territory of the Lipetsk special economic zone. The enterprise will open in early autumn of 2019. After reaching the design capacity, the plant will produce 50,000 tpa. Investment in the project amounted to 3.3 billion roubles. The company has already completed construction work on the construction of production areas. Currently, equipment is being assembled and brought from Germany, Austria and Poland.

Russian TDI-MDI imports, Jan-May 2019

Russia imported 18,800 tons of TDI in the first five months in 2019 against 21,300 tons in the same period in 2018. The three largest sources of imports in the first five months in 2019 included Germany with 4,300 tons, Saudi Arabia with 4,100 tons and Hungary with 4,000 tons.

MDI imports into Russia totalled 30,500 tons in the first five months in 2019, against 49,800 tons in the same period in 2018. Most product was delivered to Russia. Saudi Arabia was the largest supplier, providing 15,500 tons against 12,800 tons in the previous year. The Netherlands accounted for 12,500 tons of MDI imports in the first five months in 2019 against 15,200 tons in the same period in 2018.

SIBUR-Kstovo, propylene glycol project?

SIBUR-Kstovo is considering the possibility of building a plant for the production of an oxidizing agent, propylene glycol and polyethers. The company is assessing investments of up to 60 billion roubles. Sintez OKA at Dzerzhinsk plans to launch its own production of

Tatneft-acrylonitrile & maleic anhydride projects

Tatneft is undertaking work on the choice of the licensor of the technology for the production of acrylonitrile in Tatarstan. The aim is to produce PAN precursor for the production of carbon fibre from acrylonitrile, as part of the creation of a complete technological chain of production of composite products.

Tatneft expects to complete an Environmental Impact Assessment (OVS) in November this year for the production of maleic anhydride at the Minnibayev gas processing plant in Tatarstan. The capacity of the new installation for maleic is expected to be designed at 50,000 tpa.

On 1 February 2018, Sintez OKA commissioned a pilot unit for the production of propylene oxide by direct epoxidation of propylene with hydrogen peroxide (HPPO). The launch of the pilot unit constitutes the first step towards a large investment program to build a production of propylene oxide with a capacity of 100,000 tpa.

Pigment, Tambov Jan-Jun 2019

Pigment for the first half of 2019 increased production in value terms by 7% to 3.9 billion roubles from the production of 67,200 tons of products. The total volume of shipments for the first half of the year increased by 12%, exceeding 4 billion roubles. The company increased the production of concrete

additives by 43%, acrylic emulsions by 40%, and formaldehyde by 27%. In July of this year, a pilot development of a new product in the line of acrylic binders for the market of paints and varnishes was carried out. Production is scheduled for the fourth quarter in 2019. In the first half of the year, profit from shipping increased to 221 million roubles. Investments in the modernisation and maintenance of fixed assets since the beginning of the year amounted to 138 million roubles.

Ukraine**Ukrainian polymer imports, Jan-Jun 2019**

In the first six months of 2019 imports of polyethylene to the Ukrainian market rose by 9% to 131,100 tons against 120,500 tons. HDPE imports amounted to 48,800 tons against 37,200 tons, whilst LDPE imports dropped 5% to 37,400 tons. LLDPE imports rose to 38,800 tons against 36,900 tons in the same period in 2018. Imports of other types of polyethylene, including ethylene vinyl acetate, amounted to about 6,200 tons against 7,000 tons.

Ukrainian Polymer Imports (unit-kilo tons)		
Product	Jan-Jun 19	Jan-Jun 18
PVC	15.8	25.8
LDPE	37.4	36.4
LLDPE	38.8	36.9
HDPE	48.8	37.2
Ethylene Vinyl Acetate	6.2	7.0
PP	45.0	38.4

Imports of propylene polymers totalled 45,000 tons in January-June 2019, compared to 38,600 tons in the same period in 2018. Propylene homopolymers (homopolymer PP) accounted for the main increase in imports, amounting

25,900 tons in the first six months in 2019 versus 27,600 tons. 4,300 tons of PP block copolymers were imported in January to June this year, versus 4,100 tons in 2018, whilst random copolymers dropped from 6,000 tons to 4,100 tons. Imports of other propylene copolymers were about 600 tons over the first six months.

Imports of PVC into Ukraine decreased by 44% in the first six months of this year to 15,800 tons. The key suppliers of PVC to the Ukrainian market were producers from Europe, their share in total imports in the first four months of this year was about 65%. PVC exports from the country exceeded 50,100 tons in January-June, compared with about 49,000 tons in the same time in 2018. The key importers of Ukrainian PVC were consumers from India and Turkey, their share in total exports was 58% and 20%.

Belarus**Further development of chemical industries in Belarus**

Belarussian petrochemical holding Belneftekhim is examining the prospects of obtaining new products with high added value. These include products in aromatic and olefin hydrocarbons; including polymeric materials; ethylene oxide, propylene oxide, polyols; PTA; MEG, synthetic rubbers; isocyanates and polyurethanes. Ernst & Young Assessment and Consulting Services was involved in the development of development strategies for Naftan and the Mozyr Oil Refinery in terms of marketing research of the oil products and petrochemical products market.

For the Mozyr refinery, the fuel option is being considered as a strategy for further development after 2020, and the fuel and chemical option for Naftan. These plans will be specified after the completion of refinery modernisation programs in November 2019 (the cost of the programme at Naftan is \$1.64 billion, at the Mozyr refinery \$1.735 billion. Naftan merged with Polymir in 2008.

Belarussian Polymer Imports (unit-kilo tons)		
Product	Jan-May 19	Jan-May 18
PVC	15.0	15.2
Polypropylene	45.7	24.6
LDPE	12.2	16.2
Other Polyethylene	7.8	5.3
HDPE	11.7	15.4
Polystyrene	14.9	13.4

Belarussian polymer trade, Jan-May 2019

Imports of polypropylene into Belarus totalled 45,700 tons in first five months of this year, up 11% compared to the same period of 2018. Homopolymer imports rose 11% to 30,500 tons compared with 27,900 tons. Russian producers occupied the market with the share of about 86%. Total imports of propylene copolymers in the country reached 15,100 tons in Jan-May 2019, up 11%.

Exports of polyethylene from Belarus rose to 41,044 tons in the first five months from 39,568 tons in the same period last year. LDPE exports amounted to 28,862 tons versus 28,441 tons. Belarus exports of polyethylene in the January to May 2019 yielded revenues of \$44.948, down from \$50.196 million. Regarding polyamide, Belarussian exports amounted to 29,531 tons in the first five months this year against 30,214 tons in the same period in 2018. Revenues dropped, however, from \$64.818 million to \$52.944 million as average prices fell from \$2,145 per ton to \$1,793.

Belarussian Acrylonitrile Exports (unit-kilo tons)		
Product	Jan-May 19	Jan-May 18
Russia	0.8	1.5
Hungary	0.0	0.5
Iran	0.0	1.4
Netherlands	4.9	0.0
Turkey	11.9	14.5
Total	17.6	18.0

Imports of PVC into Belarus decreased in the first five months of 2019 by 11%, totalling 15,600 tons from 17,800 tons. Russian producers took a share of about 86% of the Belarussian market. Producers from Ukraine and Germany with the share of 8% and 4% were the second and third largest suppliers.

Belarussian organic chemical trade, Jan-May 2019

Belarussian acrylonitrile exports totalled 17,600 tons in the period January to May 2019 against 18,000 tons in the same period in 2018. The largest destination for Belarussian exports was Turkey, accounting for 11,900 tons versus 14,500 tons in the previous year. Average prices for Belarussian acrylonitrile exports rose to \$1146 per ton in the first three months this year against \$1601 per ton in the same period in 2018.

In other areas of chemical trade, methanol export shipments amounted to 6,900 tons in January to May 2019 against 7,100 tons in the same period in 2018. Average methanol export prices amounted to \$326 per ton against \$355 in the first five months last year. Methanol imports into Belarus totalled 33,000 tons in the first five months in 2019, at \$309 per ton, against 39,100 tons in the same period in 2018 at \$318 per ton. Methanol consumption in the first five months totalled 57,400 tons against 59,700 tons in the first five months in 2018.

Belarussian Methanol Market (unit-kilo tons)		
	Jan-May 19	Jan-May 18
Production	31.3	27.7
Exports	6.9	7.1
Imports	33.0	39.1
Balance	57.4	59.7

Belarussian PTA Imports (kilo tons)		
Country	Jan-May 19	Jan-May 18
Russia	1.0	1.2
Belgium	0.0	0.5
South Korea	6.2	5.3
Portugal	3.0	0.0
Poland	12.8	6.0
Thailand	0.2	0.0
Total	23.2	13.0

PTA imports into Belarus in the first five months amounted to 23,200 tons against 13,000 tons in the same period in 2018. Poland and South Korea were the main suppliers. Prices averaged \$946 per ton in the first five months against \$804 in the same period in 2018. Ethylene glycol imports dropped to 17,711 tons from 19,085 tons in the first five months in 2017. Mogilevkhimvolokno purchases Bashkir paraxylene and PTA, and produces polyester yarns and fibres based on them.

Belarussian melamine exports, Jan-May 2019

Melamine exports from Belarus totalled 2,882 tons in the first five months in 2019 against 361 tons in the same period last year. Average prices dropped from \$1,484 per ton to \$1,317 per ton. Poland was the main market for Belarussian

melamine exports in the period January to May 2019, where 1,357 tons were shipped, followed by Germany with 740 tons and the Czech Republic with 521 tons.

Central Asia-Caucasus

Uzbek GTL project

Uzbekistan has to date undertaken around 33% of the construction work on the GTL project (OLTIN YO'L GTL) in which total investment is estimated at \$3.6 billion. Based on the results of all the work, an enterprise capable of producing 311,000 tpa of aviation kerosene, 743,000 tpa of diesel fuel, 431,000 tpa of naphtha and 53,000 tpa of liquefied gas.

Siemens and Uz-Kor Gas Chemical

Siemens and Uz-Kor Gas Chemical have signed a package of long-term contracts for the comprehensive maintenance of SGT-400, SGT-700 gas turbines, SST-600 steam turbines, and a large compressor park of a polymer plant for a period of fourteen years. Technical equipment maintenance by its original manufacturer will guarantee uninterrupted production of ethylene, polyethylene and polypropylene, production of electricity for its own needs, as well as the supply of surplus energy to the power system of Uzbekistan.

The overall progress of the implementation of the EPC contract, as noted by Uzbekneftegaz, is more than 76.6%. The plant belongs to the oil and gas company Qatar Petroleum (51%) and Sasol (49%). Haldor Topsoe is the licensor of synthesis gas technology. In addition, licensing agreements for the project were signed with Sasol (South Africa) and Chevron (USA). The construction contractors are Hyundai Engineering Co. Ltd. and Hyundai Engineering and Construction Co., Ltd (South Korea), Enter Engineering Pte. Ltd. (Singapore).

Azerbaijan, olefins & polyolefins, Jan-Jun 2019

In January-June 2019 Azerbaijan produced 52,500 tons of propylene of which 52,400 tons comprised commercial product, 59,200 tons of polyethylene and 71,500 tons of ethylene. The production of propylene increased by 57%, commercial propylene by 1.9 times, polyethylene by 1.2%, and ethylene by 18.7%.

Azerbaijan Chemical Production (unit-kilo tons)		
Product	Jan-Jun 19	Jan-Jun 18
Ethylene	71.5	60.2
Polyethylene	59.2	58.5
Propylene	52.5	44.5
Propylene captive	52.4	19.5
C4s	20.2	20.1
Methanol	188.7	96.1

In the first half of 2019 Azerbaijan reduced polyethylene exports by 16.9% against the same period in 2018 to \$41.9 million, whilst polypropylene exports rose 72.4 times to \$36.2 million. Methanol exports rose 4.8 times to \$31.3 million.

Azerbaijan, methanol production, Jan-Jun 2019

In January-June Azerbaijan produced 188,700 tons of methanol which is more than double the same period as last year. Stocks of finished goods on 1 July amounted to 31,600 tons. The methanol plant was commissioned in 2013, transferred to the management of SOCAR Methanol LLC in 2016, and from August 2017 it became the property of the company. The maximum plant capacity is 650-700,000 tpa.

Relevant Currencies

Czech crown. Kc. \$1= 22.4. €1 = 25.4; Hungarian Forint. Ft. \$1 = 279.2 €1 = 322.2; Polish zloty. zł. \$1=3.70. €1 =4.28; Ukrainian hryvnia. \$1 = 31. 4€1 = 26.9; Rus rouble. \$1 = 66.3 €1= 76.6

CENTRAL & SOUTH-EAST EUROPE	2
Central European oil supply, first half of 2019	2
Central European olefin and polyolefin supply Q2 2019	2
PKN Orlen Q2 2019	2
Unipetrol, Q2 2019 & polyolefin trade	3
MOL, Q2 2019	4
Czech chemical trade, Jan-Jun 2019	4
Estonian methanol project assesment	5
Ciech Romania, soda ash shutdown	5
RUSSIA	6
Russian chemical production Jan-Jun 2019	6
RUSSIAN PETROCHEMICAL COMPANY PERFORMANCE	6
SIBUR, Jan-Jun 2019	6
Nizhnekamskneftekhim & Kazanorgsintez, Jan-Jun 2019	7
RUSSIAN PETROCHEMICAL PRODUCTION & SALES	7
Russian ethylene production, Jan-Jun 2019	7
Russian propylene production, Jan-Jun 2019	7
Russian propylene sales & exports Jan-Jun 2019	8
Russian styrene production Jan-Jun 2019	8
Russian styrene exports, Jan-Jun 2019	8
BULK POLYMERS	9
Russian HDPE production, Jan-Jun 2019	9
Russian polypropylene production, Jan-Jun 2019	9
Russian PVC, Jan-Jun 2019	9
PX-PTA CHAIN	10
Russian paraxylene production & sales Jan-Jun 2019	10
SIBUR, PTA production in first half of 2019	10
Russian PTA imports, Jan-May 2019	10
AROMATICS	11
Russian benzene production, Jan-Jun 2019	11
Russian benzene market, Jan-Jun 2019	11
Russian caprolactam, Jan-Jun 2019	11
Russian Cumene, Phenol & Acetone Exports, Jan-May 2019	12
(unit-kilo tons)	12
Russian phenol, Jan-Jun 2019	12
Kuibyshevazot production Jan-Jun 2019	12
SYNTHETIC RUBBER	12
Russian rubber market Jan-May 2019	12
Russian synthetic rubber exports, Jan-May 2019	13
SIBUR, synthetic rubber, Jan-Jun 2019	13
SIBUR Togliatti, butyl rubber repairs and rubber exports, Jan-May 2019	13
Voronezhskintezkavkuk-rubber exports in Jan-May 2019	14
Nizhnekamskneftekhim expansion of rubber production	14
METHANOL & RELATED PRODUCTS	14
Russian methanol production, Jan-Jun 2019	14
Russian methanol sales, Jan-Jun 2019	15
Russian methanol exports, Jan-Jun 2019	15
Skovorodino methanol project	15

Vysotsk methanol project.....	16
Nizhnekamskneftekhim-methanol plant preparations	16
Volgograd methanol project-licensing agreement	16
Metafrax, Jan-Jun 2019	16
ORGANIC CHEMICALS	16
Russian butanol production, Jan-Jun 2019.....	16
Russian butanol sales, Jan-Jun 2019.....	17
Russian phthalic anhydride production Jan-Jun 2019.....	17
Russian organic chemical trade, Jan-May 2019.....	17
SIBUR maleic anhydride project-Tobolsk.....	17
OTHER PRODUCTS.....	18
CYCLEN-Togliatti	18
Lipetsk-plant production agents	18
Russian TDI-MDI imports, Jan-May 2019	18
SIBUR-Kstovo, propylene glycol project?	18
Tatneft-acrylonitrile & maleic anhydride projects	19
Pigment, Tambov Jan-Jun 2019.....	19
UKRAINE	19
Ukrainian polymer imports, Jan-Jun 2019.....	19
BELARUS	19
Further development of chemical industries in Belarus.....	19
Belarussian polymer trade, Jan-May 2019.....	20
Belarussian organic chemical trade, Jan-May 2019.....	20
Belarussian melamine exports, Jan-May 2019	20
CENTRAL ASIA-CAUCASUS	21
Uzbek GTL project	21
Siemens and Uz-Kor Gas Chemical.....	21
Azerbaijan, olefins & polyolefins, Jan-Jun 2019.....	21
Azerbaijan, methanol production, Jan-Jun 2019.....	21
