EAST EUROPE & C.I.S CHEMNET

CIREC, 36 St Christopher's Mews, Wallington, Surrey SM6 8AP, United Kingdom.
Tel: 0181 669 5126 Fax 0181 669 5126: e-mail : andrew@andspar.demon.co.uk
Edited & Produced by Andrew Sparshott©

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CENTRAL EUROPE

Refining Weakening trends in naphtha prices once again are helping to improve the competitiveness and profitability position of Central European petrochemical producers. The decline in pricing has thus far not been adversely affected by the cruise missile attacks on Iraq. In last month's issue (No 96) it was stated that in the period January-September 1998 Petrochemia Plock SA posted a net profit of PLN 498.4 million against PLN 680.5 million in the corresponding period in 1997. This latter figure should have read PLN 497 million.

Following the recent privatisation tender for the Gdansk oil refinery the Supervisory Board of Nafta Polska has failed to choose a candidate for a strategic investor. Nafta Polska rejected bids from foreign investors, stating that they offered too little for the refinery, which has a crude processing capacity of 3.5 million tpa. Low oil prices and a weak global outlook are seen as the main reasons for the under valued bids.

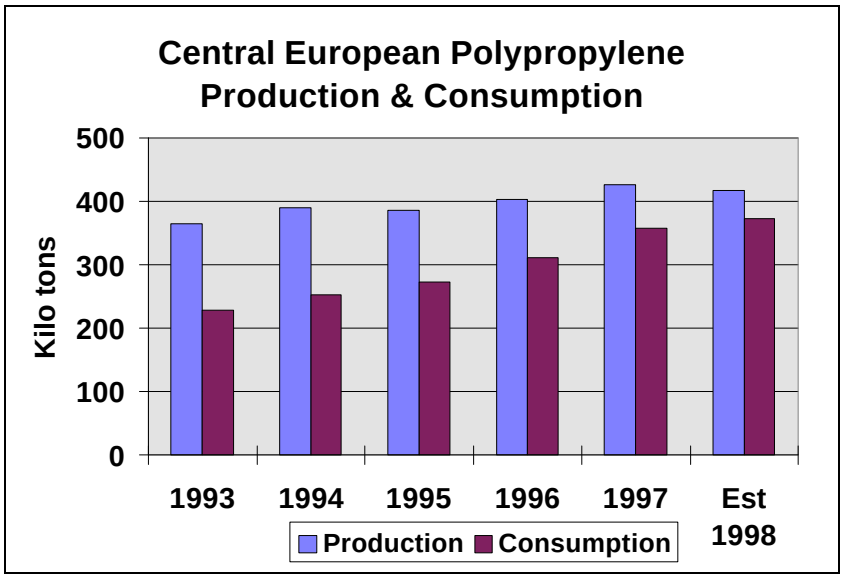
Nafta has stated that, amongst others, Agip Petroli, BP, DuPont-Conoco CS, Elf Aquitaine, Lucard Enterprises Inc. and Neste Oy had shown interest in buying into Gdanska. If a better offer fails to emerge within two to three months, Nafta could ask the government to change the oil privatisation programme. This could have implications for Petrochemia Plock SA which is to be merged with petrol retailer CPN. 30% of shares in the new firm, to be called Koncern Naftowy, are to be floated. In Hungary, MOL Rt in 1999 is expected to search for another oil company to invest the refining business.

Polypropylene Expansion of polypropylene production facilities at Plock is being reviewed by Petrochemia to meet the growing demand in Poland. Imports have been increasing since the middle part of the decade as domestic production has been falling short of consumption requirements. The present capacity at Plock of 100,000 tpa of polypropylene homopolymer, consisting of two units based on the Mitsui suspension process, is directed almost entirely to the domestic market with only a small amount of exports. The main captive outlet is for the production of 10,000 tpa of BOPP film at Plock with the main free market outlet in Poland being injection moulded products. Emerging applications of interest for polypropylene in Poland include ropes and also the rapidly expanding automotive sector.

According to the October 1998 half yearly report "Poland's Chemical Industry", published by Maciej J. Szczawnicki (an independent consultant), the per capita consumption level of polypropylene in 1997 in Poland was only 4.2 kg, which is substantially lower than West European standards. The rate of consumption is expected to increase quickly over the next few years which, referring to "Poland's Chemical Industry", could reach 5.5 kg by 2000, 8.7 kg by 2005, and 12 kg in 2010. Taking the 2005 forecast this would require a volume of approximately 350,000 tons off polypropylene. It would require a significant increase in domestic production facilities in order to avoid the demand for large-scale imports into the country. Petrochemia's plans to construct a new 250,000 tpa polypropylene unit may thus only represent a short to medium solution to the question of meeting internal demand from domestic supply.

Poland's position contrasts with the other CEFTA-bloc countries of Central Europe, including the Czech Republic, Hungary and Slovakia, where domestic production outstrips domestic demand. But regional growth prospects have convinced producers such as TVK and Chemopetrol that expansions are necessary for domestic markets even if the new capacities will depend to an extent on foreign trade. TVK's joint venture project with MOL to build a 140,000 tpa polypropylene plant (which incidentally is indicative of MOL's intention to become more involved in petrochemicals) is expected on stream in the year 2000.

In the Czech Republic, Chemopetrol has already selected Amoco's gas phase polypropylene technology for a 250,000 tpa plant which will produce homopolymers, random copolymers and impact copolymers. This plant is scheduled for coming on stream in 2002. Petrochemia's plans in Poland are yet to be finalised whilst also Slovnaft in Slovakia is known to want to modernise the existing 73,000 tpa polypropylene unit. Collectively, if current project plans materialise for polypropylene Central European capacity for the four countries would total 963,000 tpa by the end of 2002 compared to 503,000 tpa at the end of 1998. Strong growth is projected for these countries but even so extra capacity may need to be oriented temporarily towards export markets.



PVC The supply/demand balance for PVC in Central Europe saw little overall change in 1998 measured against 1997 with consumption accounting approximately for two thirds of production. As for export trends, the German market is feeling the effect of the crisis in Russia as Russian purchases of quality PVC based products from Germany has mostly ceased. Production in both Poland and Hungary is expected to increase in 1999 although these increases may be offset by extra regional consumption. Signs are that Central European PVC producers will encounter more competition from eastern Germany following EVC's expansion of the Schkopau plant from 125,000 to 330,000 tpa. The expansion was scheduled to be completed by the end of 1998 and product will probably be made available early in 1999. This plant will have the advantage of using Hoechst AG technology to produce VCM.

Central European PVC Production & Consumption (unit-kilo tons)

Country	*1997 Prod*	*1997 Cons*	*1998 Est Prod*	*1998 Est Cons*
Czech R	121	76	111	72
Hungary	207	80	237	85
Poland	284	259	255	264
Slovakia	72	41	72	42
Totals	**684**	**456**	**675**	**463**

BorsodChem in Hungary has undertaken a major expansion in the past year, increasing PVC capacity to 250,000 tpa. In 1998, PVC resin sales by BorsodChem increased 16% for the first three quarters whilst PVC compounds increased by 15% against the same period in 1997. MDI sales from Kazincbarcika also saw an increase in the period January-September 1998, of 21%. Caustic soda sales increased due to improved markets. In Poland,. Anwil has also improved PVC output rates since 1996 and is now undertaking an expansion of the facilities at Wloclawek. This will entail an increase of VCM capacity and PVC capacity each to 300,000 tpa.

The Czech PVC producer Spolana is expecting that 1998 production and sales will show a loss of Kc 300 million against a turnover of Kc 7 billion. In 1997 Spolana finished with losses of Kc 492 million and a turnover of Kc 7.67 billion. Spolana's main problem continues to be the repayment of the credit taken out against the Japanese Yen in 1990 to finance the alpha olefin project at Neratovice. Annually, Spolana incurs interest payments of approximately Kc 500 million. Irrespective of the outcome in the current financial

situation, it seems that Chemapol Group is not considering buying the Czech state share in Spolana. Currently Chemapol holds 19% of Spolana's shares.

Plastics TVK has reached an agreement with Mobil Plastics Europe (MPE) in which TVK will get technical assistance from MPE to treble its BOPP production capacity at Tiszaujvaros. The project will further increase the plastics' processing share in TVK's revenue and help the company offset the effects of commodity cycles. On top of providing engineering and operating assistance, MPE will sell 50% of the line's production under its trade names. In addition to the agreement with MPE, TVK has signed an agreement with the Swiss PCG-Polyconsult AG to establish a joint venture for the development and sales of thermoplastic compounds. PCG-Polyconsult AG will rely on TVK's existing polypropylene production in order to build sound positions in the automotive, electrical, furniture and building industries.

TVK's acquisition of a 74% stake in the Austrian company Hamburger Unterland, in the latter part of 1998, represents the company's largest ever acquisition deal. The acquisition will be followed by a capital increase by the owners in proportion of their shares that will add 100 million Schillings to the present capital stock of the company. Roughly half of this amount will go on capacity expansion and development and the remaining part will top up the current funds of the company.

The capacity of Unterland combined with that of Plastico S.A., at Sepsiszentgyörgy (Romania), 90% of which was acquired by TVK following a capital increase in February 1998, means that TVK now has a processing capacity of more than 150,000 tpa. Thus, TVK is becoming less dependent on what happens in the free polyolefin markets. With the revenue from Unterland expected to be consolidated from next year onwards, TVK estimates that about 30% of total revenue will be accounted for by plastics.

Also in Hungary, the plastics' processing company Pannonplast will probably need new finance to support modernisation plans. An estimated Ft 10 billion is required by the company although efforts are being made to find these resources internally.

Neste Chemicals has started production of phenolic resins at Trzemeszno in Poland after a period of plant modernisation. The plant had been idle but has been adapted to produce Neste's Fenorex resin with a capacity 14,000 tpa. The products are used in the insulation wool industry, a growing market in Central Europe.

Fibres Important restructuring changes are starting to take place at Stilon at Gorzow-Wielkopolski in Poland since the company became part of Rhodia at the end of November. Stilon has a combined polyamide 6 capacity of 120,000 tpa and has internal compounding facilities of 5,000 tpa, not only for the polyamide 6 unit but also polyamide 66 which it imports from Rhodia. The compounding division at Stilon has assumed increasing importance in the past few years with rising domestic demand for engineering thermoplastics. This division is expected to receive further investment now as part of Rhodia.

Rhodia has also been increasing presence in Slovakia after recently acquiring the remaining 43% of the polyamide and polyester producer Chemlon at Humenne. Rhone-Poulenc initially secured 57% of Chemlon back in 1992. Plans are for Rhodia to invest in Chemlon to expand capacity and to construct speciality nylon production facilities.

Energy Both BorsodChem and TVK are involved in construction plans for their own sources of power for internal usage that would reduce dependency on the domestic power companies and reduce costs. BorsodChem has set up a separate company with three owners to build the power plant at Tiszaujvaros. At present, BorsodChem buys 90 megawatts from Emasz, the Hungarian energy distributor, with demand expected to increase to 100 megawatts. Possessing a 50 megawatt power plant, BorsodChem would be able to provide half of its electricity requirements internally. The plant could, moreover, satisfy BorsodChem's total steam demand with the heat produced as a by-product of electricity generation. In terms of costs, BorsodChem (based on current pricing) expects to save annually between DM6 million to DM7 million by reduced electricity purchases.

TVK's plans are at a less advanced stage than BorsodChem with plan options being assessed. Advantages would result for TVK from internal power resources but finalising the size of the plant has been the major issue. A 100 megawatt plant has been favoured that would meet TVK's total energy needs although permission is required from the Hungarian Energy Office for building plants in excess of 50 megawatts. Apart from the cost savings TVK is looking at its own power plant due to the expiry of the contract with the local power company AES Tiszapalkonya Power Plant at the end of 2000. AES does not intend to supply heat after this contract has expired. TVK, like BorsodChem, plans to get other companies involved in the venture.

Events The Hungarian chemical industry exhibition CHEMEXPO will be held in Budapest between 2-5

March 1999. The exhibition will take place at the Budapest Fair Centre. Four separate exhibitions will be involved, including Hungaroplast for the plastics' industry, Hungarorubber for the rubber industry; Hungarokorr for corrosion protection; and Hungaromedicin for the pharmaceutical industry. Further details can be obtained from the Szilvia Rozsa, Project Director, International Trade Exhibition, Tel +36 1 263 6247, Fax +36 1 263 6086.

Company News

The past month has seen continuing speculation about the future of Chemapol Group and its constituent chemical companies. According to the views of the Chemapol President the creation of AliaChem, to become effective on January 1, 1999, is not threatened by recent financial developments involving Chemapol. The creation of AliaChem was to be approved by Chemapol Group's general meeting on Friday, December 18, but the outcome is yet to be made public. Prior to that date reports were received that a group of Czech and Slovak entrepreneurs were to become the new co-owner of Chemapol Group.

The Czech banks have sold their interests in Chemapol Group (ChG) quickly in the past few months. Union Banka, Komercni banka, and Sporitelni investicni spolecnost sold their stakes in October and November. Ceskoslovenska obchodni banka (CSOB) followed this trend in early December. Investicni a Postovni banka, in addition to the company Proventa, has maintained their holdings in ChG and was at one stage to compete with the new group of owners for ownership.

There has been a hypothetical idea muted recently that a form of merger could be done between the constituent companies of ChG and Unipetrol, perhaps even leading to the creation of a more diverse and large-scale competitive chemical company. As a chemical supplier Unipetrol delivers bulk feedstocks, from Litvinov, and intermediates to ChG companies, such as Synthesia a.s. at Pardubice-Semtin, and Moravske chemicke zavody a.s. at Ostrava.

One argument in favour of a merger is that in the worst case scenario that ChG or AliaChem folds through bankruptcy Unipetrol could not escape the side-effects. A joint Unipetrol-Chemapol Group company could overcome not only the financial problems facing the industry but also improve the degree of integration amongst Czech chemical companies. As suggested by one source, with competition looming to the west in the shape of BSL and other important companies, a merger could create a diverse and large-scale competitive chemical company.

Central Europe-currencies Dec 21st 1998

Country	**Currency**	**$1=**	**DM1** =
Czech Republic	Koruna	29.9095	17.9135
Hungary	Forint	215.495	129.481
Poland	Zloty	3.4825	2.0925
Slovakia	Koruna	36.0595	21.6605

In Hungary, ICC industries has taken over Chemol, which started operations in late 1992 after Chemolimpex was acquired by Great Lakes Chemical Corporation. From the start of 1996 a new company was created called MOL-Chem which has taken on Chemol's role in many product areas, particularly being responsible for the marketing for the Szazhalombatta complex. Great Lakes Chemical Corporation decided in 1997 that, in view of the privatisation of most of the larger chemical companies and trading partners located in East Europe, it had become a less cost-effective avenue for introducing and distributing Great Lakes' products. Under new owners Chemol will now be known as ICC Chemol Trading. The company's main objective is to focus on marketing polymer additives, plastics, organic and inorganic chemicals throughout East Europe.

Also in Hungary, Graboplast has formed an agreement with the company Roland Berger & Partner to develop a marketing concept to find new market outlets. This need to find new opportunities is partly to do with the company's restructuring and partly connected with the financial crisis in Russia. Until a few months ago Russia represented the main market for Graboplast's products.

SOUTH EAST EUROPE

Oil

Cash shortages have impacted on Yugoslavia's 1998 crude imports which has affected oil refining at Pancevo and Novi Sad. The government plans to import around 3 million tons of crude in 1999 up from 1.6 million metric tons of crude expected to enter the country by the end 1998. However, there are concerns that the lack of funds could impede deliveries. In 1996, Yugoslavia and China signed a long-term barter deal on crude imports, providing for 50 percent of oil deliveries to be paid for in cash and the rest in counter-deliveries of Yugoslav farm and industry products.

However, the inability of domestic industries in Yugoslavia to produce goods of adequate quality and price to pay for crude imports, have almost halted crude supplies from the Chinese partner. The government, to avoid immediate cash payments, has recently visited Libya, Iran and Iraq trying to negotiate similar barter deals to the one with China. Official data showed that the two refineries

processed a total of 2.429 million tons of crude in the first nine months of 1998 of which 555,000 tons were processed for outside clients. In the period January-September 1997, 2.49 million tons were processed of which only 43,000 tons were processed crude for outside clients.

Olefins LUKoil took the opportunity at the December conference in Berlin on the CIS chemical industries, that the acquisition of the Petrotel refinery was being used as a launch-pad for developing interests in the petrochemical industry in Romania.

South East Europe-currencies Dec 21st 1998

Country	Currency	$1 =	DM1 =
Bulgaria	Lev	1657.75	906.064
Croatia	Kunar	6.2244	3.7388
Macedonia	Dinar	51.5544	30.9766
Romania	Lei	10560.0	6345.01
Slovenia	Tolar	160.309	96.322
Yugoslavia	New Dinar	9.9757	5.9939

To recap, LUKoil reached a deal with the Romanian State Ownership Fund back in February 1998 when a deal was signed amounting to $300 billion, including a $200 billion share for a four-year investment programme. LUKoil is interested in importing Romanian oil processing equipment and in turning Ploiesti into a centre for directing activity in Central Europe and the Balkans.

Romanian Oil and Processing Output (unit-kilo tons)

	Jan-Jul 98	*Jan-Jul 97*
Oil Extracted	3,730.14	3,812.00
Total Oil Processed	6,762.98	7,748.10
Gasoline	1,827.97	2,259.00
Gas Oil	1,955.95	2,437.10

Romanian Chemical Output (unit-tons)

	Jan-Jul 98	*Jan-Jul 97*
Organic dyes and Pigments	492	475
Synthetic Pigments	2,559	699
Zinc Oxide	863	1,799
Hydrochloric Acid	108,964	112,519
Sulphuric Acid	145,879	201,220
Soda Ash	295,780	318,100
Caustic Soda	186,354	199,251
Nitrogen Fertilisers	256,487	490,900
Phosphate Fertilisers	60,085	64,500
Synthetic Rubber	10,863	17,741
Ethylene	95,971	86,164
Propylene	79,233	89,081
Pesticides	4,569	5,987
PVC	86,585	82,698
Polyethylene	49,538	40,619
Varnishes and Paints	19,744	18,768
Detergents	34,563	16,397
Synthetic Fibres	14,023	8,051

Also, LUKoil has plans to restore the 300,000 tpa ethylene cracker at the Petrotel complex, in addition to becoming more involved with the Romanian refinery and petrochemical complexes at Arpechim and Petrobrazi. Throughout the 1990s the Romanian petrochemical industry has suffered from very low utilisation and without foreign support, such as companies like LUKoil, it is extremely difficult to see how production can be revived.

LUKoil's plans for Petrotel involve the introduction of an HDPE plant, using Phillips Petroleum technology, the introduction of a new generation of catalysts in the polymerisation stage of polypropylene production, and the transfer of polystyrene production to continuous technology. LUKoil has had to negotiate special conditions with the Romanian government to cancel Petrotel's debts which has helped create an environment for investment at the complex.

The Romanian State Ownership Fund is offering the oil and chemicals transportation company PETROS, also based at Ploiesti, for privatisation. The main activities of the company are listed as land transportation; pipeline transportation, chemicals, synthetic and artificial fibres' industry, etc. In 1997 the company's gross turnover was 102 billion Lei and gross profit 9.68 billion Lei. The SOF currently owns 70.26% of the company. The Tender File is available at SOF Headquarters, 6th Privatization Division, 6 Stavropoleos St, Bucharest 3, Romania. The deadline is January 26.1999. For more information contact: Tel +40-1-311 0495, +40-1-312 3130 , +40-1-312 4231, Fax: +40-1-312 1841.

PVC In the first seven months of 1998 Romania exported 57,475 tons of PVC from the Oltchim plant at Rimnicu Valcea from production of 86,585 tons. For the same period in 1997, total PVC exports were 103,162 tons from production of 132,300 tons. In the Federal Republic of Yugoslavia PVC production for the period January-July 1998 totalled 33,806 tons, of which 8,727 tons were exported.

South East Europe
PVC Production & Consumption (unit-kilo tons)

Country	*1997 Prod*	*1997 Cons*	*1998 Est Prod*	*1998 Est Cons*
Bulgaria	4	24	5	23.5
Croatia	41	15	42	16
Macedonia	5	8	6	7.5
Romania	132	31	142	28
Slovenia	0	17.6	0	17.5
Yugoslavia	47	39	47	37
Totals	**229**	**134.6**	**242**	**129.5**

These figures contrast with the same period in 1997 where 25,074 tons were produced with 16,305 tons of exports. The decrease in export activity is indicative of reviving consumption in Yugoslavia. In Croatia, VCM production has been improving over the past few months although it is still insufficient to meet PVC production requirements. Imports have been entering the country from a wide range of sources.

BALTIC STATES

Baltic States-currencies Dec 21st 1998			
Country	**Currency**	**$1 =**	**DM1** =
Estonia	Kroon	13.2604	7.9678
Latvia	Lats	0.5828	0.3381
Lithuania	Litas	4.001	2.4015

At the end of November the Kalija Parks stevedore company opened the first stage of its potassium terminal at Ventspils, which reportedly will be the world's largest when completed. Kalija Parks already operates the largest terminal in Europe in terms of freight turnover. The first stage of the new terminal comprises four warehouses each with a capacity of 10,000 tons of mineral fertilisers. The other two stages provide for the construction of a new terminal and creation of a railway junction.

The construction of the first stage required 17 months and cost around $16 million, while the total cost of the project is estimated at $35 million. The terminal is expected to start earning a profit in seven years. Prior to this development Kalija Parks operated only one warehouse with a capacity of 80,000 tons of fertilisers previously. The terminal handles mainly potassium salt. When the modernisation is completed, Kalija Parks will be able to reload 7.5 million tpa of cargo.

COMMONWEALTH OF INDEPENDENT STATES

Russia

In December Vladimir Evsyukov, Minister of Economy for the Russian Federation, argued that one advantage for the chemical industry resulting from the devaluation of the rouble was the removal of the need for import duties. However, there are various ways of looking at the situation. The lack of imports combined with the potential profit margins for exports, for instance, may reduce the impetus for companies to restructure. The rouble has moved over the past month towards a benchmark level of 20 to the dollar and there seems to be no systemic effort by the government to arrest the decline. The Russian Central Bank's main aim for 1999 is to limit the fall in GDP and to restrict inflation. The Bank's view is that the economy will contract 3% over 1999.

For industrial performance trends there are some favourable indications of a slow recovery in output after the September fall. In October, there was a strong increase (measured against September) in the daily output of potassium fertilisers, synthetic resins and plastics. For the chemical and petrochemical industry as a whole a 2.9% increase in output is estimated to have been recorded in October against September.

Olefins

The economics in olefin production in Russia have been highly questionable ever since the transition to market based pricing for feedstocks started in the early 1990s. The dependence on naphtha as a feedstock for ethylene and propylene has made most of the Russian petrochemical producers incompetitive in global terms, although the age and capability of cracker technology have also been major factors. Compared to the USA, where gas based feedstocks account for around 70% of olefin production, Russia like West Europe is orientated towards the heavier naphtha feedstock which requires a greater unit energy consumption.

At the December conference on the CIS chemical industry held in Berlin, LUKoil emphasised the need to address the feedstock situation for the petrochemical industry. LUKoil's efforts are being focused on the conversion of feedstocks at the Stavropolpolimer complex at Budyennovsk which it acquired in 1998 from the Interkhimprom group. The 350,000 tpa cracker at Budyennovsk is based on naphtha feedstock and traditionally was supplied by pipeline from the Grozny refineries. Since the outbreak of the Chechen war oil refining at Grozny has almost reached a standstill which has meant that naphtha feedstocks have been supplied to Budyennovsk by railcar, thus increasing the level of production cost.

CIS-currencies Dec 21st 1998			
Country	**Currency**	**$1 =**	**DM1** =
Azerbaijan	Manat	3950	2373.17
Belarus	Rouble	230000	142101.5
Kazakhstan	Tenge	83.8250	50.3865
Russia	Rouble	21.9	13.1587
Ukraine	Hryvnia	3.9001	2.3404
Uzbekistan	Sum	439	263.775

The intention of LUKoil is therefore to adapt the cracker to be capable of using other feedstocks such as gas oil or LPGs. This would allow Stavropolpolimer to compete more effectively in producing and selling polyolefins. Similar problems face Tomsk Petrochemical Combine which relies on naphtha feedstocks delivered by railcar from the Achinsk refinery in West Siberia.

Tomsk Petrochemical Combine has fundamentally two options to address the high costs of feedstock for olefin production which accrue largely from the rail cost component. The first is the introduction of MTO technology, methanol to olefins, which would mean that a semi-idle methanol plant could provide additional feedstocks for polyolefin production. The second option is convert the existing naphtha cracker to LPGs which would then enable Tomsk Petrochemical Combine to produce olefins on a more cost-competitive basis. This would provide greater scope for profit margin in the sale of polyethylene and polypropylene. Transport costs have been reduced for Tomsk Petrochemical Combine butt even so product margins are very tight.

For Russian olefin crackers the priorities are the modernisation and revamps of the typical EP-300 pyrolysis unit to be capable of using LPGs in olefin production. This modernisation goal represented a feature of the agreement signed between LUKoil and Gazprom on November 24 which was reported in issue number 96, published on December 1. The prices for LPGs in Russia are, at present, on average about 30% lower than naphtha prices. Taking the example of Tomsk the project for such a conversion could be completed within a few months whilst also the amount of finance required is not considered to be relatively large. The first stage of the project could be completed within a period of two to three months and the costs would be somewhere in the range of $2 million. This would allow the EP-300 plant to run on about 25% of light hydrocarbons. For a full conversion the cost would be about $8 million and it would take about twelve months to complete.

However, that would still leave the problem of the methanol plant at Tomsk, a long way from the market. By introducing MTO technology at Tomsk for processing 400,000 tpa of methanol this could convert into a maximum of 85,800 tpa of ethylene and 45,145 tons of propylene. These products could be converted into polyethylene and polypropylene for the domestic market. The drawback of this plan is that the finance required is much greater than the conversion to LPGs.

The failure of the Soviet designed EP crackers to operate at full capacity and on a cost-effective basis represents the main problem for the olefin plants in Russia. For example, despite the fact that LUKoil's involvement at the Norsi cracker at Kstovo has been particularly beneficial since 1997, helping to revive ethylene output for derivative production in the Neftekhim joint venture at Dzerzhinsk, the cracker is still uneconomic to run. Combined with the financial difficulties facing petrochemical producers capacity utilisation levels are low. Consequently further steps in the integration process seem to offer the best prospects for the industry even if it seems to be taking a lot longer than envisaged in the mid 1990s.

As for current trends, Angarsknefteorgsintez is facing a critical position on oil supplies which has affected downstream olefin operations with subsequent effects on ethylene supplies to the Sayanskkhimprom VCM plant. On November 1, the mother company SIDANKO stopped delivery of crude to the Angarsk refinery which threatened the shutdown of the complex. Under the ownership conditions Angarsknefteorgsintez is prohibited from accepting oil from other oil companies for refining. The real threat of a shutdown was adverted by urgent measures taken by the Fuel and Energy Ministry, which enabled at least some supply to reach the refinery.

Disputes over how Angarsknefteorgsintez should be run between SIDANKO and the local administration of Irkutsk Oblast has culminated in the intervention of government which seems to be reasserting state control over the company. Angarsknefteorgsintez until now has been part of the SIDANKO oil company which itself is part of the Interros holding group. The Interros group in early December conceded that it was unable to manage Angarsknefteorgsintez, in addition to the oil producer Kondpetroleum, and that subsequently the shares in these companies would be transferred to the state. Perhaps in the context of developing a market economy the state's reassertion full control of Angarsknefteorgsintez may be interpreted as a regressive step. However, if the plant has a future this appears to be about the only way forward for the short term.

NORSI refinery project

A company called TRIAS (Consolidated Petroleum Products Ltd, based in Latvia, is seeking investors/partners for a refinery project planned for NORSI at Kstovo, near Nizhniy Novgorod. NORSI is constructing a catalytic reforming unit of 1 million tpa under UOP licence with equipment delivered by Litwin. 65% of the project has been completed but to complete the remainder of the construction the company NORSI requires about $40 million. This unit will, amongst other advantages, facilitate the production of high octane non-ethylated gasolines. The pay-off period for the project is estimated at 4.4 years.

A second project involves the modernisation of the of the atmospheric oil distillation facility and work on a catalytic cracking unit. Together this project will require in the range of $350 million with an estimated pay-back period of 3 years. Other projects being examined by TRIAS include reconstruction at the Mazeikiai refinery, the Port of Liepaja, and the construction of new oil terminals at Riga-Mangali port. Further details can be obtained from Mr Ilya Blagodatsky, TRIAS Ltd, Tel +371 9 527 464, Fax +371 2 524001, E-mail : trias.bla@riga.mail.telia.com.

TRIAS is also involved in selling oil products and fertilisers, including urea and sulphuric acid. Urea can be supplied in volumes up to 100,000 tons per month on a basis of FOB Novorossiyisk or DAF China border.

Polyolefins Demand for polyethylene and polypropylene in Russia is still coming through despite the problems of liquidity. Domestic prices for LDPE and HDPE are getting close to 8,000 roubles per ton but the price range is fragmented. At the small end of the market polyethylene prices were ranging between 12,000-12,500 roubles per ton. Converters are buying polymers primarily on some form of barter basis and even within the broad classification of barter there are many variations. Actual volumes shipped into the domestic market for LDPE, HDPE, and particularly polypropylene, have shown an increase

measured against 1997. Because of the disappearance of imported material in the market domestic suppliers have been able to generate more business although the prices (after dollar conversion) have not compared well against international levels.

Export volumes of polyolefins are down for 1998 against 1997 despite the increased level of activity following August 17. HDPE sales to China have declined although enquiries for Russian product continue to arrive for delivery on a DAF Manzhouli basis. Chinese enquiries have been received for PVC, LDPE, and even LLDPE (although not produced in Russia) for delivery to northern China. The volumes are quite large, normally anything upwards of 1,000 tons.

On the longer term development of polyolefins in Russia LUKoil emphasised their interest in the product sector at the Berlin conference on the CIS chemical industries, held in December. Since 1994, LUKoil has led the drive towards vertical integration in the petrochemical industry and with the acquisition of Stavropolpolimer in the second half of 1998 has started to diversify interest into polyolefins. The formation of the joint venture Neftekhim, together with Norsi and Kaprolaktam in 1997, represented the first real move of LUKoil into chemical product sales, in this case glycols.

LUKoil is now responsible for selling HDPE from Stavropolpolimer and intends to revive the polypropylene project which has been idle for many years due to a lack of finance. The project was first rated at 80,000 tpa and was to be implemented by John Brown. John Brown withdrew from the project and since there have been a series of failed measures to install the equipment. As polypropylene is the fastest growing thermoplastic in Russia LUKoil sees this product area as an important aspect of downstream integration.

PVC The slowdown in construction activity in Russia has stemmed the good recovery in PVC consumption seen in the first eight months of 1998. But in spite of the post-August devaluation conditions, overall demand is believed by consumers to be higher than in 1997. The issue now facing PVC producers is where will the market go in 1999? The continued demand for PVC from China will provide a major outlet for Sayanskkhimprom at Zima, in the Irkutsk Oblast. But for the other two main producers, Kaustik at Volgograd and Kaustik at Sterlitamak, much will depend on finding ways to do business domestically under the broad based terms of barter conditions.

Domestic market prices in Russia were moving up in the latter part of 1998 and the general range of numbers lie between 5,500 roubles and 5,800 roubles per ton. PVC from Sterlitamak was being offered at 5,800 roubles per ton. Probably not much business is being done under 5,000 roubles per ton. Quality remains an issue, for instance PVC produced at Sterlitamak is preferred by some consumers but not liked by others. In the EDC market a Chinese buyer was looking for 20,000 tons from Russia for delivery on a CNF basis to Tianjin port. It is doubtful that any Russian producer could meet that sort of demand on a short term basis.

Propylene derivatives Propylene supply is not a problem in the Russian market but consumers' lack of funds is preventing deals being done. One investment company in Moscow has been seeking to buy propylene in Russia to process on behalf of other companies into phenol. The OXO alcohol producer Neftekhimik-Oxo at Perm has found it difficult securing sufficient feedstock supplies for plasticizer and OXO production but this is thought to be more connected with finances rather than availability. In December Neftekhimik-Oxo was seeking 2,000 tons per month of propylene, in addition to 300 tons of phthalic anhydride.

Demand for propylene derivatives in Russia is quite good despite the financial crisis. The automotive sector has reduced output since last August and although this has had a slowing down effect on purchases of polypropylene and ABS, product shipments still continue. Polypropylene demand in Russia was higher in 1998 than in 1997, according to the major sellers, and is getting closer to OXO alcohols as the major outlet for propylene.

Polystyrene The Russian market for polystyrene is in short supply with domestic producers having thus far been unable to respond to the post-August devaluation. Polystyrene produced in South Korea is available in Russia via traders. Accordingly, there is storage at Klin, in the Moscow Oblast. Product was being offered in December on a dollar basis at $960 per ton. The costs of domestically produced polystyrene are still not much lower than the cost of imported product. Consumers are not finding easy to secure product. For what has been available prices have bee variable with numbers in the Urals recorded as low as 7,800 roubles per ton rising to levels of 12,000 roubles per ton for packaging grades in the Krasnoyarsk region of Siberia. Grade 612 polystyrene was being offered at 7,500 roubles per ton and white grade 508 at 13,000 roubles. A company called Sopro-Itko in Moscow was seeking up to 70 tons of polystyrene (grade 508 or 703) for which in exchange it was offering to pay with high quality shoes. Further details from Sopro-Itko, Tel +7 095 917 1761, Fax +7 095 917 5473, E-mail : sopro@df.ru.

Olefin derivatives The problems being experienced recently by Angarsknefteorgsintez have had repercussions on Sayanskkhimprom at Zima, also located in the Irkutsk Oblast. Sayanskkhimprom's VCM plant is connected to Angarsknefteorgsintez by a 70km ethylene pipeline but with Angarsknefteorgsintez producing limited amounts of ethylene this has meant that VCM production at Zima has fallen. It is possible to buy VCM from other sources, such as Sterlitamak, to maintain PVC production and exports to China, but it is proving costly.

Kaprolaktam at Dzerzhinsk is reported to have restarted ethylene oxide production after a period of plant idleness but as yet no molecules have been seen. Production is reported to be steady at Nizhnekamsk which is one of the more reliable complexes in Russia. MEG from Nizhnekamsk was being offered in the domestic market at 5,000 roubles per ton. This represents about 1,000 roubles higher than in September but still is about $40 per ton lower than the West European spot price for December. Nizhnekamskneftekhim has several arrangements with traders for the sale of its products, including synthetic rubber, butadiene, styrene, MEG, propylene, propylene trimers, and MTBE. Styrene continues to be exported from Nizhnekamsk despite weak prices. But the low value rouble has helped a lot to make these exports reasonably profitable and has encouraged more enquiries from the far abroad. In December a German trader, for example, was seeking 1,000 tons per month of styrene either from Nizhnekamsk or another styrene plant in Russia and was looking to conclude a contract for 1999.

LUKoil is becoming more involved in buying and selling chemicals. In December the subsidiary ZAO "LUKoil-Nizhniy Novgorod" was in search for regular deliveries of phenol in volumes of 120 to 180 tons per month and monoethanolamine in volumes of 60 to 120 tons per month. Barter products offered in exchange include hydrocarbons, gas, or machinery. Further details can be obtained from Vadim Korovchenko, ZAO "LUKoil-Nizhniy Novgorod", Tel +7 8312 34 12 37, 30 43 48, Fax +7 8312 30 43 48, E-mail : ed@lukoil.nnov.ru. For supplying material ZAO "LUKoil-Nizhniy Novgorod" was selling isopropanol technical grade, produced at Sumgait, with price dependent on conditions.

Synthetic rubber Synthetic rubber prices in Russia are ranging between 8,500 roubles to 10,000 roubles per ton, inclusive of VAT. ZAO "ROSAVTO" has been attempting to secure supplies of synthetic rubber, conforming to Russian standards VK-1675N, which traditionally has been supplied either from Nizhnekamsk or Togliatti. Monthly requirements for 1999 are 500 tons. Further details can be obtained from Aleksey S Salynikov, ZAO "ROSAVTO", Tel +7 095 924-9358, Fax +7 095 924-9917, E-mail : alexey@rosavto.transit.ru.

AO "Plastik" was seeking up to 300 tons of butadiene, up to 1,000 tons of styrene, and up to 500 tons of benzene. The Director of Supply is Roman A. Ribalov, E-mail : inph@cityline.ru. Volumes of 100-300 tons per month of synthetic rubber, produced by Kaucuk at Sterlitamak, were being offered for export by a trader Arty Systems at prices of $600-610 per ton FCA. Further details from Vyacheslav Sergeyev, Deputy Director, ZAO "Arty Systems", Tel +7 3472 37-42-40, Fax + 7 3472 37-54-00, E-mail : arty@ufanet.ru.

Energopromservis has synthetic rubber (SKI-3) available from Nizhnekamsk and Sterlitamak for export at prices of $420 per ton FCA which is substantially less than the price quoted by Arty Systems. Soda ash is available from Energopromservis at $60 per ton FCA and also various grades of PVC resin at $260 per ton FCA. Further details from Irina Gnuni, Energopromservis, Tel +7 095 925-10-02, Fax: +7 095 915-60-66, E-mail : eps@rosmail.ru.

Aromatics & derivatives Russian aromatic monomer availability has been affected by the plant downtime at Kirishi. The production position for xylene isomers at Kirishi looks uncertain with planned maintenance at least into the latter part of 1999 likely to result in no product being available. New equipment is being installed at Kirishi and a restart of the plant is not envisaged until November 1999. This may cause a supply problem for Khimvolokno at Mogilev in Belarus which traditionally has relied on paraxylene from Kirishi more than from Ufa or Omsk.

Omsknefteorgsintez has now been supplying Khimvolokno over the past couple of months which has reduced export activity to the far abroad. Lower surplus availability on top of Mogilev requirements is presenting challenges in meeting existing contractual arrangements into West Europe. In the orthoxylene market, some consumers have been seeking volumes in excess of 1,000 tons indicating that there is not much free market product available.

Benzene is available domestically by virtue of lower derivative output, particularly for caprolactam. South Korean caprolactam imports from Russian producers amounted to 41,017 tons in the first ten months of 1998 compared to 68,248 tons in the same period in 1997. Not all of this product is consumed in South Korea but is in transit to other destinations. Although volumes are still much higher than several years ago

the decline in 1998 has impacted on Kemerovo Azot and Kuibyshevazot which are geared towards the export market. In the aniline market product from Perm was being offered around 6,000 roubles per ton, inclusive of VAT.

Activity is rife in the phthalic anhydride market although it is not clear if all this activity is aimed at the domestic consumption. Evidently, Russian phthalic anhydride exporters have been seeking to exploit the low valued rouble in foreign markets but demand has been weak, plus there has been strong competition from Asian producers, particularly from South Korea. Domestic prices for phthalic anhydride have been rising although still remain below international levels. In December, traders were offering phthalic at levels of 8,000 roubles per ton, inclusive of VAT, although as usual the price is flexible depending on the conditions of payment.

A trader called Spektur has expressed interest in developing long term contacts for buying phthalic anhydride supplies of approximately 120 tons per month. Further details can be obtained from Dimitri Solovyev, OAO "Spektur", Tel +7 852 72 71 24, 22 45 82, Fax +7 852 22 46. A company called Global Oxo Trade was attempting to buy 300-500 tons of phthalic anhydride, in addition to 2-ethylhexanol for processing in Russia. Permenergsnab was looking to arrange deliveries of 500 tons per ton of phthalic anhydride in flake form.

In the detergent market domestic producers may face difficulties in buying sufficient raw materials in 1999, particularly LAB and LABS which are produced only at Kirishi. At the recent Berlin conference on the CIS chemical industries the detergent manufacturer Pemos at Perm stated that although the problems of procuring sodium alkylbenzenesulphonate had been reduced after the start-up of the Kirishi plant in 1996 the 50,000 tpa LAB capacity is insufficient to meet Russian demand. LAB exports have been on the increase at the expense of domestic consumption and thus there is a shortage of LAB and LABS. Pemos estimates its own consumption of sodium alkylbenzenesulphonate to be 10-12,000 tpa. Of the other large detergent manufacturers in Russia P&G at Novomoskovsk is estimated to consume 20-22,000 tpa, Henkel 10,000 tpa and Aist at St Petersburg 6,000 tpa.

Due to the market shortages in Russia a project is being proposed for a new 75,000 tpa LAB plant based on the Detal process. The feedstocks exist for such a project in the shape of ample n-paraffins but it would require foreign involvement unless the Russian detergent manufacturers can come up some sort of consortium approach.

OXO alcohols Not a great deal of 2-ethylhexanol from either Perm or Salavat is being seen outside of Russia whilst domestic demand is being done mostly under barter conditions. There is not much availability of 2-ethylhexanol which is unfortunate for Russian producers as the European market is reasonably good compared to many other products. Butanols are also in good balance in West Europe and there is more evidence of Russian exports. Neftekhimik-Oxo at Perm has 500 tons per month of butanol and 1,500 tons per month of iso-butanol per month for sale. Neftekhimik-Oxo also is looking for customers in DOP markets but export opportunities are being limited by weak demand in both Asia and West Europe.

Methanol & derivatives The reduction of transport costs for freight out of West Siberia in recent months has helped Tomsk Petrochemical Combine to restore a degree of profit margin for some of its low priced commodities. Finding cash buyers for has methanol, formaldehyde and urea resins is proving the standard problem as for most producers. However, the emphasis is on finding domestic buyers rather than seeking export opportunities. Logistical costs still serve as a disincentive for Tomsk Petrochemical Combine to export methanol although polyolefins are considered profitable.

In the Perm region OAO "Metrafrax" has surpluses of urea-formaldehyde resins, in addition to standard commodities such as methanol (from Gubakha), formaldehyde, pentaerythritol and polyamide 6. Metrafrax can be contacted through Eduard A Pashikin, Head of Marketing, Tel +7 34248 2-14-10, Fax +7 34248 3-31-21, 3-12-27, 3-18-09, E-mail : metafrax@permonline.ru

Other market news A Russian company called Donskaya Finansovaya Kompanya was offering n-methyl-pyrrolidone, gamma-butyrolactone, 1,4-butanediol, produced at Novocherkassk, at prices lower than by direct purchase from the plant. Other products being offered included methanol, hexane, heptane, monoethanolamine, formaldehyde and succinic anhydride. Further details can be obtained from Andrey V. Verushkin, Manager, Donskaya Finansovaya Kompanya, Tel/Fax +7 8632 34 35 75, 32 87 72.

Henkel has remained ostensibly committed to the Russian market, in spite of the financial crisis, with its subsidiary Era, near St Petersburg, programmed to start the production of industrial glues in the early part of 1999. Khimprom at Novocheboksarsk is in the process of offering for sale old equipment and machinery for which it no longer has a use. For further information contact Mr I T. Belopukov, OAO

"Khimprom", Tel +7 8352 77-56-75, Fax +7 8352 74-02-73, 66-20-67, E-mail : ipchem@cheboksary.chuvashia.ru.

Belarus

Polimir at Novopolotsk is in the market for naphtha, gas condensate, and normal butane purchases on a cash basis. Polimir is seeking new marketing contacts for polymers. Further details can be obtained from either Mr V G Litvichenko or Dimitri N Ulyanov, Marketing Dept, PO "Polimir", Tel +375 2144 7-78-89, Fax +375 2144 7-78-78, E-mail : market@polimir.belpak.vitebsk.by. Polimir is also looking to conclude a barter deal for specific chemicals on a monthly basis, in exchange for acrylic fibres and other products. Raw materials available from Novopolotsk include aromatic fractions, for benzene and toluene production, in bulk volumes. The aromatic content in the fractions offered is between 60-65%. Further details from Mr V A Nikiforov, Marketing Dept, PO "Polimir", as above.

With polyester fibre sales down Khimvolokno at Mogilev is selling more DMT on the open market. The raw material picture has been affected by the prolonged shutdown at the Kirishi plant. Paraxylene is thus being delivered from Omsk, although it is not inconceivable that supplies from the far abroad will be delivered at some stage during 1999.

Ukraine

Ukraine has been in negotiations with Kazakhstan as potential new owners of the Lisichansk refinery. Supplies of crude already are delivered from Kazakhstan to Lisichansk but these have encountered heavy duties by Russia imposed on transit. The possibility of anti-dumping measures being implemented by the EU against adipic acid exports from Ukraine has receded. Although West European adipic acid contract prices have fallen this quarter Ukrainian availability is not seen as the sole contributor to this price erosion. The scale of damage on the market resulting from this product is questionable.

Central Asia

At last month's conference on the CIS chemical industry in Berlin Uzkhimprom outlined their short to medium term view of the structural changes in the Uzbek chemical industry. The chemical industry in Uzbekistan is subject to government direction through the association Uzkhimprom which includes 45 companies. The government programme for 1998 to 2002, which sounds remarkably Soviet, includes the following priorities.

- **Increasing the processing of raw materials for the chemical industry.**
- **Increased supply of mineral fertilisers and plant protection agents for agriculture and cotton. Plant protection agents are in very short supply in Central Asia and the cost of imports is a major budgetary issue for the government.**
- **Improvement of product quality and reducing the energy costs per unit consumption.**

The programme consists of 23 investment projects in three separate blocks. At least half of the investment resources will be sought overseas. The first block of investment concentrates on the creation of a raw material base for the food, cellulose-paper, construction materials' industries, etc. This includes the construction of a salt plants at Kungrad and the Kizilkumsk phosphate combine, and also the processing the Tubegatan soda ash deposits.

For the Kungrad salt plant a contract has been signed with a consortium led by Mannesmann. For the Kizilkumsk phosphate combine negotiations have been underway with the German company Humboldt Vedaya. Sofremin of France and Tissen Handel of Germany are likely to develop the Tubegatan soda ash deposits.

The second block of projects in the government programme involves the reconstruction and construction of new facilities for the production of phosphate and nitrogen fertilisers. Projects are also being considered for ammonia and urea production, nitric acid and ammonium nitrate. A project was concluded with Bechtel for the reconstruction of the fertiliser complex Azot, located at Fergana. Also at this site a new plant is under construction for the production of melamine which is intended mostly for export. The second block of investments also includes plant protection agents.

The third block of projects is more geared towards processing, including caustic soda and chlorine at Navoiazot. The intention is to reduce the dependency on imported caustic soda. A project was signed with Lurgi last year for a 26,000 tpa caustic soda unit and 23,000 tpa liquid chlorine unit. A polyamide 6 project is being undertaken at Fergana where the technology is being provided by Zimmer. The plant capacity will be 7,000 tpa of polyamide-6 and the unit will employ about 250 people. The project is being aimed mainly as a source of supply for the tyre industry and will be managed by the company Khimvolokno Fergana. In addition to an annual output of 7,000 tpa of granular polyamide, the first phase of the Fergana complex will

also produce 3,500 tons of cord fabrics for automobiles. The second stage envisages an expansion to 14,000 tpa of granulated polyamide.

The question of reducing energy consumption and introducing modern technologies represents the main priority for the chemical industry in Uzbekistan. There are projects worth examining but with the lack of domestic financial resources and a weak current climate for finding external support not all of the government programme is likely to be implemented on schedule.