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Oil Prices and Supply Still Trouble The World as Pressure Mounts Over Iraq

Military action by the USA against Iraq can provoke growth of the world prices for oil up to \$80 per barrel – that is the conclusion of some experts meeting last week in Washington. These experts do not exclude that it could happen as early as the first quarter of 2003. Such developments will cause enormous damage to the global economy and in their opinion, such a sharp rise in the price for oil is possible if during military action, key facilities for the extraction and refining of oil exporters of the region, including Saudi Arabia, which is in the lead on volumes of export of petroleum were to suffer.

These countries are afraid that the consequences of such action could be catastrophic for their economies. "It is enough that the price for petroleum should reach \$40/b when, in that case, the economy will already be in impasse but it will be even worse if the prices were to go up to \$80/b," according to one speaker from Deutsche Bank.

According to the latest figures, futures prices for oil 5 November have fallen sharply and have reached the lowest levels for 5½ months. The main cause, according to analysts, is the downturn of futures prices for gasoline.

On the eve of tenders the price for oil on the world market, expressed through "the OPEC basket", was down to \$25.00 (-0.29 \$)/barrel. Official results of futures tenders 5 November were based upon the following figures: in London on the IPE, the price of North Sea Brent (December) has fallen by \$0.90 (-3.4 %) and has reached \$24.12/barrel; in New York on NYMEX, the price of Texas WTI/Light Sweet (December) was lowered by \$0.81 (-3.0 %) and has reached \$26.14/barrel. *(ctd on p2)*

Fortum Sale Concentrates Attention on Downstream

Fortum has reached agreement with Eni to sell Fortum Petroleum AS (FPAS), its Norwegian Exploration & Production business, for a total consideration of approximately \$1.1 billion. The agreement is the result of the strategic review of Fortum's Norwegian E & P business that was launched in May 2002. The announcement, on 20 November, represents a further significant step in Fortum's restructuring programme of focusing on its core businesses and divesting non-core assets. With this transaction, Fortum's gearing will decline from 84% to 71% on a pro-forma basis.

The consideration comprises \$420 million in cash for 100% of the equity plus \$658 million for the assumption of interest-bearing loans. At year-end 2001, FPAS had reserves of approximately 210 mboe.

The financial effects of the transaction will be dependent on the results of FPAS during the fourth quarter of 2002. It is currently estimated that the transaction on a pre-tax basis will be neutral to earnings, and will incur a tax charge of about €70 million. Fortum plans to use the proceeds to pay down debt. Based on the 30 September balance sheet, Fortum's 2002 net indebtedness will be reduced to €5.1 billion on a pro forma basis, and gearing will be reduced from 84% to 71%.

Completion of the sale, which is conditional on clearance by the European Union and Norwegian Authorities, is expected in the first quarter of 2003.

"We are very pleased with the outcome of this process. The transaction is another significant step forward in Fortum's strategy of focusing on its core power and heat business and clean fuels refining and *(ctd on p3)*

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(Ctd from p1) Oil Prices....

Table 1 - OPEC country-by-country production with figures (mb/d)

Meanwhile, in Russia, prices for gasoline in October rose by 0.6 %. During the period from January to October, 2002 gasoline in Russia has increased in price by 20.4 %, having reached on the average 9.03 roubles per litre, according to the latest information provided by the State Statistics Committee. According to this source, in October, 2002 the price for low-octane gasoline of mark I- 76 (AI-80 etc.) has risen by 0.8 %, on the most popular gasoline of mark AI-92 (AI-93 etc.) - by 0.6 %, and for high-octane gasoline of mark AI-95 by 0.4 %.

In addition, costs for Russian citizens for passenger transport have increased in October by 4.6 %, and as a whole for the year by 22.8 %. Municipal transport has raised the prices the most. The cost of bus ticket increased by 6.9 %, of the underground on the average by 21.3 %, and of the tram by 10.4 %.

Looking at the global picture, the USA cannot lower its dependence on deliveries of Middle East oil according to a report in The New York Times, by Nome Shneiber. Approximately half of the gasoline consumed in the USA comes from imported crude oil and a quarter of all foreign deliveries comes from the countries of Persian Gulf. In opinion of Shneiber, for USA the conflict on Near East looks menacing because of its inevitable dependence on deliveries of oil from the Middle East. On the one hand, the president of the Russian Federation Vladimir Putin has declared that his country is ready to increase deliveries of crude oil. Russia produces about 7 mb/d of crude oil and occupies second place in the world after Saudi Arabia.

However optimism disappears after more detailed consideration of the situation, according to Shneiber, for the Russian Federation can export no more than half of extracted oil at the present time.

Deliveries of oil from African countries also are under threat as in 2000 the oil recovery in Nigeria has fallen by 5 %. Nigeria's share is about 8 % of oil imports to the USA.

Turning now to oil supply, it would appear that the majority of OPEC members are continuing to break cartel discipline and to exceed the quotas on extraction and export deliveries of crude oil. This is according to information published in Austria on Wednesday in the latest report of the International Energy Agency.

For the coming year, the IEA has revised downwards its forecasts of demand for OPEC crude by 500,000 b/d to 24.8 mb/d in response to rising non-OPEC output. The agency has left its expectations for global oil demand growth broadly unchanged at just 190,000 b/d for this year and a little over 1mb/d for 2003. In a

| Country | Oct 02 | Sept 02 | Aug 02 | July 02 | June 02 | Quota |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Algeria | 0.950 | 0.920 | 0.870 | 0.860 | 0.850 | 0.693 |
| Indonesia | 1.100 | 1.120 | 1.120 | 1.110 | 1.130 | 1.125 |
| Iran | 3.590 | 3.380 | 3.450 | 3.390 | 3.400 | 3.186 |
| Iraq | 2.450 | 1.950 | 1.650 | 1.700 | 1.620 | N/A |
| Kuwait | 1.980 | 1.940 | 1.920 | 1.900 | 1.890 | 1.741 |
| Libya | 1.360 | 1.350 | 1.340 | 1.330 | 1.320 | 1.162 |
| Nigeria | 1.990 | 1.990 | 1.950 | 1.920 | 1.870 | 1.787 |
| Qatar | 0.690 | 0.680 | 0.650 | 0.640 | 0.640 | 0.562 |
| Saudi Arabia | 7.900 | 7.720 | 7.650 | 7.650 | 7.490 | 7.053 |
| UAE | 2.020 | 2.000 | 1.990 | 1.980 | 1.960 | 1.894 |
| Venezuela | 2.900 | 2.860 | 2.800 | 2.720 | 2.670 | 2.497 |
| Total | 26.930 | 25.910 | 25.390 | 25.200 | 24.840 | |
| OPEC 10 (excluding IRAQ) | 24.480 | 23.960 | 23.740 | 23.500 | 23.220 | 21.700 |

caveated forecast, it said: "assuming colder-than-normal temperatures for the remainder of this year and cooler conditions than this year in the first half, and barring any new major outburst of terrorist activity, oil demand is expected to continue to recover from last year's abnormally low levels, even in the context of sluggish economic growth".

Ten members of OPEC in October independently have increased their output quota of 21.7 mb/d by 2.48 mb/d. The eleventh member of the cartel, Iraq which is still working under its "Petroleum for Food" programme, has increased production of crude oil by 910,000 b/d. The biggest excess was in such countries as Saudi Arabia and Venezuela - the main suppliers of crude oil to the USA.

In the meantime, Iraq's oil minister has warned OPEC not to raise its oil output at December meeting, as poor demand since 11 September 2001 has left a surplus of 1-2 mb/d on global markets. OPEC member states already have spare capacity of 5-6 mb/d, according to Amer Mohammed Rasheed. Iraq would be able to raise output to 3.5-4.5 mb/d if U.N. sanctions were lifted, he said. The U.S. Energy Information Administration estimates that Iraq pumped 1.7mb/d in the third quarter of this year, a level that is expected to rise to 2.23 mb/d in the fourth quarter.

Iraq also intends to boost output to 5.6-8 mb/d in the next four years, Rasheed said. He said a possible U.S. strike on Iraq would be motivated by Baghdad's massive proven crude reserves of 112 billion barrels, which are second only to those of Saudi Arabia.

Algeria produced close to 886,000 b/d of crude oil in October, which is 193,000 b/d over its official 693,000 b/d output target as set by the OPEC. Algeria remains under constant pressure to pump more oil from international oil companies participating in the country's oil sector. It is currently seeking a 58% increase in its official OPEC output quota and will try to do this in Vienna on 12 December during the meeting of OPEC oil ministers. Algeria is the only OPEC member to have made a formal request for a higher quota, although

Libya and Nigeria have also indicated that they also need bigger quota shares.

Rilwanu Lukman, president of OPEC, has challenged its members to "more strictly adhere to quota levels". The 10 members of the cartel were producing 2m barrels a day more than their collective ceiling of 21.7m b/d. He also stressed that non-OPEC producers such as Russia and Norway must "discipline themselves to not strain the market". OPEC's market share is under pressure as Russia boosts production and new oil from

the Caspian and West Africa comes to market.

OPEC believes that non-OPEC output will continue to rise faster than that of OPEC for the rest of this decade. However, the cartel's members, according to Dr Lukman, will reassert themselves in the next decade.

Global oil demand estimated at 76 mb/d this year could soar to 103 mb/d by 2020. Dr Lukman said OPEC would supply more than half of this – 53 mb/d. Its present market share is nearer one third.

(Ctd from p1) Fortum Sale....

marketing business. The sale of FPAS strengthens Fortum's balance sheet and is consistent with our strategic agenda," said Mikael Lilius, President and CEO of Fortum.

For its part, Mr Vittorio Mincato, Eni Chief Executive Officer said "The acquisition is in line with our strategy of production growth through the consolidation of our presence in core areas. This operation strengthens Eni's presence in Norway where our production will rise by more than 40% in 2003. Furthermore focusing on assets where we already have interests will enable us to generate operational synergies."

Eni has signed, with the Finnish oil company Fortum, the agreement for the acquisition of 100% of the Norwegian subsidiary Fortum Petroleum AS at the price

of US\$ 420 million. The value of the company, including the outstanding debt at June 30, 2002, is of US\$ 1078 million.

Fortum Petroleum AS, based in Lysaker, near Oslo, carries out activities in the Norwegian North Sea where it has stakes in producing fields such as Asgard (7%), Brage (12.26%) and Heidrun (5.12%), and also holds interests in the field of Mikkel (7%), under development and Goliath (15%) still to be developed. Eni already holds interests in the fields of Asgard, Mikkel and Goliath, in the latter, it acts as operator.

In addition, Fortum Petroleum AS has stakes in important gas transmission infrastructures such as Haltenpipe (5%), Heidrun Gas Export (5.12%) and Asgard Transport (5%) connecting the fields of Asgard and Heidrun to the Norwegian coast. The company is also present in Franpipe (1.29%) and the related Dunkerque terminal (0.84%) in France and in Europipe II (3.66%) for gas transmission to the German coast.

Global

Industry News

ConocoPhillips Gains Safety Award

ConocoPhillips has announced that Conoco Inc. has been named one of America's Safest Companies for 2002 by Occupational Hazards magazine. "This honour reinforces our long-held belief that safety is the right thing to do," said Steve Brouillard, manager of safety for ConocoPhillips. "Conoco and Phillips Petroleum Company recently completed their merger to become ConocoPhillips.

The new company embraces a long-held tradition of putting safety first in every operation. In fact, the

values of the new company spell 'SPIRIT' - and that 'S' stands for safety. We believe that any job worth doing is worth doing safely."

Conoco ranked as the safest major energy company in the United States according to the American Petroleum Institute's latest benchmarking survey of occupational injuries, illnesses and fatalities in the petroleum industry. This is the fifth consecutive year and the 17th time in 23 years that Conoco has been ranked No. 1.

UK

Huge Oil Laundering plant Seized in Northern Ireland

The UK Revenue Commissioners in Northern Ireland have announced that customs officers from its enforcement division have seized a huge oil laundering plant together with 100,000 litres of oil at Raskeagh, Kilcurry, Dundalk, Co Louth.

The plant, one of the biggest ever seized by Customs, consisted of five over ground tanks with a total capacity

of hundreds of thousands of litres. According to Revenue, the operation had the capacity to launder 150,000 litres of oil per day. The loss of tax revenue could have run into millions of pounds per annum. No arrests have yet been made and investigations are continuing.

France's Elf Affair Returns to Court

France's disgraced former foreign minister, Roland Dumas, returned to court this week to appeal against his conviction in a vast network of corruption and kickbacks at former state-owned oil company Elf Aquitaine. Dumas and other high-profile co-defendants, including his former mistress and the oil group's former top executive, were convicted in May last year of corruption-related charges and sentenced to various penalties, including prison terms.

Their appeal was originally scheduled for March, but was postponed because one of the trial's key players, former Elf President Loik le Floch-Prigent, was too ill to attend. The Elf affair linked politicians and business leaders to a multimillion-dollar kickback scheme in which company slush funds were used to buy influence in France and abroad.

However, the scandal has focused above all on

Dumas, a former resistance fighter who rose through political ranks to join the inner circle of the late Socialist president Francois Mitterrand and become an elite figure of the French left.

At the trial last year, he was convicted and sentenced to six months in prison for illegally receiving gifts and cash from Elf while serving as foreign minister. Prosecutors said his former mistress, Christine Deviers-Joncour, was hired by Elf to serve as a liaison with the foreign ministry in order to influence Dumas.

This particular trial focuses on Deviers-Joncour's job and on the lavish gifts she gave Dumas with Elf's money, including a dozen antique Greek statues and a pair of handcrafted boots worth €1600.

Dumas has maintained he did not know Elf money was paying for the gifts or the luxury pad on the Left Bank where the couple met for trysts.

UK

Oil Companies Well Prepared as Firemen Strike

As Britain faces a nervous period over the coming days with the firefighters on strike over pay and condition claims, the oil companies have had time to take all necessary precautions in good time. The majority of the UK's refineries have their own dedicated fire crews with specialist equipment.

A spokesman for TotalFinaElf, which has a refinery at Milford Haven, revealed it had completed a risk assessment programme of all its UK operations including retailing, distribution and refinery activities.

The spokesman said: "We have a series of contingency plans to cover these operations, and intend to operate as normal."

Texaco said it had its own highly trained fire brigade on 24-hour-call at its Pembroke refinery. A spokesman said: "As an additional precaution on strike days, we will not undertake any non-essential maintenance work to further minimise the chance of any incidents."

For its part, BP said that over the last few weeks, there had been a heightened awareness of the possible problems. Full risk assessments had been made at all refineries, chemical plants, distribution terminals and filling stations. In addition, the company had been working closely with local authorities and neighbouring businesses to provide help and support where necessary. The spokesman told *ER&M*, At Grangemouth, for example, we have a long-standing cross-industry arrangement that meets regularly. On Humberside, we have a chemical plant and this has been liaising with the nearby Conoco and TotalFinaElf refineries while, again at our refinery at Coryton, there has again been good liaison with neighbouring concerns and with the local authorities. All unnecessary maintenance work, particularly involving such activities as welding, has been suspended during the days of the strike, wherever possible. Otherwise, things will continue as normal."

Global

Shell Hydrogen Invests In Hydrogen Purification Technology

Shell Hydrogen has purchased an equity stake in QuestAir Technologies Inc., a company that has developed proprietary gas purification technology. The \$7 million investment will enable the Canadian company to commercialise and further develop technology that purifies hydrogen. Purification technology is important to the development of hydrogen as an energy source because the purity of hydrogen fed into fuel cells affects their performance and useful lives, and hence their economic viability. QuestAir, based in Vancouver, aims to commercialise hydrogen purification devices for use in fuel cell applications by 2006. The transaction provides Shell Hydrogen with non-exclusive access to

QuestAir's technology for use in a number of applications, including stationary and automotive proton-exchange-membrane (PEM) fuel cell systems, stationary solid oxide fuel cell systems, vehicle hydrogen refuelling stations, and industrial processing.

Furthermore, QuestAir will work with HydrogenSource LLC to integrate its technology with HydrogenSource's 150kW fuel processing system. The product resulting from this effort will be marketed to third party developers of larger scale stationary PEM fuel cell power plants. HydrogenSource is a joint venture between Shell Hydrogen and UTC Fuel Cells, a unit of United Technologies Corp.

Bosnia

Bosnia Gets Single Oil Derivatives Market

The agreement for a single oil derivatives market was signed in Sarajevo on 7 November. The agreement stipulates that the two entities have to return to the previous gasoline price by 15 November, while the Brcko District has to introduce a road tax by the New Year. According to a report on Bosnia's BH Radio 1 in Sarajevo, "In order to comply with the existing stand-by arrangements with the International Monetary Fund, the entities have to harmonize all indirect taxation on oil derivatives. This is why it has been agreed that by 15 November at the latest the entities will once again start applying indirect taxes on oil derivatives, which were in force on 30 October. The Brcko District agreed that for the purpose of forming a single market the scope and application of indirect taxation on oil derivatives will be completely harmonized with the two entities. The Brcko District also agreed to introduce indirect taxation amounting to 0.15 convertible marks [Bosnian currency]. This tax will come into force by 31 December

at the latest."

For his part, Mr Anto Domazet, treasury minister in the Council of Ministers said, "This agreement and measures which very soon will be adopted by the governments of the [Bosnian] Serb Republic and the Federation, and by the Brcko District by the end of the year, will ensure harmonization. For the first time we shall have a real harmonization of excise and tax duties on oil derivatives, and a true single economic area. Above all this will provide for the acquisition of public revenue and create a healthy competition amongst oil companies in Bosnia-Herzegovina."

The agreement also stipulates that the entities and Brcko District will undertake significant steps so that inter-entity permits for excise goods are issued in a just and transparent way. The measures will contribute to the lawful sale and to the distribution of excise revenue. The agreement comes into force immediately.

*Europe**Company News*

Atofina buys out Dorlyl

On 28th October 2002 Atofina, the Chemicals branch of TotalFinaElf, finalised the purchase of Shell's 50% shareholding in Dorlyl, which it now owns fully. Dorlyl specialises in the production and marketing of PVC compounds for the extrusion blow moulding of bottles and packaging for food products, cosmetics and pharmaceuticals. Dorlyl's operations include two production plants in France, at Le Havre and Meyzieu,

as well as facilities in Brazil, via Rionil, a company in which it has a majority share.

With this acquisition, Atofina consolidates its leading European ranking in PVC compounds, with 11 production sites and a comprehensive range of specialties and services in every application area, including packaging, automotive, cable manufacture, construction and medical equipment.

UK/Global

Johnson Matthey Completes Syntex Acquisition

Johnson Matthey has completed its acquisition of the Syntex division of ICI. This transaction was first announced on 23rd September 2002. Completion of the purchase of those Syntex businesses which are owned by ICI India Limited were the final part of the picture to be completed and this was announced on 12

November when ICI India Limited's shareholders approved the sale of those Syntex businesses owned by ICI India Limited to Johnson Matthey. It is therefore expected that the acquisition of the Syntex businesses in India by Johnson Matthey will complete on 2nd December 2002.

Hungary

Mol Might be Partly Privatised in 2003

Hungary could sell part of a 25% state-owned stake in the country's MOL oil and gas group next year, according to the head of the State Privatisation Agency (APV Rt) Mr Tamas Meszaros.

"We trust that MOL's expansive strategy will have a positive outcome and thus the value of the state stake could grow with the rise of the stock's rate on the bourse," Meszaros told a press conference.

MOL, which bought into Slovakia's Slovnaft in 2000 and has been eyeing investments in Poland and the Czech Republic, aims to become a regional energy supplier. Meszaros said that in order to raise the value

of MOL's shares, the 'government should first make a move.'

The conditions of the MOL sale include creating a new gas pricing system, separating MOL's gas branch from other company activities and the adoption by parliament of a new law that liberalises the gas market and creates transparent market rules, Economy Minister Istvan Csillag said last month.

Meszaros said the 25% state stake would be sold in instalments. "If we could sell part of the stake at a good rate, we could fulfil our 200-million-forint (€816,000) revenue plan for next year," said Meszaros.

Battle for Moscow Rages On

The rivalry between two powerful Russian power structures has spilled over into the country's most lucrative gasoline market, estimated to be worth \$2 billion a year, in a trial of stamina between Sibneft, Russia's fastest-growing oil producer and City Hall, Moscow.

At the centre of the fight is control of the Moscow Oil Refinery. Sibneft and the City of Moscow each hold a 38% stake although the city has a majority of the voting shares, which Sibneft is challenging. Sibneft wants to control from 10% to 15% of Moscow's gasoline market by end of 2003 and also needs the refinery to secure an outlet for its crude production - up 18% since the start of this year. Sibneft is also eager to buy the government's 74.59% stake in Slavneft, which would vastly increase its presence in the retail market. Slavneft owns the nearby Yaroslavl refinery, which supplies 10% of Moscow's gasoline.

The Moscow refinery has a throughput of 11 mt/y, or about 220,000 b/day, and supplies roughly half of Moscow's gasoline market. According to a spokesman, "The situation is bad for the refinery as well as for its shareholders who lose money every day because of inefficient management."

Meanwhile, according to reports in *The Moscow Times*, oil magnate Roman Abramovich (Sibneft) and Moscow Mayor Yury Luzhkov are in talks to resolve a dispute over the Moscow Oil Refinery that has twice brought the city to the verge of a gasoline crisis. "Talks are being held to find a compromise on how to manage the enterprise," Sibneft spokesman Alexei Firsov said Monday. Moscow Oil Co. spokesman Nikolai Fralov said the two sides were in negotiations and that details would be available before an annual shareholders meeting scheduled for 18 November. Moscow Oil says Sibneft has been trying to take control of the refinery ever since it acquired a 38.5% stake from oil major LUKoil last year. However, Sibneft denies that it wants to take over the refinery and is hoping to come to an agreement that would make the refinery's management

independent of all major shareholders.

The conflict between City Hall and Sibneft came to a boil this summer when the oil major cut off supplies to the Moscow refinery, which produces 50% to 55% of the gasoline sold in Moscow and the Moscow region, bringing the city's gas supplies to a dangerous low. That conflict was resolved in a telephone call between Luzhkov and Abramovich.

Sibneft later called a shareholders meeting for September at which the oil major elected six representatives to the nine-member board of directors. Sibneft's ally, Tatneft, which holds 8 percent in the refinery, had three representatives elected. The new board later approved a share conversion that gave Sibneft and Tatneft a 56% stake in the refinery. Moscow Oil, however, says the shareholders meeting at which the board of directors was elected was not legal because Moscow Oil was not notified that the meeting was taking place. The refinery now has two rival boards of directors.

Moscow's gas supplies nearly came to halt for a second time in October when pipeline monopoly Transneft cut off oil supplies to the Moscow refinery after a court ruling in Orenburg. Sibneft filed the Orenburg suit, saying Moscow Oil's supply contracts with the Moscow refinery were illegal because the company's head, Shalva Chigirinsky, also sits on the refinery's board of directors.

Moscow Oil says the refinery lost more than \$3.7 million because of the gasoline shortages and wants Sibneft to pay up. Sibneft declined to comment.

Chigirinsky has expressed hope that the rival boards of directors would meet at the shareholders meeting. "I don't exclude the possibility that the November shareholders meeting will be held cooperatively," *Vedomosti* quoted him as saying.

First Deputy Mayor Oleg Tolkachyov said Sibneft has fulfilled Moscow's request to withdraw all its 10 lawsuits against Moscow Oil.

Tyumen Stalks Slavneft

Tyumen Oil Co. has officially entered the Slavneft sweepstakes and will submit a bid for the government's 74.95% stake in Slavneft within two weeks. The State Property Fund has set a minimum price of \$1.3 billion for the stake, but analysts say competition from other oil majors could push it into the \$2 billion range. Russia's three majors - LUKoil, Yukos and Surgutneftegaz - are rumoured to be preparing bids, but all have refused to commit one way or the other,

leaving No. 5 Sibneft and now TNK the only declared bidders. TNK already controls some 40% of Slavneft subsidiary Megionneftegaz, which accounts for 80% of Slavneft's total production.

The approximate date of the auction sale of state-shares in Slavneft is the middle of December. This was announced by the head of the Russian government, Michael Kasianov, who said "I think, that the auction will be held no later than 20 December."

Russia

Yukos leads Russian oil industry

YUKOS has moved ahead of LUKoil as Russia's leading oil producer, according to October production figures released by the Energy Ministry in Moscow. Yukos produced 6.429 mt last month, passing LUKoil for the first time. LUKoil's output was 6.412 mt. According to a London presentation last month by Yukos production executive Ray Leonard, Yukos is well ahead of LUKoil, as well as other Russian oil producers, in its average daily oil flow from new wells. The company also claims its lifting costs are substantially below its domestic rivals. If the company forecast of 18% production growth next year is achieved, Yukos officials said they expect to consolidate their domestic lead. LUKoil has announced that its production growth next year would be just 2%.

To lock in demand for this new crude oil output, and establish beachheads for shipments to its export markets, Yukos has consolidated control of five domestic refineries. It recently completed the acquisition of the Maėikiu Nafta refinery in Lithuania, and has acquired a control stake in the Slovak Transpetrol pipeline transporting Russian crude into Germany. According to Italian sources, Yukos is also close to finalising a deal to acquire 50% stakes in two, possibly three refineries owned by Italy's ENI in Sicily and near

Venice. If consummated, the deal is estimated to be worth \$700 million.

Later this month, Oleg Sheiko, Yukos's executive vice president for corporate finance, will resume talks with the China National Petroleum Corporation on the planned laying of a 2400km pipeline from the Yukos Siberian base at Angarsk to the northern Chinese petroleum terminal at Daqing. With an estimated construction cost of \$1.7bn, the pipeline is projected to ship 400000 b/d of oil (30 mt/y).

In the next decade, according to Yukos estimates, East Asian demand for oil would jump faster, and also further than US and West European levels, reaching 24 mb/y. East Asia is currently more dependent on Middle Eastern oil than other regions, and is paying a premium more than \$4 billion annually to receive that oil. The Russian and Chinese governments first announced the project in July last year, but wariness in Beijing and indecision in Moscow slowed down the planning process. At a meeting in Shanghai recently, Prime Ministers Mikhail Kasyanov and Zhu Rongji announced they wanted to speed up this project.

"The Russian government is supportive," Sheiko said. "We need to start talking to western banks, and to the potential suppliers to the project."

Company Results

Global

Shell Records Another Solid Quarter

The Royal Dutch/Shell Group of Companies has reported net income of \$2.6 billion for the third quarter 2002, 7% higher than a year ago. Adjusted current cost of supplies (CCS) earnings for the quarter were 17% lower at \$2.2 billion, bringing the year to date total to \$6.4 billion.

Commenting on the quarter, Philip Watts, Chairman of the Committee of Managing Directors of the Royal Dutch/Shell Group of Companies, said: "We have again delivered a strong performance, with year to date cash generation of some \$12 billion. The rapid and successful integration of the Enterprise assets means production volumes have grown by 9%. Excluding Enterprise, production volumes from existing operations grew 2% - above target for the year."

In the downstream, Mr Watts highlighted the resilience of the global marketing business and integration progress in the USA: "The huge retail site re-branding and rationalisation programme continues apace. I am confident that the effects of this, the recently completed acquisition of the Pennzoil-Quaker State lubricants business and other initiatives will deliver improvements in the bottom line in the USA as we move forward."

Crude oil prices firmed in the quarter due to declining oil stocks and continuing tensions in the

Middle East. Brent crude prices averaged \$26.90 a barrel compared with \$25.30 a barrel a year ago, while WTI crude averaged \$28.25 a barrel compared with \$26.65 last year. The outlook for crude prices is particularly uncertain and will be dependent on the pace of global economic recovery, the severity of the northern hemisphere winter, political developments in the Middle East and supply restraints from major oil producing countries.

Refining margins remained weak in all markets. In Rotterdam, refining margins averaged \$1.00 a barrel compared with \$1.10 a barrel in the same period last year while in the USA, Gulf Coast margins averaged \$2.45 a barrel compared with \$3.65 a barrel a year ago. In Asia-Pacific, margins continued to be depressed by over-capacity with the Singapore margin averaging \$0.15 a barrel for the quarter compared with \$0.50 a barrel a year earlier. Refining margins may improve in the fourth quarter if crude oil supply increases. The margin outlook for 2003 will be strongly influenced by the pace of global economic recovery and political developments in the Middle East.

Overall chemical margins were somewhat higher than in the third quarter last year and similar to the second quarter of this year. Industry plant capacity utilisation is still low but

(ctd on p8)

Company Results (Ctd from p7) Shell...

has improved. Cracker margins in both Europe and the USA were similar to a year ago. Overall the environment is still relatively weak and the outlook remains volatile and dependent on demand growth.

Third quarter earnings on an adjusted CCS basis of \$527 million were 34% below a year ago. Earnings were significantly lower in refining, as the very weak refining environment continued. Marketing and trading earnings were also lower.

Relative to a year earlier the results for the quarter included Shell's 100% ownership (effective July 1st) of the former joint venture with DEA in Germany that was formed in January 2002 and in the USA the consolidation of Equilon (now 100% owned), together with an increased equity share of the earnings of Motiva (now 50% owned). Benefits from the restructuring and integration activities in both the USA and Germany continued to grow.

Outside the USA, adjusted CCS earnings for the quarter were \$464 million compared with \$704 million a year ago. Refining earnings declined due to the lower industry margins in both Rotterdam and Singapore and higher costs arising from the weaker dollar.

Overall refinery utilisation was lower than a year earlier but rose significantly from the low second quarter levels. Refinery intake was 13% higher than a year ago reflecting the acquisition of DEA refinery assets. Marketing earnings were also lower. Gross fuels margins were lower than a year earlier but improved from the second quarter; marketing costs were adversely affected by exchange rate effects. Total inland sales volumes rose 11%, essentially because of the larger market position in Germany.

Trading earnings were down due to limited regional arbitrage opportunities. Shipping earnings were adversely affected by the decline in freight rates relative to a year ago.

In the USA, adjusted earnings were \$63 million compared with \$95 million

| Third Quarter | | | \$ million | First 9 Months | | |
|---------------|-------|-----|----------------------------------|----------------|-------|-----|
| 2002 | 2001 | % | | 2002 | 2001 | % |
| 583 | 779 | -25 | Oil Products earnings | 1,270 | 2,782 | -54 |
| 56 | (20) | | Special credits/(charges) | (45) | (10) | |
| 527 | 799 | -34 | Adjusted segment earnings | 1,315 | 2,792 | -53 |
| 4,130 | 3,410 | +21 | Refinery intake (thousand b/d) | 4,051 | 3,420 | +18 |
| 7,657 | 6,073 | +26 | Oil product sales (thousand b/d) | 7,428 | 6,111 | +22 |

a year ago. Earnings for the quarter benefited from a permanent inventory reduction. Earnings from refining were lower with industry margins on both the US West Coast and Gulf Coasts significantly below the levels seen in the third quarter 2001.

Shell refining margins were adversely impacted by a lower differential between light and heavy crude prices relative to a year ago. Refinery utilisation was unchanged from a year earlier.

Reported refinery intake rose by 56% reflecting the increase in Shell's equity ownership in Equilon and Motiva. Marketing earnings were slightly lower as a result of lower gasoline margins on the Gulf and East Coasts partially offset by lower marketing expenses.

Segment earnings included net special credits of \$56m in the USA; gains on the sale of crude pipeline assets were partially offset by increases in provisions for legal and environmental costs.

| Quarters | | | | FirstNine Months | | |
|--------------------|--------|--------|-----|-------------------------------------|--------|------------|
| Q3 | Q2 | Q3 | % | 2002 | 2001 | % |
| 2002 | 2002 | 2001 | | 2002 | 2001 | |
| Refinery | | | | Processing Intake (,000 b/d) | | |
| 1,792 | 1,642 | 1,377 | | Europe | 1,744 | 1,377 |
| 925 | 908 | 989 | | Other Eastern Hemisphere | 925 | 1,017 |
| 1,056 | 1,085 | 678 | | USA | 1,075 | 662 |
| 357 | 202 | 366 | | Other Western Hemisphere | 307 | 364 |
| 4,130 | 3,837 | 3,410 | +21 | | 4,051 | 3,420 +18 |
| Oil Sales** | | | | | | |
| 889 | 2,893 | 2,093 | | Gasolines | 2,826 | 2,122 |
| 862 | 740 | 675 | | Kerosines | 775 | 673 |
| 2,453 | 2,234 | 1,923 | | Gas/Diesel oils | 2,314 | 1,920 |
| 687 | 790 | 688 | | Fuel oil | 750 | 711 |
| 766 | 739 | 694 | | Other products | 763 | 685 |
| 7,657 | 7,396 | 6,073 | +26 | Total oil products*** | 7,428 | 6,111 +22 |
| 5,038 | 5,284 | 4,390 | | Crude oil | 5,045 | 4,384 |
| 12,695 | 12,680 | 10,463 | +21 | Total oil sales | 12,473 | 10,495 +19 |
| ***comprising | | | | | | |
| 2,240 | 2,143 | 1,831 | | Europe | 2,192 | 1,854 |
| 1,281 | 1,302 | 1,259 | | Other Eastern Hemisphere | 1,280 | 1,247 |
| 2,257 | 2,239 | 1,341 | | USA | 2,202 | 1,307 |
| 788 | 777 | 793 | | Other Western Hemisphere | 774 | 805 |
| 1,091 | 935 | 849 | | Export sales | 980 | 898 |

Lithuania

Mazeikiu Nafta Preliminary Results

Based on US Generally Accepted Accounting Principles (GAAP), Mazeikiu Nafta's preliminary loss was 172.8 million Litass, compared to 163.6 million Litass for the same period in 2001. Based on Lithuanian accounting principles (LAP), Mazeikiu Nafta's preliminary loss for the first nine months of 2002 was 248.5 million Litass, compared to 151.9 million Litass for the same period last year.

According to Vita Petrošienė, acting Chief Financial Officer of Mazeikiu Nafta, "the loss was caused mainly by very low refining margins throughout almost the entire period, as a result of which the Company has shown negative financial results despite high throughput volumes through the Būtingė Terminal and the pipeline system and stable operations at the refinery. Mazeikiu

Nafta was operating just slightly below breakeven level due to improved refining margins in September."

Due to lower margins, Mazeikiu Nafta has kept refining volumes below last year's levels, refining around 4.7 mt of crude oil and other feedstock over the first nine months of 2002, compared to over 5 mt during the same period a year ago. The Company's pipeline system transported almost 18 mt of crude oil and diesel fuel in the first nine months of this year. A year ago, the pipeline had handled almost 23 mt.

The Būtingė Terminal exported 3.9 mt of crude oil and was operating at capacity throughout the entire period after resuming operations in late March. The Terminal had exported 4.2 mt in the first 9 months of 2001.

Spain

CEPSA's Nine-month Results

CEPSA's net income totalled €333 million, the same amount as the previous year, with sales revenues in excess of €8.5 billion. The Downstream (R & M) segment recorded an EBITDA of €101.7 million, 10% lower than in the previous quarter. Results were sensitive to low refining margins, which averaged \$1.4/b in the third quarter. In addition to this, the situation in domestic and international markets did not allow the refining margin to be offset. On the other hand, the sale in the third quarter of 1.025% of CEPSA's stake in CLH, as well as the disposal of other non-strategic assets, allowed the company to obtain an EBIT of €3.5 million, 18% higher than in the second quarter of 2002.

In the third quarter of 2002, the EBITDA in the Petrochemical segment amounted to €74.2 million, therefore the petrochemical division accounts for 38% of CEPSA's cumulative earnings, although it was 11% lower than in the April-June 2002 period.

In Downstream, at an international level, aside from the decline in the price of the raw material (the price per barrel of Brent oil averaged \$24.37 in the first nine months of the year), there have also been falls in the international prices of major oil products. Thus the price of 95-octane lead-free gasoline dropped by 15% in relation to the same period of 2001 and the price of gas oil fell by 14%. Consequently, the margin available in transforming crude oil into gasoline or gas oil was reduced by 41% and 42%, respectively.

In Spain, the average price of 95-octane gasoline was 30.39 eurocents per litre, which is 3.57 eurocents lower than the average in the same period of 2001 and 0.39 eurocents lower than the average for the other 14 countries in the European Union (EU). As far as gas oil is concerned, its average price was 29.84 eurocents per litre. This price was 3.68 eurocents per litre lower in comparison to the January-September 2001 period, and 0.38 eurocents lower than the average in the other

14 EU countries.

These circumstances, which entail that the overall refining margin fell by 55% and the marketing margin by 6%, are the main reasons why the EBITDA in the Downstream area, which amounted to €292.7 million, was 30% lower than in the first nine months of 2001. As far as sales are concerned, it should be noted that CEPSA sold 17.3 mt of oil products, which is a 2% increase over January-September 2001. On the other hand, successive sales of holdings in CLH, up to a total of 7.125% of the share capital, as well as other disposals of assets, allowed the P&L account to be balanced.

In the January-September 2002 period, the Petrochemical area generated an EBITDA of €220.7 million, 10% more than in the first nine months of 2001 and nearly 40% of the overall EBITDA. The cumulative EBIT through September reached €178.1 million, 12% higher than in the same period of 2001.

From January to September 2002, CEPSA continued to carry forth its investment program, allocating a total of €510.2 million to a number of projects, including:- The completion last summer of the extension of the PETRESA paraffin plant in San Roque, for the production of this raw material that is used at CEPSA'S plants in Spain, Canada and Brazil.

The beginning of the construction of a new hydro-desulphurising plant at the refinery in San Roque, Cádiz, and the remodelling of the four existing plants at the three refineries, with the object of reducing the sulphur content in gasoline and gas oil, in accordance with the Auto-Oil 2005 programme.

The implementation of new computer application systems, including the MPS (Maintenance, Procurement and Service) program, consisting of the definition of a new purchase management and maintenance model that is already enabling significant cost saving.

Aker Kvaerner Recovery Continues

Despite continued slow markets, ordinary earnings before interest, tax and amortisation for the Aker Kvaerner Group was NOK 254 million in the third quarter. The financial position was further strengthened. Net interest-bearing liabilities were reduced to NOK 166 million while cash and short-term interest-bearing receivables rose to NOK 4.6 billion. Ordinary trading earnings before interest, tax and amortisation (EBITA) for the first nine months this year were NOK 748 million compared with losses of NOK 57 million in the same period last year.

In the third quarter, operating profits (EBIT) were NOK 169 million and year to date totalled NOK 429 million, after special charges and sales gains that amounted to a loss of NOK 107 million year to date. Correspondingly, the Group reported an operating loss of NOK 2.5 billion in the first nine months last year after recognising NOK 2.3 billion in exceptional charges. Net financial items for the first three quarters amounted to NOK 282 million, taking profit before tax to NOK 711 million. Net profit after tax for the first nine months this year was NOK 585 million.

Operations continued to improve in the Oil & Gas business area in the third quarter. EBITA totalled NOK 206 million in the quarter and NOK 465 million in the first nine months. In the third quarter the EBITA margin was 4.1%. All divisions improved compared to last year, except Field Development International, which suffered from low utilisation of engineering staff in Houston.

The Engineering & Construction (E&C) business area reported a marginal profit in the third quarter. Ordinary trading EBITA was NOK 9 million in the third quarter and NOK 12 million for the first nine months. As re-reported before, special non-recurring charges had a considerable impact on profits in the business area in the second quarter.

The US polypropylene project that has caused significant losses to E&C historically is now complete,

and Aker Kvaerner staff has demobilised from the site. Negotiations with the customer concerning final settlement have begun. Net interest-bearing liabilities at the end of September were NOK 166 million, significantly down from NOK 570 three months earlier and NOK 6.3 billion at the end of last year. The equity ratio was 25.2% at the end of September this year compared with 7.0% nine months earlier. At the end of September cash and bank deposits amounted to NOK 4.4 billion, up from NOK 3.8 billion three months earlier.

In the third quarter, the Group order intake was NOK 6.8 billion, and the order reserve at the end of September was NOK 38.0 billion, compared with NOK 43.3 billion three months earlier. The order reserve declined in all business areas during the third quarter, while E&C reported increased order intake compared to the previous quarter.

Although only a few large new contracts were confirmed in the third quarter, Aker Kvaerner has bid successfully for a number of projects that are pending final confirmation. In the third quarter such potential awards amount to NOK 4 billion.

The strong financial foundation established by the Group at the end of last year has been further strengthened through the year. This stronger platform will allow the Group to prevail against the generally weak market conditions that are expected to continue well into next year.

At the same time, the Group will continue to reduce its cost base through capacity adjustments. This will provide a basis for further operational improvements in 2003. In the fourth quarter this year, the positive trend in the Oil & Gas business area is expected to continue. The E&C and Pulp & Pa-per areas will continue to struggle in difficult markets, while the Shipbuilding business is expected to show a strong decline in profits.

Hungary

Favourable Results of the MOL Group in Q3

In the first nine months of 2002, MOL's profit increased significantly, its net income reached HUF 55.2 billion with net sales revenues of HUF 836.6 billion, compared with a loss of HUF 14.3 billion in the same period of 2001. This net income reflects the combined effects of a return to profit of the gas business and the good result of the oil business despite the weaker oil industry environment. In the third quarter net income reached HUF 15.6 billion compared with a loss of HUF 9.6 billion in the same period of last year.

The Natural Gas segment was profitable again. It contributed an operating profit of HUF 0.8 billion in contrast to HUF 105.1 billion loss in the first nine month

of 2001, primarily as the difference between the cost of imported gas and the regulated selling price turned positive, supported by a strong HUF.

At the same time the growing import prices and the present domestic natural gas regulations forecast that this tendency will not last.

Total product sales of Refining and Marketing rose by 5% in the third quarter, however, excluding fuel oil and chemical feedstock, sales volumes rose by 15%. Motor fuel sales increased by 6.5% in the third quarter, compared to 4% growth in domestic market demand. Shop sales increased by 30% and the proportion of non-fuel sales per litre *(ctd on p11)*

(Ctd from p7) MOL...

of fuel sold grew by 30%. In Romania, MOL opened 3 filling stations, and so at the end of September 2002, the Company had 53 filling stations in the region.

The segment contributed an operating profit of HUF 36.1 billion, a 32% decrease over the first nine-month of 2001, reflecting lower international refining margins and a negative FX effect.

The Petrochemical segment produced operating profit of HUF 2.7 billion, the same as in the first nine months of 2001. The improved third quarter performance reflects the recovery experienced in the industry following a very weak start to the year.

Mr Zsolt Hernádi, Executive Chairman of MOL commented: "I am pleased to be able to show that MOL has reported solid performance in Q3. Forint strength, while negative for our downstream business helped keep the gas business in profit in Q3. I would like to take this opportunity to update our estimate of gas profitability. Since we made our last estimate in August both import price and consumption assumptions have changed for the worse. Nevertheless, on the basis of our current exchange rate assumptions we still expect a near breakeven gas business result in the second half of 2002. I am also pleased that our shareholders demonstrated their support of our regional strategy through their authorisation of the Board of Directors to raise capital through a private placement of equity. We are convinced that this possibility, alongside the

continuing share buyback program, will give us more flexibility in the regional consolidation process. I would also like to take this opportunity to announce that we plan to release details of our strategy for the period to 2005 on November 25th. Within this review, we will also be analysing the performance of the past three years against the targets we established in 1999."

Mr György Mosonyi, Chief Executive Officer of MOL added, "In Q3 the international industry environment continued to be characterised by a war premium in the crude price without a similar premium built into oil product prices. Nevertheless, we continued to deliver many advances in our core businesses in line with our strategic goals. In spite of the strong forint and the increase in excise duties, the positive effect of the delayed coker, MOL-Slovnaft sale channel optimisation and sales volume growth helped the refining and marketing segment to perform strongly. Despite a weaker environment the Petrochemical segment continued to perform well. I am also pleased to announce that the capacity expansion project started at TVK, which will assure future growth of the segment. We continue to focus on the harmonisation of our activities with those of Slovnaft. In the first three quarters of the year Slovnaft achieved \$21 million synergies in line with our plan. Non-core divestments continued with the sale of our stake in Nitrogénművek and the sale of Rotary's international assets. Furthermore, we reduced our headcount by 16% in line with our strategic target."

Spain**Repsol Turns in 3Q Figures**

In the first nine months of 2002, Repsol YPF reported net income was €1,763 million, showing a year-on-year rise of 5.1%. Operating income was €2,445 million, and cash flow was €3,571 million. Oil and gas production rose to 1,014,700 barrels per day. These results were especially significant in view of the adverse international scenario and the situation in Argentina. Although oil prices rose from January to September 2002, they remained below those for the period in 2001, and international refining margins were at much lower levels than in recent years. On the positive side, the signs of improvement in chemicals in the first months of the year were confirmed, and the first three quarters of the year closed with a positive operating income, whilst gas & power continued to show income growth in Spain.

The impact of the crisis in Argentina, which has adversely affected company income, has lessened as the situation there gradually improved. To date this year, the drop in Argentina has slowed considerably; the monthly inflation rate has been progressively curtailed (from 4% in May to 0.2% in October); the Central Bank's currency reserves have begun a slow recovery, and the Governor of the Argentine Republic has adopted a series of measures to increase

normalisation for the oil sector.

At 30 September last, the exchange rate of the peso against the dollar was 3.69 pesos/\$ in comparison to 3.75 pesos/\$ at 30 June 2002. For the first time following the break with the peso/dollar conversion equivalence, and as a result of the peso/dollar stability, the Company has made a positive asset adjustment on its balance sheet of €26 million. Neither has the company been obliged to make additional provisions against the financial result, rather the contrary: thanks to the denomination in pesos of some debts in Argentina and the strengthening of the peso against the dollar, Repsol YPF has retracted provisions in Argentina to the value of €76 million.

In addition, to compensate for the Brazilian real devaluation against the dollar, Repsol YPF has made foreign currency translation adjustments amounting to €205 million. At 30 September 2002, Repsol YPF assets in Brazil represented 1.6% of the company's total assets.

From January to September net financial debt reduced by 47%, €7,816 million. Net financial debt at 30 September was €8,739 million in comparison to €16,555 million a year earlier, and the debt to capitalisation ratio fell to 31.9% *(ctd on p12)*

Company Results **(Ctd from p11) Repsol-YPF...**

as against 42.2% at the close of 2001. This debt reduction was mainly the result of a high cash flow generated over the period, the moderation of the investment schedule, the divestments carried out, changes in the consolidation perimeter (mainly Gas Natural). In the third quarter, despite a negative accounting effect because of the depreciation of the dollar against the Euro, raising net debt by €119 million, the company has pursued its ongoing debt reduction policy, achieving a reduction of €221 million. This important cut in net debt over the first nine months of the year has lowered the company's financial costs by 26%, as a result of which the financial result evolved from a cost of €898 million to €660 million.

Accumulated operating income from the Refining & Marketing area was 48.5% down on the equivalent

figure the year before, at €604 million. Performance here showed the effect of not entering CLH operating activity on accounts in 2002; and was mainly the result of weak international refining margins, which despite a recovery in the third quarter, produced a 64% drop in the company's index; and marketing margins which, although recovering normal levels in Spain, were damaged by the crisis in Argentina.

LPG sales in Europe remained stable with respect to the first three quarters of 2001, thanks to favourable temperatures, which were cooler than the year before, and despite competition from alternative energies.

Total oil product sales in Spain sales rose 0.5% year-on-year, reaching 36.7 mt, showing a varying performance depending on the market. Whilst in Spain sales rose 8% to over 20 mt, in Argentina overall sales, at 6 mt, fell 8.9%. Gasoline and gas-oil sales to its network fell 0.6% in Spain, and 2% in Argentina.

Austria

OMV Earnings Down but Picture Improving

In the first three quarters of the current fiscal year, the European oil and gas group OMV reported earnings before interest and tax (EBIT) of €312 million compared with €510 million during the same period in the previous year. This corresponds to a decline of 39%. Net income for the period fell 37% to €202 million. However, the trend is steadily moving in a positive direction: In the first quarter, earnings remained 60% below those of the comparable period in the previous year, while in the entire first half they were just 46% lower.

Commenting on these results, CEO Wolfgang Rutenstorfer said, "The trend from the first quarter to the third shows that we can still hold our own in an economically tough environment."

Group sales increased in the third quarter compared to the second by 6%, to €1,824 million. However, during the first three quarters of 2002, sales were €5,137 million - 11% below the results for the same period in 2001. Headcount has grown by 145 to 5,804 - mainly as a result of increased activities in Marketing and Refining as well as in the Exploration and Production segment.

In the R&M and Petrochemicals division, EBIT declined in the first three quarters compared to the previous year from €177.5 million to €72.2 million. This drop was mainly the result of weaker business activity in the first half. Compared to the second quarter 2002, third quarter EBIT declined by 9% from €38.4 million to €35.1 million (3Q02). Sales in the first three quarters of 2002 fell 16% to €3,613.53 million compared to the same period in 2001.

The main factor governing performance in the first three quarters has been bulk refining margins, which are at their lowest level in more than a decade. In Rotterdam bulk margins have fallen from \$1.97 to \$0.48

per barrel. Petrochemicals margins are also coming under pressure. The relative increase in the third quarter reflects the expected gradual strengthening of refining margins.

Refining volumes decreased compared to the first three quarters of 2001 by 2% to 8.70 mt. Compared to the same period in the previous year, the volume of crude oil refined by OMV has remained stable at 9.19 mt. The Schwechat refinery increased its capacity utilization from 91% to 93% while the Burghausen refinery continued to operate close to full capacity at 99%.

Sales volumes in Marketing improved. Total sales volume increased 2% to 5.94 mt (5.80 mt in the same period in 2001). The domestic and international retail businesses and the Austrian commercial business contributed to this increase. OMV's sales volume within Austria increased by 5% from 2.49 mt to 2.62 mt. International sales volumes remained stable at about 3.32 mt.

Since the end of 2001, OMV has expanded its filling station network by 58 stations to a total of 1,218 stations, 530 of which are located in Austria. In the third quarter alone, 21 stations were opened. The percentage of stations located outside Austria relative to the total number of stations has now increased to 56% in line with the Group's international expansion strategy.

A major step in OMV's growth strategy was the acquisition in September of 25.1% of the largest privately-held oil company in Romania, The Rompetrol Group N.V. (TRG). Rompetrol's Petromidia refinery - the only one in Romania located on the Black Sea with access to the Danube - is of particular strategic importance to OMV. This gives the OMV Group access to refinery capacities that it can use to *(ctd on p13)*

(Ctd from p12) OMV...

supply its filling stations in this region.

As reported at the presentation of the annual results for 2001, a repeat of that year's record profits will not be possible in fiscal year 2002 as a result of continued weaker fundamentals. Certain market factors have however shown gradual improvement over the course of the year. OMV expects a further recovery in refining

Norway

Satisfactory Results for Statoil

Statoil delivered a result for the third quarter of 2002, adjusted for special items, of NOK 9.8 billion (\$1.3 billion) before financial items, tax and minority interests (EBIT). "Given prevailing market conditions, the financial result is satisfactory," says chief executive Olav Fjell. "It is gratifying that the underlying business is improving and that we can upgrade our production forecasts for 2002."

Net profit for the third quarter, adjusted for special items, came to NOK 2.6 billion (\$351 million). This compares with NOK 4.1 billion for the same period of last year. For the first nine months, net profit adjusted for special items totalled NOK 11.6 billion (\$1.6 billion)

bulk margins in the fourth quarter, however petrochemicals margins should come under pressure. Further volume growth is expected in the Marketing segment, although margins in the international areas will continue to remain under pressure. The business R&M and petrochemicals is expected to improve further in the fourth quarter, although we anticipate earnings for the year will be lower than those of the previous year.

as against NOK 12 billion in the same period of 2001. Return on capital employed, adjusted for special items, was NOK 14.6% as against NOK 17.6 for the whole of 2001. Earnings per share, adjusted for special items, came to NOK 1.19 for the third quarter compared with NOK 1.89 for the same period of last year.

Lower refining margins and a weaker shipping market adversely affected results from Statoil's downstream operations. Statoil has participated in the consolidation of the European service station market, and concluded an agreement to buy Preem's forecourts in Poland.

France/Germany/USA

Environmental Developments

Hydrogen Fuelling Plant for Berlin Buses

Proton Energy Systems, Inc., a specialist in hydrogen generation and fuel cell technology and products has supplied a Hogen hydrogen generator to TotalFinaElf for use at the Berlin Transportation Company (BVG)'s first hydrogen fuelling station for the city's bus system. Proton distributor Diamond Lite S.A., Switzerland, installed the generator, along with

a compressor, hydrogen storage and dispensing system.

Owned by TotalFinaElf and located in Berlin's Wedding district, the new fuelling station made its debut by fuelling a hydrogen fuelled bus at a recent press conference. The hydrogen-compatible bus was manufactured by the MAN Group AG.

Czech Republic

Ceská rafinerska Retains Care Award

In October 2002, Česká rafinerska retained the right to use the title of Responsible Care for two more years. The certification had namely been by the company two years ago upon successfully meeting the requirements of an environmental protection and work safety scheme. Both the award and its successful defence are seen as the result of systematic care devoted within the Company to the above spheres of activities on all levels. As a result, since 1996, the volume of emissions has been dramatically reduced, e.g. hydrocarbon and hydrogen sulphide emission have been cut to 4% and to below 1%, respectively of 1996 levels.

In the fields of work safety and health protection, Česká rafinerska has managed to cut the number of so-called registered industrial injuries from 16 in 1996 to zero in 2001. This August, Česká rafinerska, together

with its contractors, has achieved 6 million hours without a lost workday case (i.e. an accident with subsequent incapacity from work) which ranks Česká rafinerska - within the given field - among the top refineries worldwide.

Inspired by similar approaches in other European countries, the Responsible Care programme was launched in 1994 by the Association of Chemical Industry of the Czech Republic. Delivery in more than thirty criteria is typically monitored and apart from meeting their legal obligations in carrying on business in the chemical industry, the Program expects participating companies to adopt measures in organization and production as well as to establish a transparent information environment.

New Report Says Diesels May Promote Global Warming More Than Gasoline Cars

Laws that favour the use of diesel, rather than gasoline, engines in cars may actually encourage global warming, according to a new study. Although diesel cars obtain 25% to 35% better mileage and emit less carbon dioxide than similar gasoline cars, they can emit 25 to 400 times more mass of particulate black carbon and associated organic matter ("soot") per kilometre. The warming due to soot may more than offset the cooling due to reduced carbon dioxide emissions over several decades, according to Mark Z. Jacobson, Associate Professor of Civil and Environmental Engineering at Stanford University.

Writing in the *Journal of Geophysical Research-Atmospheres*, Jacobson describes computer simulations leading to the conclusion that control of fossil-fuel black carbon and organic matter may be the most effective method of slowing global warming, in terms of the speed and magnitude of its effect on climate. Not only does soot warm the air to a much greater extent than does carbon dioxide per unit mass, but the lifetime of soot in the air (weeks to months) is much less than is that of carbon dioxide (50 to 200 years). As such, removing soot emissions may have a faster effect on slowing global warming than removing CO₂ emissions.

The model Jacobson used tested 12 identifiable effects of airborne particles, known as aerosols, on climate, eight of which had not previously been described in scientific literature. Jacobson notes that it is not currently possible to quantify each of these effects individually, only the net effect of all of them operating simultaneously.

"Since 1896, when Svante Arrhenius first postulated the theory of global warming due to carbon dioxide, control of carbon dioxide has been considered the most effective method of slowing warming," Jacobson says in an interview. "Whereas carbon dioxide clearly causes most global warming, control of shorter-lived warming constituents, such as black carbon, should have a faster effect on slowing warming, which is the conclusion I have drawn from this study. The Kyoto Protocol of 1997 does not even consider black carbon as a pollutant to control with respect to global warming."

The reason the issue of diesel versus gasoline is important, says Jacobson, is that, in Europe, one of the major strategies for satisfying the Kyoto Protocol is to promote further the use of diesel vehicles and specifically to provide a greater tax advantage for diesel. Tax laws in all European Union countries, except the United Kingdom, currently favour diesel, thereby inadvertently promoting global warming, Jacobson says. Further, some countries, including Sweden, Finland, Norway, and the Netherlands, also tax fuels based on their carbon content. These taxes also favour diesel, he

notes, since diesel releases less carbon per kilometre than does gasoline. Nevertheless, the small amount of black carbon and organic matter emitted by diesel may warm the atmosphere more over 100 years than the additional carbon dioxide emitted by gasoline.

In Europe and the U.S., particulate emissions from vehicles are expected to decline over the next decade. For example, by 2005, the European Union will introduce more stringent standards for particulate emissions from light duty vehicles of 0.025 gm/km. Even under these standards, diesel powered cars may still warm the climate more over the next 100 years than may gasoline powered cars, according to the study.

The state of California is implementing an even more restrictive standard in 2004, allowing only 0.006 gm/km of particulate emissions. Even if the California standard were introduced worldwide, says Jacobson, diesel cars may still warm the climate more than gasoline cars over 13 to 54 years.

Jacobson said that new particle traps being introduced by some European automobile manufacturers in their diesel cars appear to reduce black carbon emissions to 0.003 gm/km, even below the California standard. "I think this is great, and it is an indication that tough environmental laws encourage industry to change. But," he said, "diesel vehicles emitting at this level may still warm the climate more than gasoline over a 10 to 50 year period, not only because of black carbon emissions, but also because the traps themselves require addition fuel use. Gasoline/battery hybrid vehicles now available not only get better mileage than the newest diesels but also emit less black carbon."

In practice, less than 0.1% of light vehicles in the United States run on diesel fuel, whereas more than 25% do in Europe. In both the United States and Europe, virtually all heavy trucks and buses are diesel powered, and American diesel consumption rates for all modes of ground transportation combined are about 75% to 80% of those in Europe.

Control of fossil fuel black carbon and organic matter will not by itself eliminate long term global warming, says Jacobson. Other strategies to be considered for reducing black carbon and organic matter from the atmosphere could include the phasing out of indoor biomass and coal burning and improved particle collection from jet fuel and coal burning, he says. This reduction would provide the additional benefit of reducing the 2.7 million people who die annually from air pollution, as estimated by the World Health Organization. The health costs of particulate pollution range, in industrial countries, from \$200,000 to \$2.75 million per ton, Jacobson notes.

Spain/Bolivia

Joint Venture in GTL Projects

Repsol-YPF Bolivia S.A. and Syntroleum Corporation have signed two memorandums of understanding (MOU's) to jointly conduct pre-engineering assessment studies on developing two gas-to-liquids (GTL) projects in the Republic of Bolivia. The first of the two projects would be a 13,500 b/d plant to produce clean diesel to satisfy the local market. The second project would be a 90,000 b/d plant that would manufacture ultra-clean fuels and other products for export. Syntroleum is applying for financial support for this project from the United States Trade and Development Agency (TDA). Both plants would use the Syntroleum Process for converting natural gas into synthetic liquid fuels

The studies will be carried out exclusively by a joint Repsol-Syntroleum study team which will determine the feasibility of planning, building, owning and operating the two GTL plants. The projects would fully integrate upstream reserves development and delivery of natural gas feedstock to the GTL plants, processing of the natural gas to extract and market natural gas liquids (NGL's), transportation of the NGL's and FT products via pipeline or other means, and marketing of all outputs to domestic and export markets. The two projects are independent; thus both projects, one project, or neither project could proceed beyond the study stage.

If the studies determine that the projects will go forward, the two parties will each determine their individual equity participation. Either party would have the right to sell down their respective equity interests or transfer interests between them, as may be mutually agreed.

For the 90,000 b/d project, subject to completion of the studies, acquisition of project financing and project sanction to proceed Repsol would contribute up to 990 million cubic feet per day of unprocessed natural gas delivered from its reserves in Bolivia that are suitable for the development of the projects, for a period of 20 years. Repsol would also contribute approximately 85

hectares of suitable undeveloped land inside the Repsol exploration and development block boundaries in Bolivia for the construction of the GTL plant; also man-hours as required to develop the project and marketing/sales of the NGL's. Similarly, for the 13,500 b/d project, Repsol would contribute up to 150 million cubic feet per day of gas and approximately 20 hectares of suitable land.

As part of its equity participation, Syntroleum would provide project access to previously developed engineering designs for a nominal 90,000 b/d and 13,500 b/d GTL plants integrated with NGL processing. Syntroleum would also provide engineering man-hours as required to develop the project, dedication of commercial resources to secure possible partners, financing, and support from the Bolivian government, and the marketing/sales of the FT products.

To the extent that study costs for the 90,000 b/d project are not funded with anticipated grants from the TDA, each party would bear its own internal costs incurred in relation to the study and MOU-related activities.

The MOU for the 90,000 b/d plant will terminate after 12 months from signing and the MOU for the 13,500 b/d plant will terminate 6 months after execution, - or upon execution of subsequent agreements to proceed with the projects, - or the date on which both parties elect to abandon the studies and projects - whichever occurs first. Either party may elect to withdraw from the MOU's by giving no less than 30-days prior written notice. There are no restrictions for either party to develop or negotiate with third parties similar GTL projects.

"We are the company that believes in the new petroleum technology and expects that this integrated studies contributes in the development of Bolivian gas market," according to Jose Maria Moreno Villaluenga, President and General Manager of Repsol YPF Bolivia S.A.

USA

Processing Refinery Waste Streams

Environmental Safeguards, Inc. has begun processing various refinery waste streams at an oil refinery in Sweeny, Texas owned by ConocoPhillips. Environmental Safeguards said it is using its own proprietary Indirect Thermal Desorption (ITD) technology and equipment, manned by its own trained personnel, to complete the project. This patented ITD technology uses a heat jacketed rotating chamber that vaporizes hydrocarbons and hydrocarbon derivatives from contaminated materials, and a condenser that liquefies the vapour into hydrocarbon

liquids of better than 99% purity, for reuse. A single ITD unit can process 1-10 t/h of waste, depending on its content.

In addition to the United States, soil remediation and hydrocarbon recycling operations have been successfully conducted in Mexico, Colombia, Venezuela, Scotland and the U.A.E. Since becoming fully operational six years ago, the Company has processed more than 750,000 t of contaminated waste, recovering in excess of 15 million gallons of hydrocarbon fluids.

Marking of Fuel- The EU Makes Slow Progress

Andrew Rudd

Business Development Manager

John Hogg Technical Solutions Ltd, UK

This year saw a significant shift towards further unification of fuel fiscal policy in the EU, with the introduction of a common marker, the Euromarker. This dye, used in low tax fuel, makes the identification by customs authorities of these fuels easier and unified across the 15 member states. Until August 2002, each country in the EU had the possibility to dye/mark their low tax fuel as they wished. After this date, EU legislation* prescribed the use of Solvent Yellow 124 as the primary marker to identify this fuel.

Although the introduction of the Euromarker has gone relatively smoothly, it has not been without its problems. By far the greatest issue to be faced by the petroleum industry was demand. Although the Euromarker had been in the planning stages for over 12 months, supply issues still dominated the early stages of the implementation, which started at the beginning of 2002 in some countries. These supply issues have, on the whole, subsided, primarily due to Euromarker suppliers finally being able to catch up with an unprecedented surge in demand. However, there is still much puzzlement as to how even the most bullish demand forecasts were so far out.

However, the introduction of the Euromarker has not gone smoothly in two of the most northerly countries in the EU. Finland and Denmark have still to implement the new fiscal marking system for differing reasons. Finland have yet to introduce the Euromarker changes

due to technical issues relating to their cold winter climate. Whereas Denmark, who currently do not use fiscal marking systems, have requested extra time to conduct further tests on the Euromarker system. It is anticipated that both these countries will start the implementation of the new system in March 2003.

Now that the initial surge of activity with the Euromarker is over, more routine issues are surfacing with regard the use of Solvent Yellow 124, one of the primary ones being detection. Petroleum companies and national laboratories are in the process are devising accurate and reproducible tests which can be used to analyse for the Euromarker. These tests will eventually be used by the trade, and the customs authorities to detect for Solvent Yellow 124. Round robin tests, like those currently being conducted in the UK by the Institute of Petroleum, are underway in a number of countries in the EU.

So what has been learnt from the introduction of the Euromarker? The implementation of an EU wide marker system is time consuming and requires an enormous amount of planning by all the stakeholders involved. However, in general the introduction has been a success. Roll on 2006, when the question of a Euromarker is next discussed!

Note: For details of individual countries markers, readers are referred to the table on page 17

*** The New Legislation**

The original legislation on the fiscal marking of gas oils and kerosene was Council Directive 95/60/EC of 27 November 1995, (published in the EC's Official Journal L291, 6.12.1995 p46) and in particular Article 2(2). The legislation was intended to provide for the proper functioning of the internal fuel distribution market and in particular to prevent tax evasion. Directive 95/60/EC has provided a common marking system to identify gas oils, falling within CN code 2710 00 69, and kerosene, falling within CN code 2710 00 55, which have been released for consumption exempt from excise duty, or subject to a reduced excise duty rate. Since 1996, the first code has been split into CN codes 2710 00 66, 2710 00 67 and 2710 00 68 in order to take into account the sulphur content of gas oil.

The new legislation, 2001/574/EC and notified under Document number C(2001) 1728, was published in the EC Official Journal L203 28.07.2001 pp20-21 and covers the Commission Decision of 13 July 2001 establishing a common fiscal marker for gas oils and kerosene.

Under the previous legislation, each Member State had drawn up its own rules and standards for marking diesel and these varied widely. However, the results of the trials to establish a standard fiscal marker showed that Solvent Yellow 124 came closest to the required standard by satisfying six of the seven criteria specified in the call for expression of interest. Furthermore, according to the EC's Scientific Committee on Toxicity, Ecotoxicity and Environment, the additional health and environment risks of Solvent Yellow 124 were seen as not giving rise to any proven harm. Solvent Yellow 124 is commonly known as N-Ethyl-N-[2-(1-isobutoxyethoxy)ethyl]-4-(phenylazo)aniline!

It was therefore agreed that this product should be established as the common fiscal marker for the marking of all gas oils falling within CN codes 2710 00 66, 2710 00 67 and 2710 00 68 as well as of kerosene falling within CN code 2710 00 55 within the meaning of Directive 95/60/EC and subject to the conditions set out in that Directive. It was further agreed that the marking level should be at least 6 mg of marker per litre of mineral oil. In the case of Solvent Yellow 124, despite its being under patent cover in six Member States, its availability is secured by licensing agreements.

*Table 1 – Current and Future Legislation Marker Systems in the 15 EU Member States
(courtesy John Hogg Technical Solutions)*

| <i>Country</i> | <i>Product</i> | <i>Dye Marker System (Pre August 2002)</i> | | <i>Dye Marker System (Post August 2002)</i> | |
|-----------------------|--|---|--|---|--|
| Austria | Gas Oil | Red Dye Quinizarin Furfural | Visible 5mg/l 10mg/l | Red Dye Euromarker | Visible 6mg/l |
| Belgium | Heating Oil | Red dye Furfural | Visible 10mg/l | Red dye Euromarker | Visible 6mg/l |
| Denmark | Gas Oil | None | | Solvent Blue 35 Euromarker | 5 mg/l 6mg/l |
| Finland | Gas Oil | Solvent Red 19 Furfural | 3mg/l 2.5mg/l | Solvent Red 19 Euromarker | 3mg/l 6mg/l |
| France | Gas Oil Marine Diesel | Solvent Red 24 Furfural Diphenylamine Solvent Blue 35 Furfural Diphenylamine | 10mg/l 10mg/l 50mg/l 10mg/l 10mg/l 50mg/l | Solvent Red 24 Euromarker Solvent Blue 35 Euromarker | 10mg/l 6mg/l 10mg/l 6mg/l |
| Germany | Gas Oil | Solvent Red 19 Furfural | 5mg/kg 5.6mg/kg | Solvent Red 19 Euromarker | 5mg/kg 6mg/l |
| Greece | Gas Oil | Red Dye Furfural | Visible 10mg/l | Red Dye Euromarker | Visible 6 mg/l |
| Holland | Heating Oil | Red Dye Furfural | Visible 10mg/l | Red Dye Euromarker | Visible 6mg/l |
| Irish Republic | Gas Oil Kerosene | Solvent Blue 35 Euromarker Solvent Red 19 Solvent Yellow 172 Euromarker | 5mg/l 5mg/l 1.5mg/l 2.3mg/l 5mg/l | Solvent Blue 35 Euromarker Solvent Red 19 Euromarker | 5mg/l 6mg/l 3mg/l 6mg/l |
| Italy | Gas Oil | Solvent Green 33 Euromarker | 5.0mg/l 6mg/l | Solvent Green 33 Euromarker | 5mg/l 6mg/l |
| Luxembourg | Heating Oil | Red Dye Furfural | Visible 10mg/kg | Red Dye Euromarker | Visible 6mg/l |
| Portugal | Gas Oil (Agriculture) Gas Oil (Heating) | Solvent Blue 35 Euromarker Solvent Red 19 Euromarker | 5mg/l 5mg/l 4.2mg/l 4.4mg/l | Solvent Blue 35 Euromarker Solvent Red 19 Euromarker | 5mg/l 6mg/l 4.2mg/l 6mg/l |
| Spain | Gas Oil (Type B Agriculture) Gas Oil (Type C Heating) | Red Dye Euromarker Blue Dye Euromarker | Min abs 0.4 5mg/l Min abs 0.5 5mg/l | Red Dye Euromarker Blue Dye Euromarker | Min abs 0.4 6mg/l Min abs 0.5 6mg/l |
| Sweden | Gas Oil | Solvent Blue 35 Euromarker | 5mg/l 5mg/l | Solvent Blue 35 Euromarker | 5mg/l 6mg/l |
| United Kingdom | Gas Oil Kerosene | Solvent Red 24 Quinizarin Coumarin Solvent Red 24 | 4mg/l 1.75mg/l 2.20mg/l 4mg/l | Quinizarin Euromarker Coumarin Euromarker | 1.75mg/l 6mg/l 2.20mg/l 6mg/l |

Note: Where not specifically mentioned, heating kerosene must be marked with at least 6 mg/l Euromarker in accordance with EU legislation.

BP Coryton Applies NMR For Perfect Blending

Rodney Pitt

Editor, European Refining & Marketing

Advanced process control schemes frequently require near real-time stream composition information to make adjustments to controls – the faster and more reliably, the better. To obtain these crucial measurements of process performance, refiners have been deploying GC, boiling point, RVP, cloud point, octane, and numerous other process analysers. Nuclear Magnetic Resonance spectroscopy is rapidly emerging as one of the most versatile and cost-effective technologies for process analysis. One of the first European refineries to apply this technology to the control of its blending operations is BP's Coryton refinery on the bank of the River Thames, just to the east of the City of London.

According to Mr Bill Claessens, Group Leader, Advanced Control at Coryton, "We had been using an older technology to measure the octane on our CCR unit but it was not really proving to be accurate enough in today's environment. We need to bring together the various components for blending to make gasoline of the right specification, and one of the key specifications is octane. Adding high-octane component costs money (or "giveaway") and it is important from an economic point of view not to add too much. What we needed was a continuous, in-line technology that would give us a precise indication of the amount of octane – and other components – to be added. In the end, we chose the Invensys NMR system."

What is NMR? NMR or Nuclear Magnetic Resonance, offers flexibility in analytical measurement, non-invasive sampling, rapid and precise analysis, and a claimed system availability exceeding 95%, coupled with low maintenance requirements. Moreover, Process NMR analysers can measure numerous chemical species, because they can be tuned for hydrogen, fluorine, or phosphorus nuclei.

So how does this help a refinery? To take a reading, the NMR analyser transmits pulses of radio frequency energy into the stream, which deflects the protons off their aligned axis. The amount of deflection and the subsequent recovery time varies according to molecular structure, and the NMR analyser reads this structure by analysing RF signals emitted by the spinning protons. Within seconds, the analyser averages multiple pulses into a spectrum that reveals chemical species and their concentrations.

This spectrum can then be correlated with physical properties other than chemical composition, enabling determination of multiple parameters in a single spectrum. And since NMR is not an optical technology, the analysis is essentially independent of sample state or physical condition. Small particulates or bubbles, for example, have little or no effect on the analysis. The sample passes through the magnetic field in a small tube, untouched and unchanged in any way, and can

Fig.1. A typical NMR unit

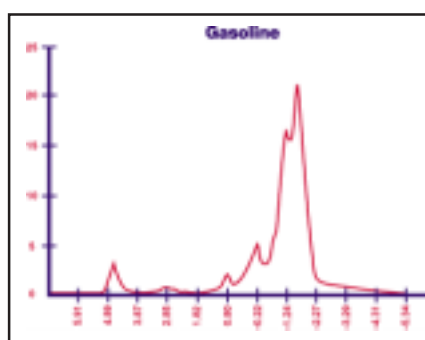
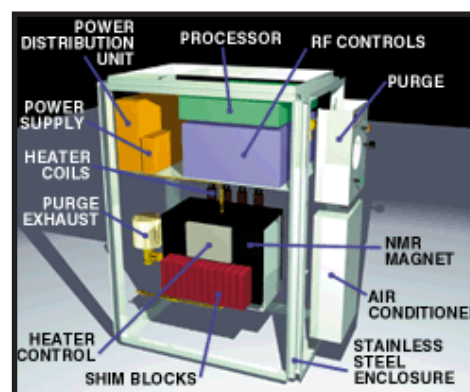


Fig.2 A typical chart for gasoline

easily be returned downstream if desired. In NMR spectroscopy, the surrounding molecular structure determines where the species will be resolved in the spectrum. These peaks occur at known positions, and their intensity is directly proportional to concentration. These facts contribute to NMR's high precision and accuracy. Chemical constituents and physical properties of the stream are available simultaneously, eliminating the need for multiple analysers.

Again, Bill Claessens, "This system was installed over a year ago, and we have found that not only have we now got much more precise control over our CCR octane level but there have been other spin-offs. For example, to produce gasoline takes a number of components. These are produced and stored until required for blending together, into a finished product. What we have found is that the NMR system enables us to produce the required amounts of each component far more accurately, because it allows the balancing of the octane in the gasoline component pool as a whole. We now use the NMR in an advanced control scheme and it really works well. We can nail the octane level at a preset amount and know that it will remain at that level. When we want to change to another grade, we simply reset the control scheme and the new level is then attained with the same degree of accuracy. This system has also reduced the amount of maintenance required and so, overall, I can say that it has been very successful."

Global

AspenTech and TIBCO Announce Strategic Partnership

Aspen Technology, Inc. has selected TIBCO as its preferred provider of integration technology for the next-generation of manufacturing/supply chain solutions it is jointly developing with Accenture. As part of the agreement, TIBCO's business integration platform will be embedded in the Aspen Enterprise Platform™ (AEP), AspenTech's integration architecture for enterprise-wide solutions. AspenTech and TIBCO will integrate their technologies to deliver a new wave of business process products for the process

industries, including the petroleum and chemical industries. The expanded integration platform will be designed to integrate AspenTech's manufacturing/supply chain applications, as well as provide pre-packaged integration to third-party plant floor systems. The strategic partnership includes joint sales and marketing efforts, and TIBCO will provide technical and development resources to assist AspenTech in its ongoing development of its integrated, enterprise solutions.

Switzerland/Mexico

ABB Completes Major Control and Instrumentation Installation

Pemex has started a modernization program to revamp all six of its refineries in Mexico. As part of this, ABB has recently completed work on the first refinery in Minatitlan on the Mexican Gulf, with one of the largest integrated control and instrumentation installations ever undertaken in the refining industry.

According to management at Pemex, it has brought immediate benefits in terms of significant productivity improvements and cost savings. Safety and emergency response times have improved dramatically, and requests for maintenance have been cut by at least 60%.

Mario Castillo, an operator at the facility, said, "With the ABB Operate IT stations, it is easier to control the process. I can see the total system on one screen. In two clicks everything can be adjusted to make better a product."

The six processing plants – three natural gasoline

stabilizer plants, and three hydrodesulphurisers for gasoline, kerosene and diesel – were modernized and fully automated. ABB supplied the control systems, safety systems, process analysers and field instrumentation, all equipped with Foundation Fieldbus (FF) digital communication capability. The solution is based on ABB's Industrial IT platform for seamlessly linking multiple applications and systems in real time.

ABB and Pemex worked jointly on an aggressive benefits-analysis plan to assess the safety requirements, expected improvements in quality, operational reliability, availability and productivity of each plant. The analysis determined that the field instrumentation, heaters and compressor protection systems should be modernized, and that a new distributed control system (DCS) be installed.

*Oil Supply**Iran*

Energy Charter Participation is a Possibility

Iran is considering possible participation in the Energy Charter, an inter-governmental organization devoted to promoting East-West energy cooperation among its 51 European and Asian member states. Upon the invitation of the Iranian government, Secretary General of the Energy Charter Secretariat Ria Kemper visited with numerous energy officials in Tehran on 5-7 November. Meetings included sessions with Began Agene, petroleum minister, and Mir Moezi, president of the National Iranian Oil Co. Discussions focused on the Energy Charter's promotion of international cooperation regarding energy trade, transit, investments, and energy efficiency. Procedures for accession to the Energy Charter Treaty (ECT) by non-member states also were discussed. Kemper said a nation could convey

a positive signal to the international community of investors by signing up to the ECT's rules on investment protection and non-discrimination. Member states already include all the countries of the former Soviet Union. Iran is the only littoral state of the Caspian Sea that is not a member of the Energy Charter process.

As a next step in developing its relations with the charter, Kemper invited the Iranian government to consider applying for observer status at the Energy Charter Conference, the organization's governing body. If such an application were accepted, Iran would become the seventh OPEC member-country to be granted observership at the Energy Charter. The others are Algeria, Kuwait, Qatar, Saudi Arabia, the UAE, and Venezuela.

Fortum's New Tanker Calls at Finland for the First Time

Fortum is acquiring two new ice-breaking tankers of 106,000 tdwt each. *Tempera* called at Finland for the first time on 5th November. Her sister ship will be delivered by the end of December. The new vessels will focus on round-the-year crude oil transport to the Fortum refineries from the Baltic and North Sea area. Safety improvement was the basis for the design of the vessels. Two ways to achieve this objective were implemented in the design of the vessel. Proactive operations are possible with the management systems and properties of the vessels and, on the other hand, potential consequences are prevented with structural solutions. The acquisition of *Tempera* and *Mastera* is part of the Fortum's fleet renewal. "Winter is now welcome. New tankers enable crude oil supply to the refineries during difficult ice conditions without ship to ship operations at sea," says Jukka Laaksovirta, President of Fortum Shipping.

Tempera's manoeuvring is based on the DAT (Double Acting Tanker) concept, which is patented by Kvaerner Masa-Yards and developed in co-operation with Fortum Shipping. This way of operating has now been implemented in new tankers for the first time in the world. The super ice-class vessels are able to transport crude oil in Baltic Sea conditions throughout the year. Their hull is designed to manoeuvre as efficiently as possible – forward in open water and stern ahead in demanding ice conditions.

OPEC

Saudi Arabia Can Change Oil Balance in Europe

Delivery to Europe of big volumes of crude oil from Saudi Arabia can change the crude oil balance on this continent, according to a statement on Sunday by the general secretary of OPEC in Vienna. Saudi Arabia is number 1 in crude oil export in the world and, according to the statement, it will not stop at the current level of 4-5 mb of crude oil, which already are delivered to Europe and it intends to continue to exceed supplies from the Norwegian and Russian sectors.

Turkey

Troubled Waters in the Bosphorus

The oil companies operating in Kazakhstan have made a joint complaint to the United Nations about the actions of Turkey which, they claim, is breaking international law. Turkey has established more rigid rules for tankers with the Kazakhstan oil passing through its waters. Oilmen refer to the international

Russia

No Licences Required for Oil and Gas Sales

The Russian State Duma, on Wednesday 13 November, passed in the second and third readings amendments to Article 17 of the law On Licensing

Vessels are built by the Sumitomo shipyard in Japan and they represent the latest approach in safety. Almost all of the functions related to the vessel's manoeuvring are redundant. Her manoeuvrability is especially good thanks to the diesel-electric azimuth propulsion system. The propeller and rudder combination operates like a huge outboard motor, which can turn 360 degrees around its axis.

Safety has also been improved though an integrated bridge, which will be a Fortum standard also in coming new buildings. Standardisation will make change from one vessel to another easier for navigators. Particular attention has also been paid to improve visibility from the bridge.

In addition to the cargo tanks, the extended double hull also covers the fuel and lubricant tanks. In case of emergency, it is also possible to transfer cargo into double-hull ballast tanks. The calculated strength of the hull steel is 40 years. Despite the strong hull, steel fatigue is monitored with a control system.

In addition, Fortum Shipping is replacing part of its old tonnage with two new 25,000 tdwt product tankers. These super ice class vessels will carry oil products in the Baltic and North Sea. They will be built in the Jinling Shipyard in China. The first vessel will be delivered to Fortum in the summer 2004, and the other one at the end of the year. The new tankers are options for two vessels that will be delivered during 2003.

Currently in tanks in the port of Rotterdam, there are 2 mb plus, in the French port of Le Havre, 2 mb in tanks and a further 1 mb in floating storage. All of these have arrived there from the Saudi oil-and-gas company Saudi Aramco. According to OPEC, this has been responsible for a further fall in the price for Brent from the North Sea of 4-5 cents a barrel and a further downturn is expected.

agreement of 1936, signed in Montreux. According to its conditions, Turkey has the right to limit passage of vessels through Bosphorus and Dardanelles passages only during wartime. There are no other clauses in the agreement.

Certain Types of Activity, which would remove the sale of oil, gas, and their products from the activities subject to licensing, according to the Interfax News Agency

Germany/Poland

Hydrocomplex for Lurgi

Lurgi Oel · Gas · Chemie GmbH, Frankfurt is currently building to an order by the Polish refinery operator Rafineria Nafty Glimar S. A. a turnkey hydrocomplex in the existing Gorlice-located refinery at a total value of around €80 million. After the order for a lube oil plant in Jedlicze, completed last year, this was the second contract received from the Polish mineral oil industry within a very short span of time.

The hydrocomplex comprises Isocracking and Isodewaxing/Isotransfinishing processes licensed from Chevron. The contract also includes the construction of a hydrogen production plant, a sour gas wash as well as the necessary ancillary units. The new plants are due to go on stream by the end of 2004.

The extension of the refinery serves the main purpose of producing base oils for lube oil production as well as oils for pharmaceutical applications, both products being much in demand in Poland. In addition, very high quality diesel, jet fuel and light hydrocarbon fractions

are produced. The complex will process 150,000 t/y of vacuum gas oil and 75,000 t/y of middle distillate from the refinery.

Based on technology licensed from Chevron (Richmond/USA) for the refinery facilities, Lurgi succeeded in minimizing the capital investment through value engineering, thus safeguarding the economics of the complex. The contract will be executed jointly with Lurgi Bipronaft S. A. in Kraków, a subsidiary of Lurgi Oel · Gas · Chemie which will take care of the major part of the engineering.

The extended basic engineering for the hydrocomplex will be the responsibility of Lurgi Oel · Gas · Chemie in Frankfurt, whilst the further project execution will take place in a task force at Lurgi Bipronaft in Kraków. Lurgi Bipronaft is one of the largest engineering companies in the chemical, petrochemical and refining industries in Poland recalling for more than 50 years of experience.

USA

Plasma Reforming Can Reform Off Specification Fuels

Synergy Technologies Corporation has demonstrated that its patented SynGen cold plasma reforming process can reform high sulphur, off-specification liquid fuels into hydrogen-rich synthesis gas, or syngas, according to reports from the USA. The syngas has many applications, one of which is to provide fuel for fuel cells. The ability to reform so-called "dirty" fuels for use in fuel cells is critical for industrial and military operations in many parts of the world where off-specification (or non-standard), high sulphur fuels are the norm rather than the exception. The SynGen process is of interest to the U.S. military, and indicative test results were presented at the 3rd Department of Defense Logistics Fuel Reforming Conference held recently in Panama City Beach, Florida.

Dr. Arthur Kaufman, chief technology officer for H Power Corporation, a leading manufacturer of fuel cells, made the presentation in collaboration with Synergy. Dr Kaufman said, "These are exciting results

and they were enthusiastically received at the Conference."

The tests were conducted at Synergy's Conroe, Texas, Research Centre. The Company prepared a high sulphur, off-specification liquid fuel by mixing commercial diesel fuel with a 4.6 wt% sulphur synthetic crude oil. The synthetic crude had the following distillation characteristics:

| | |
|-----------------------|---------|
| Initial Boiling Point | 51.5°C |
| 10% | 151.8°C |
| 50% | 331.1°C |
| 90% | 484.3°C |
| End Point | 605.9°C |

Fuel mixtures included sulphur contents of 4900, 9500, and 23,000 ppm by weight. The fuel mixture was reformed in a SynGen reactor suitable to supply a 5-10 kW fuel cell. Results show that SynGen reformers can be used to produce hydrogen-rich fuel from almost any high sulphur, off-specification liquid fuel, regardless of boiling range, for fuel cell applications.

Lithuania

Mazeikiu Nafta Markets Winter-type Diesel Fuel

Mazeikiu Nafta has switched to marketing winter grade diesel fuel as from 15 November. This grade of diesel fuel meets all EU and Lithuanian quality requirements and is designed for low wintertime ambient temperatures.

According to Thomas Schneider, acting General Director of Mazeikiu Nafta, "Our customers know that this grade of diesel fuel ensures reliable operation of their automobiles in the conditions of low winter temperatures. In mid-November, when air temperature

Marketing and Retailing

usually falls remarkably, we start to supply our customers with winter grade diesel fuel and so provide the market with a high-quality product developed for this colder period of the year."

Mazeikiu Nafta's winter-type diesel fuel loses fluidity only at temperatures as low as -26°C and therefore, in usual wintertime conditions it maintains all required properties and prevents engines from clogging and false operation.

Refinery of The Week - No.10 - Petrogal



Axens has brought on stream a Prime-G+ unit at Petrogal's refinery in Sines, Portugal. The 26,600 b/d unit was designed to desulphurise cracked gasoline to a level that would yield a gasoline pool sulphur specification of less than 50 ppm (Euro 2005 specification). The test run was accomplished with a cracked naphtha containing 2,100 ppm sulphur and the result showed less than 50 ppm sulphur in the product, with good octane retention and excellent gasoline yield.

Sines and Porto refineries have both implemented Axens' technologies to produce ultra-low sulphur fuels. In addition to the start-up of the Prime-G+ plant at Sines, Petrogal has recently streamed two Prime-D Toolbox technologies for ultra-low sulphur diesel production at the Porto and Sines refineries.

Petrogal is a wholly owned subsidiary of Galp Energia. The company is involved in the research and production of crude oil and natural gas, refining, transportation, distribution and sales activities related



*The new Axens unit under construction
(Courtesy of Fluor Daniel)*

to crude oil and its derivatives and natural gas.

The Petrogal refineries are located in Sines and Porto and have a combined nameplate distillation capacity of 15.2 mt/y.

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