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Front cover Foto: **Wintershall AG, Kassel**

In November BASF and Russia's OAO Gazprom  
officially launched natural gas production at the  
joint venture ZAO Achimgaz in Siberia.  
The German-Russian joint venture produces  
natural gas and condensate from the Achimov  
Formation, from which it also gets its name, in  
the Urengoy deposit. (see p. 170)

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Front cover Foto: **MAN Turbo AG, Oberhausen/  
Germany**

MAN Turbo pipeline compressors have been  
proven reliable and highly efficient in numerous  
operating hours ensuring a defined pressure  
level of gas pipelines.  
This RV080 type compressor is driven by a MAN  
Turbo industrial steam turbine DK 63/130 utilis-  
ing the exhaust heat of the installed FT8r MAN  
Turbo gas turbines at the Mallnow compressor  
station of WINGAS TRANSPORT GmbH & Co.  
KG. Thus the combined cycle concept of  
Mallnow sets a new benchmark for the efficient  
transport of natural gas.

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Front cover Foto: **Joh. Heinr. Bornemann GmbH, Obernkirchen/Germany**

Multiphase Pump System during factory acceptance test at Joh. Heinr. Bornemann GmbH in Obernkirchen.

The core part of the system consists of two multiphase pumps of the type MPC 400 with a drive power up to 2.8 MW. The turn-key supply also includes control and transformer containers, air-cooled liquid chillers as well as a comprehensive fire detection and fire fighting system with highest safety levels.

Due to the dimensions of the entire system the multiphase pumps and the associated piping with remote operated ball valves are installed on separate skids.

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Front cover Foto: **Bayernoil GmbH,**  
**Indolstadt/Germany**

Detailed view of the OATS plant at the Vohburg  
refinery site.

The OATS™ process is an alternative route for  
the desulphurisation of mainly light fractions  
from FCC units without using hydrogen.

(see article on pages 28–30)

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*LNG Storage Nievenheim*

The Nievenheim Liquid Natural Gas Storage serves to secure the natural gas supply in the area of Cologne providing about 23.000 m<sup>3</sup> liquefied gas at -165 °C for balancing seasonal peaks in demand. Initially developed in 1973 as future technology, in 2003 the refurbishment starts to prove the equipment thoroughly and to implement state of the art safety equipment. In the season 2007/2008 Nievenheim will be commissioned for its "second life time".

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Front cover Foto: **OMV Aktiengesellschaft,  
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With more than 1500 km of underground pipe-  
lines, Austria plays a key role in the European  
natural gas network.

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Front cover Foto: **Winterhall AG, Kassel**

Sparks flew in the cold winter air as work  
started on the Russian onshore section of the  
Nord Stream in Babayev, 800 km east of  
St. Petersburg.  
The pipeline link connects the planned Nord  
Stream pipeline through the Baltic Sea with  
the existing gas pipelines from Siberia.

# OIL GAS EUROPEAN MAGAZINE

INTERNATIONAL EDITION OF  
ERDÖL ERDGAS KOHLE

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Front cover Foto: **Uhde GmbH,**  
**Dortmund/Germany**

The photo shows a polymer production complex built by Uhde in the Middle East. Another plant for the production of high-quality polymers is now to be erected in Egypt, 170 km north-east of Cairo. Uhde GmbH, part of the Technologies segment of the ThyssenKrupp Group, has been commissioned by Egyptian Propylene & Polypropylene Co. to build a new turnkey petrochemical complex consisting of a propylene and polypropylene plant with an annual production capacity of 350,000 t. This first ever commercial-scale application of Uhde's **STAR process®** for the production of propylene will use propane from Egyptian natural gas deposits as feedstock. (More details see p. OG 41)

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Front cover Foto: **UGS GmbH, Mittenwalde/  
Germany**

Mobile drilling and workover rig IRI Franks 900 /  
T12 (hook load capacity: 1731 kN) while drilling  
the new cavern well K 103 for the extension of  
cavern storage field Kraak in northern Germany.  
After leaching a cavern volume from more than  
500,000 m<sup>3</sup> could already be realised.

Technical specification of the well:

Contractor: E.ON Hanse AG – Hamburg  
Planning and Realisation: UGS GmbH –  
Mittenwalde  
Final depth: 1320 m (measured depth)  
1236 m (true vertical depth)  
308 m vertical section.

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tions, both onshore and offshore. N-SPEC®  
cleaning chemicals have already been success-  
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panies worldwide.

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*Gas pipeline in Tierra del Fuego, Argentina*

The world's most southerly natural gas pipeline  
was put into operation in June 2005 by the con-  
sortium partners Wintershall Energía SA, Total  
Austral SA and Pan American Energy L.L.C. to  
transport natural gas produced from the Carina  
and Aries offshore fields

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Front cover Foto: **Lurgi AG, Frankfurt/Main**

Lurgi AG built a plant for the production of biodiesel/FAME and pharmaceutical-grade glycerin with an annual capacity of 35,000 t of biodiesel/FAME for its customer Energía Hidroeléctrica de Navarra (EHN) in Caparrosa, Spain. This plant went on stream in April this year after a construction time of around one year and a half. The quality of the biodiesel complies with EN 14214, that of the pharmaceutical-grade glycerine to European/US Pharmacopeia 99.5. As plant feedstock all vegetable oils, in particular from rape seed, palm olein, sunflower seed and soy beans are used and have been proven in operation. Lurgi built this plant under a turnkey contract.

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Front cover Foto:

**Manufacturing milestone for Bentec, 2500 HP drilling rig for the Mittelplate field development**

Bentec Drilling & Oilfield Systems, international rig designer and manufacturer unveiled the new 2500 hp rig T-150. It has been building for the Mittelplate Consortium at Bentec's manufacturing facility in Bad Bentheim, Germany.

The rig will be operating on the artificial drilling and production island Mittelplate located in the eco-sensitive Tidelands. The rig has been manufactured to an extremely high specification, with a zero spill policy, low noise and reduced emissions.

Bentec has completed this project on schedule and on budget. The award of this contract recognized an exceptional track record in rig design and construction. (see report on p. 59)

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Front cover Foto:

3D-image in the cave at Norsk Hydro's research  
center at Sandsli, Norway

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Front cover Foto: **OMV Exploration & Production, Vienna**

OMV Exploration & Production started its activities in Albania in 1991. Through selective acquisitions in promising areas and the purchase of Preussag Energie's portfolio in early 2003, OMV became the leading international E&P company in Albania. In 2002 and 2003 geological studies, seismic surveys, and drilling of exploration wells confirmed the existence of carbonate reservoirs onshore in southern Albania. Exploration and evaluation there is still ongoing. OMV has signed a production sharing contract for exploration and production in a new offshore block in Albania in May 2004. Seismic surveys in the new Block called "Duress" will start early 2005.

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Front cover Foto: **Crown Minerals,  
New Zealand**

Semi-submersible "Ocean Bounty" drilling Pohokura-3 well offshore New Zealand's North Island. In the background the mighty Mount Taranaki.  
The country is extremely interested to attract exploration investment (see also article starting on page OG 106).

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Front Cover Foto: **Linde AG, Gas and  
Engineering, Gas Division, Höllriegelskreuth/  
Germany**

The industrial process most commonly used  
nowadays for the large-scale production of  
hydrogen is steam reforming.  
Linde has worldwide built numerous steam  
reforming plants with capacities ranging from  
appr. 1,000 to 100,000 Nm<sup>3</sup>/h H<sub>2</sub>.  
At Milazzo, Sicily, Linde supplies the local  
refinery with hydrogen from its own large  
capacity on-site plant.

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Front cover Foto: **OMV Aktiengesellschaft,  
Vienna, Austria**

Pipelines and storage volumes – unreplaceable connections and buffer between production and demand.

Within OMV's Schwechat Refinery near Vienna several thousand kilometres of pipeline are used to transport products.  
(www.omv.com)

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Front cover Foto: **Linde AG, Linde Engineering  
Division, Hoellriegelskreuth**

Linde are currently building Europe's largest  
natural gas liquefaction plant for the Snøhvit  
consortium. The plant is located on the Norwe-  
gian island of Melkøya near Hammerfest, north  
of the Arctic circle. The contract includes the  
supply of the key equipment for the liquefaction  
process, the development of storage and  
offloading facilities, and all engineering, procure-  
ment, and supervision of construction. The total  
project will have a contract value for Linde of  
more than 400 million euro.

The plant should be operational by 2006 and will  
have a production capacity of 4.3 million t of  
liquid natural gas per annum. The gas will be  
processed from the Snøhvit field and from other  
gasfields in the Barents Sea.

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Front cover Foto: **RWE Dea AG, Hamburg**

The new living quarter of the Mittelplate drilling  
and production island being transported by  
floating crane 'Samson' through the Wadden  
Sea to the artificial island.

The two modules of the living quarter, which  
together weigh 840 tonnes, were built by the  
Aker shipyard in Wismar.

In mid-August the Mittelplate Consortium  
(RWE Dea AG / Wintershall AG) reported that  
the new living quarter had successfully arrived  
at the island. The new living quarter is more  
spacious and comfortable. Instead of 69 persons  
in the past, the new facilities can accommodate  
up to 96 persons.

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Front Cover Foto: **Siemens AG, Power Generation**

Having an intake volume flow of approx. 700,000  
m<sup>3</sup>/h, weighing approx. 160 t: Siemens Power  
Generation has manufactured the **largest air  
compressor** ever for application within an air  
separation plant. The compressor unit is being  
installed by Sasol at the world's largest air sepa-  
ration plant in Secunda, South Africa. The plant,  
which was constructed by the French company  
Air Liquide, provides oxygen for coal gasifica-  
tion. The synthetic gas that is produced is then  
converted into sulfur-free fuels. The unit was  
manufactured at the headquarters of Siemens  
Industrial Applications in Duisburg and has been  
shipped to South Africa by sea via Antwerp.  
Siemens completed this order in just 13 months,  
two months less than usual in the sector. (see p. 83)

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Front cover Foto: **Wintershall AG, Kassel/  
Germany**

*Wintershall AG's Production Platform A6-A*

After a two-hour helicopter flight, the new crew  
members are able to see where they are going  
to work for the next two weeks – platform A6-A.

Wintershall AG has operated this steel platform,  
located 300 km off the Dutch coast, since the  
summer of 2000. It is Wintershall's first natural  
gas production platform in the German sector of  
the North Sea. Its production capacity of around  
1.2 billion m<sup>3</sup>/a represents approximately 6% of  
Germany's overall annual production.

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