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Front Cover Photo: **Repsol, Madrid**

Sovex Rig in the Santos Basin, offshore Brazil

Recently Repsol Sinopec announced a
good quality oil discovery in the extremely
deep waters of the Santos Basin, along
with partners Petrobras and BG Group.
(see p. 176).

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Front Cover Photo: **Øyvind Hagen / Statoil**

Peregrino B platform with FSPO vessel

In April production started from the Peregrino
field offshore Brazil. Peregrino represents the
largest international field Statoil operates. The
heavy crude oil field is located 85 km offshore
in water depths of around 100 metres.
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Front Cover Photo: **Nord Stream AG, Zug,
Switzerland**

*Welding and sealing of Nord Stream pipes on
board of the pipelay vessel Castoro Sei*

Construction of the Nord Stream Pipeline
continues on track. Over 1000 km of Line 1
have been laid in the Baltic Sea and pipe-
laying works have already been completed at
the landfalls for Line 2.

Gas deliveries from Line 1 will begin before
the end of 2011, and Line 2 will be launched
in 2012.

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Exploration drilling in Kurdistan, Iraq
(www.mol.hu).

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Kadanwari Gas Plant, Pakistan

OMV's production from the Sawan and Miano
gas fields in the south of the country makes it
the largest foreign gas producer in Pakistan.

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Netz AG, Essen**

Cavern storage Xanten

The piping is part of the most modern
technology for cavern storage of the RWE
Gasspeicher GmbH in Xanten, which en-
sures together with the RWE gas grids
and other components the constant avail-
ability and the safe, and environmentally
aware gas distribution in Germany.
RWE Gasspeicher GmbH is one important
part within the RWE Rheinland Westfalen
Netz AG. With the head office in Essen, it
is the distribution grid company of the
RWE Group and responsible for one of
Germany's largest distribution grids.

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View on the filter separation unit Baumgarten
natural gas hub in Austria.

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Front cover Photo: **Rohoel-Aufsuchungs AG
(RAG), Vienna**

The cover photo shows the modern RAG drilling
rig E 200, built by German BENTEC, on location
"Oberholz-001", Austria.

Technical details:

Hook load capacity	250 t
Drilling capacity	5000 m
BENTEC drawwork	E 1250 HP, AC
AC	gas/diesel driven, 3000 KW
Top drive	MH 500 t/800 HP
Mud pump	2 x Wirth TPK 1300 AC
Iron roughneck	ST 80
Pick up lay down pipe handling	
Mud tank capacity	120 m ³

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Front cover Foto: **TNK-BP**

Exploration well drilling in the Samotlor field

The Russian-British company TNK-BP is going
to invest \$1 billion by 2012 into development of
the Samotlor field for maintaining oil production
at a level of around 30 million t/a.
(see News on page 60)

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

The cover photo shows offshore installa-
tions of the **Ashtart oil field, Tunisia**.
OMV first became active in Tunisia in the
early 1970s. The most prolific of its produ-
cing oilfields is the Ashtart field.

OMV currently has interests in two explo-
ration and five production licenses in Tuni-
sia. Its current production in Tunisia
amounts to approximately 9,000 boe/d.
OMV operates the Jenein Sud exploration
block which is situated in the Tunisian ex-
tension of the Ghadames basin. In April
2008, OMV acquired an 80% operated
share in the Sidi Mansour exploration
area.

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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.

OIL GAS EUROPEAN MAGAZINE

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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 m³
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,
Vienna, Austria**

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.

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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 & Poly-
propylene Co. to build a new turnkey petrochem-
ical complex consisting of a propylene and poly-
propylene plant with an annual production ca-
pacity of 350,000 t. This first ever commercial-
scale application of Uhde's **STAR process®** for
the production of propylene will use propane
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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 m³ 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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Front cover Foto: **Brenntag Nederland B.V. Oil & Gas Europe, Dordrecht**

N-SPEC® pipeline cleaning services from Brenntag Oil & Gas Europe.

N-SPEC® cleaning chemicals consist of highly concentrated liquid surfactants, polymers and dispersants designed to penetrate and remove solids such as paraffin, asphaltene, compressor oil deposits and waxes in industrial oil and gas applications. N-SPEC® cleaning chemicals can be applied online, without interrupting operations, both onshore and offshore. N-SPEC® cleaning chemicals have already been successfully applied in cleaning crude oil and gas pipelines, flow lines and gas lift wells at ~400 companies worldwide.

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MiRO refinery in Karlsruhe, Germany. – Partners
in Germany's largest refinery (16 million t/a) are
Shell Deutschland Oil GmbH (32.25%), Esso
Deutschland GmbH (25%), Ruhr Oel GmbH
(24%) and ConocoPhillips Continental Holding
GmbH (18.75%).
www.miro-ka.de

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Front cover Foto: **BASF AG**

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

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OIL GAS EUROPEAN MAGAZINE

INTERNATIONAL EDITION OF
ERDÖL ERDGAS KOHLE

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

OMV Exploration & Production started its activi-
ties in Albania in 1991. Through selective acqui-
sitions 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 explora-
tion 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 Nm³/h H₂.
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
m³/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 m³/a represents approximately 6% of
Germany's overall annual production.

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