HERNIS CCTV
below the surface
on the world's first HiLoad DP

Bjørn Fossestøl, new Marketing Director at HERNIS

Lillian Thaule, new sales responsible for the German market
New Contracts

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CRUISE
HERNIS 400 System
Buyer: Siemens AG, Bremen
Owner: Stena Line BV
Project: Stena Britannica, CCTV extension no 2

HERNIS Switch System
Buyer: Wormald Italiana S.p.A. (Tyco)
Owner: Princess Cruises Inc.
Project: H-6131 Fincarrier

OFFSHORE
Crane TV CT20
Buyer: National Oilwell Varco
Owner: Seadrill
Project: 2 systems delivered to West E-drill

Buyer: National Oilwell Varco
Owner: Stena Drilling Ltd.
Project: Stena Drillmax III

Buyer: National Oilwell Varco
Owner: Offshore Deep Sea Rig Crane no. 1 and 2

Buyer: National Oilwell Varco
Owner: Transocean Offshore Deepwater Ltd.
Project: H-5904 (4 systems)

Buyer: Petroleum Supply Company
Owner: Petrobras
Project: Pride Brazil, SemiSub

Crane TV CT30
Buyer: National Oilwell Varco
Owner: Woodside Offshore Petroleum Pty Ltd
Project: Vincent FPSO

Buyer: National Oilwell Varco
Owner: Petrobras
Project: PS3 Marlim Leste FPSO (5 systems)

HERNIS 400 System
Buyer: Aisha Trading Co.
Project: Mampak Platform

Buyer: Aisha Trading Co.
Project: Seria North Flank Platform

Buyer: Samsung Heavy Ind. Co., Ltd.
Owner: Stena Drilling Ltd.
Project: H-1747 Stena Drillmax III

Buyer: National Oilwell Varco
Owner: Stena Drilling Ltd.
Project: H-1747 Stena Drillmax III

Buyer: / Owner: BW Offshore AS
Project: H-1747 Stena Drillmax III

ONSHORE
HERNIS 400 System
Buyer: Aisha Trading Co.
Project: Mampak Platform

Buyer: Aisha Trading Co.
Project: Seria North Flank Platform

Buyer: Samsung Heavy Ind. Co., Ltd.
Owner: Stena Drilling Ltd.
Project: H-1747 Stena Drillmax III

Buyer: National Oilwell Varco
Owner: Stena Drilling Ltd.
Project: H-1747 Stena Drillmax III

Buyer: / Owner: BW Offshore AS
Project: OffRig Innovator

Buyer: Samsung Heavy Ind. Co., Ltd.
Owner: Petrobras
Project: Odfjell Deep Sea Rig Crane no. 1 and 2

HERNIS Switch System
Buyer: J.J. Sietas KG Schiffswerft GmbH
Owner: Godby Shipping AB
Project: N-B-1282 RoRo 9500dwt

Buyer: / Owner: Shell Int. Trading & Shipping Co Ltd
Project: Galeomma LNG Carrier

Buyer: Samsung Heavy Ind. Co., Ltd.
Owner: Chevron Shipping Company
Project: H-1642 LNG carrier

Buyer: Hyundai Heavy Industries Co.
Owner: Primorsk Shipping Corporation
Project: H-1737 Prisco Mizar Oil Tanker

Buyer: Hyundai Heavy Industries Co.
Owner: Primorsk Shipping Corporation
Project: H-1738 Prisco Alcor Oil Tanker

Buyer / Owner: Samsung Heavy Ind. Co., Ltd.
Owner: ConocoPhillips Australia
Project: Lewak Champion

Buyer / Owner: ConocoPhillips Australia
Project: Lekmar 

Buyer / Owner: ConocoPhillips Australia
Project: Van Oord Dregder

Buyer: B.V. Installatiebouw van der Leun
Owner: Volvox Iberia
Project: Van Oord Dregder

Buyer: Callenberg Engineering AB
Owner: Seatrans ANS
Project: MS Baltic Excelent

Buyer: / Owner: Frontier Drilling Asia Pte Ltd
Project: Peregrine II

Buyer: / Owner: MOL Tankship Management (Europe) Limited
Project: M.T. Pacific Partner

SHIPPING
Crane TV CT10
Buyer: MacGregor Cranes, Hägglunds AB
Project: 2/06029.01 LMW

Buyer: MacGregor Cranes, Hägglunds AB
Project: 2/06028.01 LMW

Buyer: Sojitz Europe Plc
Owner: Sojitz Kyushu Corporation
Project: MH-2219

Buyer: J.J. Sietas KG Schiffswerft GmbH
Owner: Godby Shipping AB
Project: N-B-1282 RoRo 9500dwt

Buyer: / Owner: Shell Int. Trading & Shipping Co Ltd
Project: Galeomma LNG Carrier

Buyer: Samsung Heavy Ind. Co., Ltd.
Owner: Chevron Shipping Company
Project: H-1642 LNG carrier

Buyer: Hyundai Heavy Industries Co.
Owner: Primorsk Shipping Corporation
Project: H-1737 Prisco Mizar Oil Tanker

Buyer: Hyundai Heavy Industries Co.
Owner: Primorsk Shipping Corporation
Project: H-1738 Prisco Alcor Oil Tanker

Buyer: Samsung Heavy Ind. Co., Ltd.
Owner: Leif Höegh & Co.ASA
Project: H-1689 LNG SRV Carrier

Buyer: Daewoo Shipbuilding and Marine
Owner: Exmar Shipmanagement
Project: H-2263 RV LNG Carrier

Buyer: B.V. Installatiebouw van der Leun
Owner: Volvox Iberia
Project: Van Oord Dregder

Buyer: Callenberg Engineering AB
Owner: Seatrans ANS
Project: MS Baltic Excelent

Buyer: / Owner: Frontier Drilling Asia Pte Ltd
Project: Peregrine II

Buyer: / Owner: MOL Tankship Management (Europe) Limited
Project: M.T. Pacific Partner
New Marketing Director at HERNIS

It is with great pleasure we can announce that the position for Marketing Director at HERNIS Scan Systems has been taken by Bjørn Fossestøl. He joined HERNIS in the beginning of March, 2007.

Bjørn has left a position as Vice President for the Marine & Offshore division at Aker Kvaerner Pusnes, a position he has held since 2002. From 1994 to 2002 he had a similar position for the Offshore division at Aker Kvaerner Pusnes. Bjørn holds a Master of Science degree within mechanical engineering. We are certain that Bjørn's background will add expertise to HERNIS when it comes to management, strategic planning and marketing.

Bjørn lives in Arendal with his wife and 2 children. When he has some time off he enjoys outdoor life both winter and summer.

We hope you will all join us in a warm welcoming of Bjørn.

Presenting HERNIS Area Sales Responsible for the German market

Many of you already know Lillian Thaule, as she has been with HERNIS since 2001 as Sales Assistant in the sales department.

However, from January 2007, in addition to her current position, she has taken on the task of sales responsibility for the German market, including support and after sales.

“This certainly is a challenge to me, but I look forward to undertake this new and exiting responsibility. It is a great opportunity to fulfill some of my ambitions within HERNIS and I am prepared to meet the challenges ahead. I am very pleased” says Lillian with a smile.

Lillian lives in Arendal with Stein Are and their adorable 2,5 year old son, Eirik. In the summer they spend the holydays and most weekends in their boat in the skerries of Arendal, and during winter time they go to the family cabin in the mountains.

We are happy to entrust this task in the hands of Lillian and wish her all the best of luck!

“I am pleased to join the HERNIS team and I am looking forward to contribute to the continuous success for the HERNIS products in the market” says Bjørn Fossestøl.
HERNIS has entered a contract with Remora ASA for delivery of the complete HERNIS 400 CCTV System to operate onboard the HiLoad DP in the Gulf of Mexico. The contract includes options for another two HiLoad systems.

The CCTV system consists of several Camera Stations, including the RDC400WP, EX286 and EX291 Subsea camera station, which will be placed in strategic areas of the HiLoad to operate respectively above and below the surface. According to Remora ASA, the HiLoad Technology has a wide range of applications, spanning from offshore loading of crude oil, turret mooring of FSOs and FPSOs as well as a mobile propulsion/DP system for ship shapes and semis. (HiLoad Systems
are used for offshore loading of crude oil, and for mooring of FPSOs and FSOs.) The HiLoad Systems offer significant cost and operational advantages.

We are pleased to be part of this exiting project, and are looking forward to a productive cooperation with Remora for this and future projects.

The HiLoad® DP Technology has been developed, engineered and model tested in cooperation with ConocoPhilips, and is now being fabricated on speculation. The unit is scheduled to be delivered in May 2008 and Remora ASA is expecting to have an end user lined up by then.

- The remotely operated HiLoad unit will dock onto any tanker in a similar way as a forklift picks up a pallet. The HiLoad unit will connect to the forward part of the tanker, allowing the tanker to weathervane during operation.

- The tanker loading hose is stored on a reel onboard the HiLoad, and can simply be deployed and pulled to the midship manifold using a dedicated winch on the HiLoad.

- Model basin tests have proven that the HiLoad can safely connect to a tanker in waves up to 8-9 meters. The HiLoad can be used for tankers up to and including VLCC size.

HERNIS EX291 Subsea Camera Stations will be placed in the middle section of the HiLoad and will operate under the surface.

The RDC400WP camera stations will be placed in all rooms in the pontoon of HiLoad DP to allow the crew to monitor all rooms from the CCR.

HERNIS EX286 Camera Stations will be placed on top of each tower of the HiLoad DP.
HERNIS is on course delivering CCTV System to PROSAFE onboard the FPSO Umuroa. The CCTV system will provide real time visual surveillance of critical areas onboard the vessel.

**FPSO UMUROA**

The system includes the well-proven HERNIS 400 Control System along side Camera Stations EX286W, PT9W and S7. Upon alarm activation, all events are recorded on a Digital Video Recorder.

The FPSO will be delivered 1st quarter of 2007. The vessel will be chartered to New Zealand Oil and Gas for an initial period of five years with options to extend with five more years.

The Umuroa FPSO is capable of producing 50,000 barrels of oil per day and 118,000 barrels of water per day, and has a storage capacity of 730,000 barrels. The vessel will be moored in 120 meters of water and will be Prosafe’s first FPSO offshore New Zealand. The first oil will be delivered in the second quarter of 2007.

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The name, Umuroa, has been selected following cultural advice from the New Zealand Iwi, a Maori tribal group who are the traditional occupiers of the nearest landfall to the project. Loosely translated, “Umus” means heat or energy or place of warmth, and “Roa” means long. Hence Umuroa can be considered to mean “long on energy”.

HERNIS recently delivered the CCTV System and Equipment for the FPSO POLVO. The delivery comprises several HERNIS EX 286W, PT9W, S7 Camera Stations and HERNIS 400 Control System with the latest Compact Matrix including Digital Recording to capture every video image on each Camera Station.

FPSO POLVO

The Factory Acceptance Test was conducted in HERNIS Regional Office, Singapore in the presence of PROSAFE representatives and with great success.

The FPSO POLVO is due for completion from Keppel Shipyard early 2007. The FPSO is capable of producing 90,000 barrels of oil per day, 135,000 barrels of water per day and 150,000 barrels of fluid per day, with a storage capacity of 1.6 million barrels. The vessel will be moored in 105 meters of water in Campos Basin, offshore Brazil and is to be tied to a wellhead platform located nearby.
Main course 6 portions
Preparation time:
1-2 hours
Cooking time:
30 min to 1 hour

Ingredients:
1 kg/2lb 4 oz middle cut beef fillet, trimmed
1/4 bunch of thyme – finely chopped
Sea salt and black pepper – freshly ground

For the Duxelles
55g/2oz butter
1 clove of garlic – finely chopped
500g/1lb 2oz flat field mushrooms – finely chopped
A few drops of truffle oil
1 tbsp parsley – finely chopped

For the “Wellington”
English mustard, to taste
500g/1lb 2oz block puff pastry
1 egg – lightly beaten, to seal the pastry
Melted butter, to glaze

HERNIS taste of the world
Beef Wellington – English traditional recipe

With her English background and a passion for cooking, Philippa Clark made this contribution to the HERNIS cookery book. It is an old traditional recipe, which draws the attention to the history of the duke of Wellington. Ms Clark tells us that she is carrying on her mum’s tradition of making it for Boxing Day dinner.
Invitation!

All HERNIS customers and business relations are invited to bring your personal contribution to the HERNIS cookery book; “HERNIS taste of the world”.

Do you have a specialty or a favorite recipe in one of these categories?

• First course
• Main course
• Desserts
• Bakery

It is time to disclose the secrets of the ingredients and share the procedure with us! Send your recipe to cctv@hernis.com, marked “HERNIS taste of the world”, and don’t forget to include the background story for the recipe and your picture.

Please note, that by sending your contribution to HERNIS, you give HERNIS all rights to publish and use the recipe in any connection that HERNIS may decide to promote and distribute the cookery book. We do not guarantee to publish all contributions received, but each contribution will be greatly appreciated.

Procedure:

Preheat the oven to 180°C/350°F/Gas 4.
Season the beef with the thyme, sea salt and pepper and rest for 30 minutes.
Heat a pan and sear each side of the beef until golden brown.
Allow to cool to room temperature.
For the Duxelles, sweat the butter, garlic and mushrooms in a pan over a low heat until all the moisture evaporates.
Add the truffle oil and parsley, and season to taste.
Remove from the heat and allow to cool to room temperature.
Smear the beef with an even coating of English mustard.
Lightly dust a sheet of baking paper with flour.
Roll the pastry so it is a little wider than the beef, and the beef can be completely rolled in pastry.
Place the pastry so the longest half is facing you.
Spread the Duxelle mixture evenly over the half of the pastry closest to you.
Place the beef on top of the mushroom mix.
Roll the beef up in the pastry, leaving a slight overlap of 3 cm/1 in. Brush this with beaten egg and seal.
Trim the ends of the pastry so they are flush with the beef.
Cut a sheet of baking paper to the size of the beef Wellington.
Place the beef Wellington on the paper, lightly brush the top with melted butter and refrigerate for 30 minutes.
Put the beef Wellington in the oven and cook for 25 minutes or until dark golden in colour.
Serve with steamed spinach or roast vegetables of your choice.

Philippa Clark, Controller at HERNIS in Norway
In December 2006, HERNIS once again took part in OSEA, the International Oil & Gas Industry Exhibit and Conference in Singapore. After the show our sales team in Singapore proudly reported of a well visited exhibition with both existing customers as well as interested parties from Singapore and surrounding regions finding their way to the HERNIS booth.

The Sales Team at HERNIS in Singapore, Rizal, Vincent and Svein, were eager to show off some of the new solutions and equipment in the newly designed stand. Several projects were discussed and we were glad to meet up with our old friends to discuss new and existing Projects.

### Successful exhibit for HERNIS at OSEA 2006

Vincent Yap, Rizalino Esquivel and Svein Gundersen (HSS Singapore) at the HERNIS booth during OSEA 2006

### HERNIS Activity plan 2007

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 April – 3 May</td>
<td>OTC, Houston</td>
</tr>
<tr>
<td>4 May</td>
<td>Agent Seminar, US</td>
</tr>
<tr>
<td>8 June</td>
<td>Norwegian Offshore Customer Seminar, Arendal</td>
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<tr>
<td>12 – 15 June</td>
<td>Norshipping, Oslo</td>
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<tr>
<td>18 – 20 June</td>
<td>Agent Seminar, Arendal</td>
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<tr>
<td>24 – 27 October</td>
<td>Kormarine, Korea</td>
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<tr>
<td>27 – 30 November</td>
<td>Marintec China,</td>
</tr>
<tr>
<td>4 – 7 December</td>
<td>OSEA, Singapore</td>
</tr>
</tbody>
</table>
TECHNICAL CORNER

TEMPERATURE CLASSIFICATIONS

Whilst the Gas Group (or Class) relates to the ignition energy of the hazard, it is also necessary to have some way of classifying hazards for their ignition from hot surfaces. There is no relationship between ignition energy and ignition temperature, and hazards with very low (dangerous) ignition energy, may have a relatively high ignition temperature.

(For example hydrogen will, under worst case conditions, ignite with 20 micro Joules of ignition energy, and is placed in the most hazardous Gas Group: IIC. However, the ignition temperature of hydrogen is quite high at around 560° C.)

In order to establish the suitability of apparatus for use in a hazardous area from the view point of hot surfaces, apparatus is awarded a T-Rating, corresponding to its maximum surface temperature under certain conditions. The T-Rating or T-Class, can then easily be compared to the Auto Ignition Temperature or, Spontaneous Ignition Temperature of the hazard in which it is to be used, thus establishing safety from ignition from hot surfaces.

Six temperature classes, with some sub classes are recognised in North America. These are shown in Tables 1 and 2 below.

<table>
<thead>
<tr>
<th>T-Class</th>
<th>Maximum Surface Temperature in °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>450</td>
</tr>
<tr>
<td>T2</td>
<td>300</td>
</tr>
<tr>
<td>T3</td>
<td>200</td>
</tr>
<tr>
<td>T4</td>
<td>135</td>
</tr>
<tr>
<td>T5</td>
<td>100</td>
</tr>
<tr>
<td>T6</td>
<td>85</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>T-Class</th>
<th>Maximum Temperature on °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>450</td>
</tr>
<tr>
<td>T2</td>
<td>300</td>
</tr>
<tr>
<td>T2A</td>
<td>280</td>
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<td>T2B</td>
<td>260</td>
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<tr>
<td>T2C</td>
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<td>T2D</td>
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<td>T3</td>
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<td>T3A</td>
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<tr>
<td>T5</td>
<td>100</td>
</tr>
<tr>
<td>T6</td>
<td>85</td>
</tr>
</tbody>
</table>

Table 1 Temperature Classes (IEC)

Table 2 Temperature Classes (North America)

Table 1 is also applicable in North America when using NEC505. Table 2 refers to NEC500.
The HERNIS EX286 Camera Station is designed to withstand even the most challenging temperatures.