

Offshore

i n d u s t r y

On & Offshore 2009

ESSENTIAL BUSINESS EVENT

Hermod

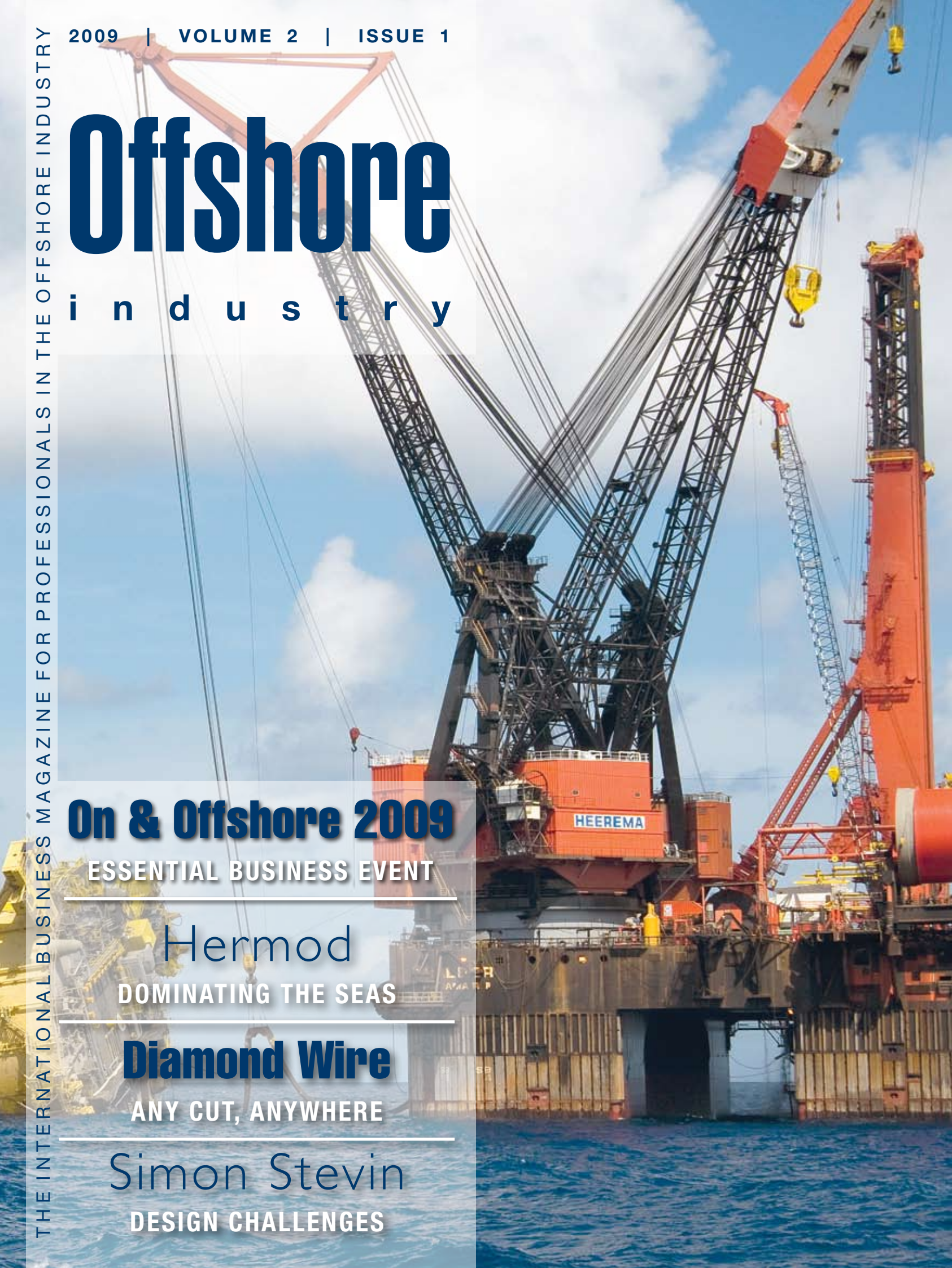
DOMINATING THE SEAS

Diamond Wire

ANY CUT, ANYWHERE

Simon Stevin

DESIGN CHALLENGES



**Bram van Bekhoven,
captain of the Hermod:**

“Size Really Matters!”



The heavy lift crane vessel Hermod may be thirty years old, there is still a very high demand for this versatile crane vessel. The vessel is not only a perfect fit for building platforms, it is also very suitable for the decommissioning of offshore structures. Through the years the vessel has more than proven its versatility and reliability. Jacques Kraaijeveld visited the floating giant when it made a port call in Europort Rotterdam for maintenance work.



“The right tool is half the job done and size really matters”, says captain Bram van Bekhoven with a bright smile. “This vessel has proven its reliability. Hermod’s size is one of its main advantages. We are successful due to the extent of our specialised equipment and dedicated work preparation. We operate in a niche market, meaning we have to counteract and solve specific problems. Thus, we can only succeed by permanent innovation.” Bram van Bekhoven is captain of one of the largest crane vessels in the world, the Hermod. This gigantic vessel, owned by the Dutch company Heerema Marine Contractors (HMC), was in the Caland Canal in the Europort for maintenance during the last months of 2008. “Regular maintenance takes place at an interval of five years. During this maintenance period, we have to carry out a small job for about two weeks off Scotland and then return to Europort to resume maintenance works that are expected to be completed in March 2009.”

Double Celebration

Bram van Bekhoven and some of his crew-members are met in the captain’s office on the Hermod, which hardly differs from an office setting ashore. The cosy office is accommodated with all kinds of conveniences. The heavy lift crane vessel is so large and spacious that one could quite easily get lost on board. Fortunately, there is an orange rope guiding visitors safely into and out of the deepest crypts of the Hermod. “Last week we welcomed about 2,600 visitors on board. Being here in Rotterdam Europort

gave us the opportunity to organise an ‘open house’ celebrating the 30th anniversary of the Hermod. Moreover, our company was founded sixty years ago, providing us with an additional reason for celebration. The open house was clearly an enormous success to promote our company and to give the visitors an impression of the great potential of the Hermod”, Bram van Bekhoven continues. He has been captain for thirteen years and has sailed on the Thialf, the Balder and the Hermod. When Bram van Bekhoven is on leave, he is relieved by captain Peter Sellers. They both work in shifts of five weeks. The officers on board of the Hermod are Dutch, or originate from other European countries. The majority of the crew holds the Malaysian nationality, or comes from other countries in the Far East.

Worldwide Deployment

Hermod is in capacity to be deployed all over the world, however, its huge size and low sailing speed are a restricting factor when there is a need for speed. Bram van Bekhoven explains: “During a maintenance stop like this, improvisation skills are a necessity. When at work, we are close to where the action is – the North Sea, so it speaks for itself to seize any opportunity that occurs. Although we can do our work all over the world, it is not always logical to go to the other side of the world. Our main work areas are the North Sea, the Gulf of Mexico and West Africa, where the Thialf is currently operating. The Persian Gulf is actually too far. To get there, we have to go around the Cape, meaning a sea passage of at least 75 days.





We make five knots under own power, and with one or two tugs we can achieve a maximum of seven knots. However, there is plenty of work in the North Sea for the decommissioning of platforms for the time being. In the case of decommissioning, we are highly dependent on the weather, so this work usually takes place during the summer months. Recently HMC was awarded a contract for a longer period of time off Australia starting in 2013. It also occurs that a project is delayed. We have to deal with different and changing circumstances. During this major overhaul and maintenance, all ballast tanks of Hermod are thoroughly

inspected. This is quite a task, with eighty ballast tanks on board. In addition, the cranes are surveyed and some painting may be carried out as well. UWILD (Underwater Inspection in Lieu of Dry Docking) is another aspect. The entire ship gets a thorough under-water inspection."

Work Satisfaction

"It speaks for itself that the ballast systems, both static as well as dynamic, are of essential importance for a heavy lift crane vessel. Working at water depths of up to 2,500 m, demands the utmost of the vessel and its equipment. Everything is on edge, from the cranes, the cables and the dynamic positioning system up to and including the technology to control all the activities", emphasises Bram van Bekhoven. "When we first operated at such a deepwater depth, it was a matter of trial and error. Please keep in mind that we have to cope with tremendous forces, for example with 420t underwater hammers. Thanks to our vast experience, we now handle these jobs quite easily. In fact, we have plans to work at even greater water depths. Taking up work like this is not only in our own advantage, our suppliers profit from it as well. We offer them the opportunity to test their products on our vessels, resulting in a happy customer. As for

Pioneering Solutions

Heerema Marine Contractors (HMC) is one of the two divisions within the Heerema Group. The Hermod, the Balder and the even bigger Thialf constitute the three showpieces of HMC. The company's head office is located in Leiden, the Netherlands. Local offices are, amongst others, based in Houston, Villahermosa, Groningen, Bangalore, Luanda, Perth and Singapore. HMC employs about 1,000 people.



myself: this work is very diverse and exiting. When it comes to the crunch, I can feel the adrenaline running through my veins. I really enjoy working on this ship because of the personal involvement with the projects and because you usually see the result of all the hard work immediately. As a comparison, pipe laying is a nice trade as well, but you do not see much result of your work. It generates an overwhelming feeling of satisfaction when you see a platform rising from the sea on the exact spot where it was planned to be and moreover, that you have made an important contribution to the building process."

Safety First

"Whatever task we perform, we work with very strict safety measures. Safety is the highest priority at all times and under all circumstances. The favourable conditions on this ship are the result of the good cooperation between the superintendent, the chief engineer and myself. In fact, HMC is actually a contractor at sea. But more than onshore, we are greatly dependent on the weather conditions. We receive a detailed weather forecast twice per day, indicating the expected weather conditions in detail for the location where we are working. When a storm is approaching, we cancel all activities and seek shelter. We can handle wind

Ekofisk Decommissioning

Heerema Marine Contractors (HMC) has been awarded a contract by ConocoPhillips for the engineering, offshore preparation, removal and onshore recycling of nine platforms in the greater Ekofisk area in the Norwegian and UK sector of the North Sea. HMC will be the main contractor for this work, which will also involve Norwegian demolition and recycling company AF Decom Offshore (a business unit of AF Gruppen ASA). The Ekofisk topsides and jackets will be removed and taken to a yard in Vats, Norway, for recycling and disposal. An estimated 96-98% of the recovered material will be recycled by 2014. The contract includes several options for the removal of other platforms and other installations.

Commenting on the awarded contract, HMC's Executive Vice President Commercial Steve Preston says: "This award strengthens the excellent relationship between our companies. We are looking forward to a continuation of the successful execution of Ekofisk CAT 1. For Heerema Marine Contractors and our key suppliers, it is a further step in demonstrating our ability to deliver the complete service required for such a decommissioning project." Safeguarding the environment, safety and predictability of the execution are the starting principles for the planned removal and recycling methods. HMC will remove and recycle the platforms in a phased sequence, whereby optimum use is made of both the unique as well as proven capabilities of its vessels. Offshore removal is expected to be completed by the end of 2013. The work will be carried out by the semi-submersible crane vessels Hermod and Thialf.

forces of a maximum of eight or nine Beaufort, depending on the relative wind direction. The cranes catch a lot of wind which results in tension on the cables. We can experience very bad operating conditions, especially on the North Sea. Compared to some years ago, we



are now much better prepared thanks to the permanent supply of information. We are not easily taken by surprise nowadays.”

Strong Team Spirit

“Apart from installing platforms, we are also involved in their removal and decommissioning. I have a slight preference for the first type of work. When building a platform, we are responsible from the beginning until the transfer of the platform. It is in everybody’s interest to start producing gas or oil as soon as possible. The sooner the better. It is different when it comes to decommissioning platforms, because of the various factors and different interests involved. In a certain way, the principal considers a structure as a live platform, whereas it is as lifeless as a stone in our view. This does not always lead to an easy removal. Working on board this ship, I continuously have to cope with new challenges. However, there is a very strong team spirit on board, and that is exactly the kind of working environment I really do enjoy!”, concludes Bram van Bekhoven with a bright smile.

i. hmc.heerema.com

Photo courtesy of Heerema Marine Contractors, Jacques Kraaijeveld and Gerrit de Boer.

Facts & Figures Hermod

Principal Particulars

Built in 1978 by Mitsui Engineering & Shipbuilding Company Ltd.	
Length overall including superstructure	154 m
Length of vessel	137 m
Width	86 m
Depth to workdeck	42 m
Draught	11.5 – 28.2 m
GRT	73,877 t
NRT	22,166 t

Portside Crane

Main hoist guyed	4,000 st*	26 – 39 m
Main hoist revolving	3,000 st	26 – 30.5 m
Auxiliary hoist	660 st	29.6 – 81 m
Whip hoist	80 st	33.9 – 110 m

Main hoist lifting height 92 m above workdeck. Lowering depth of auxiliary hoist up to 3,000 m below workdeck at maximum radius.

Starboard Crane

Main hoist guyed	5,000 st	24 – 40 m
Main hoist revolving	5,000 st	24 – 32 m
1st auxiliary hoist	1,000 st	27.2 – 80 m
2nd auxiliary hoist	660 st	30.8 – 101 m
Whip hoist	300 st	34.4 – 113.2 m

Main hoist lifting height 81 m above workdeck. Lowering depth of auxiliary hoist up to 3,000 m below workdeck at minimum radius.

Tandem Lift

Main hoist 8,100 t at 39 m radius.

Ballast System

Static and dynamic ballast system both fully computer controlled. Ballast pump capacity 8,000 m³/hrs. Dynamic ballast water handling 500 t/sec.

Deck Load /Transit Speed

Deck load capacity	20 t/m ²
Total deck load capacity	8,000 t
Transit speed, with 8,000t deck load	6 kn at 11.5 m draught

Propulsion & Power

Propulsion takes place by two electrically driven, controllable pitch propellers of 4,400 kW each aft and two electrically driven, retractable, controllable pitch thrusters of 1,470 kW each forward. Power supply is provided by seven diesel driven main generators of 2,765 kW each.

Mooring System

Twelve Delta Flipper anchors of 22.5 t each, on wire ropes of 4,500 m (15,000 ft) long. Minimum breaking strength 386 t.

Accommodation / Helicopter Deck

The living quarters are equipped to accommodate 336 persons. All quarters have heating and air conditioning facilities. The helicopter deck is suitable for a Sikorsky 61-N.

* 1 short ton (st) = 0.90718474 metric ton (mt)