

Gripping News



A regular quarterly newsletter
Informing and Entertaining !

Issue 6, September 2008

After a year of publishing *Gripping News*, we recently carried out a survey of our agents and representatives worldwide to see what improvements could be made. We are delighted that so many of you responded and thank you for your feedback. It's also nice to know that copies are regularly being passed to customers.

The two most interesting features for everyone are the recent news briefs and our second-page product information article – most all of you have also researched both of these on our website. We've recently completed a major upgrade to our website and as a result of your feedback, over the coming months, we will try to boost the news features both on the website and in *Gripping News*.

2008 Exhibitions



ONS2008 is Europe's largest offshore event. This year it was held in Stavanger between 26th – 29th August and all previous attendance records were broken with the organisers estimating that over 38,000 people attended the show and conference.

Bardex occupied Stand H854-04 in the USA Pavilion where we had a steady stream of visitors coming to see us. There are several major replacement, upgrade and refurbishment projects moving ahead in Norway and many of our visitors were asking us about our rig skidding systems. In the North Sea, Bardex systems have been installed on over 70% of the fixed drilling/wellhead platforms that are working in Norwegian and UK waters, some of which are over 30 years old.



It is with very great sadness that we advise the passing of Monty Peters. Monty was featured under "Experienced Hands" in our very first issue of *Gripping News* last year.

We will all miss him.

SCR Pull-in System:

Bardex has recently delivered a Steel Catenary Riser (SCR) Pull-in system for an order received in 2007 for development of an offshore field in the Gulf of Mexico.

The Bardex SCR pull-in system is used as an installation tool and comprises a linear chain jack capable of pulling 400 kips of 62 mm Grade R4 studlink chain, a separate operator's control console and a dedicated twin 40 hp motor-pump hydraulic power unit with water cooled heat exchanger.

The chain jack incorporates a trunnion pin and trunnion beam so that the chain jack can always provide a linear pull to the riser in spite of the changing angle of the catenary as it is pulled in.

Exmar Opti-Ex

Bardex is preparing to ship an order for the moveable chain jack mooring tensioning system for the Exmar OPTI EX floating production semi (FPS), a deep-draft ring-pontoon vessel, shown here under construction.



Each of the four chain jacks will pull up to 1,100 kips of the 107 mm top mooring chain and are movable over three Bardex chainstoppers each rated to hold the break strength of the chain - over 2,500 kips. Working closely with Exmar, Bardex engineers developed a unique chain handling system that, with a minimum of deck equipment enables a single 107 mm installation chain to be used for each cluster of three chainstoppers. As the installation chain is pulled in, it is directed over a special deflector sheave that allows it to feed back out through the adjacent chainstopper to prepare for pull-in of the next mooring line. After mooring is completed, the installation chain and related deck equipment is removed to reduce weight.

The system is powered by two Hydraulic Power Units with associated controls and instrumentation each of which comprises twin 60 hp motor-pumps and air-cooled heat exchangers.

Bardex SCR and Pipeline Pull-in Systems

A steel catenary riser (SCR) is typically a hydrocarbons production pipe that is run from a manifold or wellhead on the seabed up to a floating production platform or vessel. It is solid wall pipe but because of the very great depth, as much as 2,000 m, between seabed and the production vessel, and the horizontal offset, it hangs in a gentle curve which is known as its catenary. As the riser is lifted from the seabed, the angle of the catenary constantly changes and the tension needed to be applied to pull it in to the vessel increases considerably as the riser approaches the production vessel.

Bardex is known for its innovative and compact chain jacks – we were the first company to develop chain jacks for use in the offshore oil/gas industry - and our engineers devised a unique chain jack arrangement so that we will always provide a linear pull to the SCR, no matter how its angle of approach changes.

Our engineers devised a special structure for the chain jack so it is supported by a trunnion pin and trunnion beam, this provides the necessary articulation in two planes. The turndown sheave or bending shoe is close-mounted to the chain jack frame to ensure correct alignment at all times.



Bardex has designed and supplied SCR and Pipeline pull-in systems ranging in pull-in capacities from 55 tonnes to 350 tonnes. Since these systems are used as installation tools, Bardex designs them to be as portable and compact as possible and our smallest system, weighing in at less than 1 tonne was clearly highly portable. The photograph shows our Support Services Manager, Porter Spencer, during installation of a Bardex SCR system on a semi-submersible production vessel in the Gulf of Mexico. This particular system is designed for use with 102 mm studless chain to apply 350 tonnes tension in normal pull-in operations and in the event of an emergency case where a riser floods, our system is designed to hold 750 tonnes tension. In spite of its high capacity, in keeping with Bardex philosophy, the system including its A-frame support structure still weighs less than 20 tonnes.

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