

Rescue Mission Aided with Hunger Hydraulic Cylinders

Top Kill and Relief Well Operation on the Deepwater Horizon Drill Hole

Following damage to the Deepwater Horizon drill platform in the Gulf of Mexico a rescue mission was carried out using new untested methods and technology. To carry out the works drill ships including *Discoverer Enterprise* and *Discoverer Clear Leader* were employed, operating in water depths up to 1,500 metre.

These deepwater drill ships utilise special N-line tensioner systems to compensate for vertical drillship motion between the surface and the ocean bed due to ocean surface swell, thereby maintaining constant tension in the drill string and riser. The N-line tensioner systems employ special hydraulic cylinders produced by Hunger Hydraulik, based in Lohr am Main, Germany, which are able to accommodate loads from drill pipes up to 7 km long and at the same time compensate for wave motion of several metres.

Using this compensating system it was possible to complete the Top Kill trials and subsequently drill the relief wells to an accuracy of less than half a metre measured diameter of the damaged drill hole at a depth of over 5.000 metres. Furthermore with help of a containment dome installed over the well tens of thousands barrels of leaking oil and gas were recovered to the drill ships daily.



Drill ship Discoverer Clear Leader



Central drill pipe supported with
N-line tensioner cylinders

Even though the N-line tensioner cylinders have an effective stroke of over 15 metres the drill works had to be suspended for over a week in July due to hurricane *Bonnie*. Finally the technically demanding and lengthy process to drill the relief wells & seal the damaged drill hole succeeded, last but not least with the help of special hydraulic cylinders from Hunger Hydraulik

*Bilder: Hunger Hydraulik
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