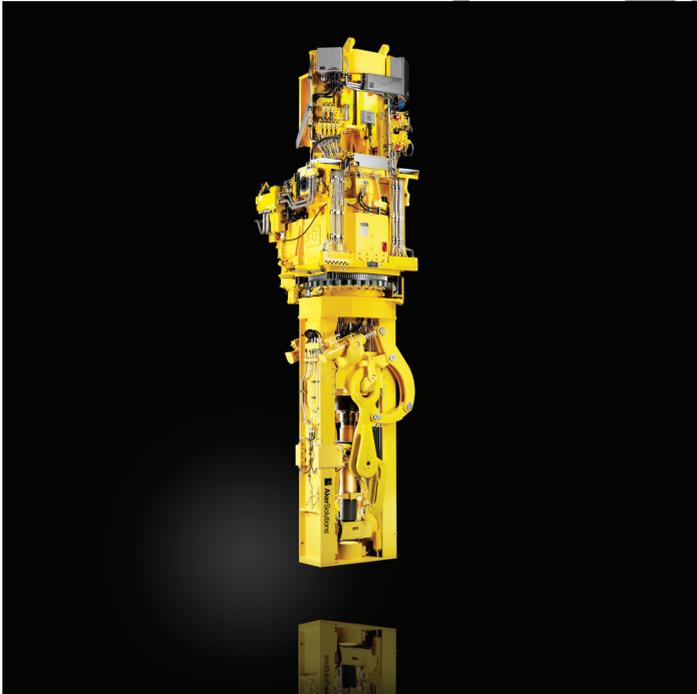


# : drilling



MH Wirth modular derrick drilling machine; MH MDDM 1000 AC™



Photo: Erik Ruud

## The technology

bondura® is an established system that simplifies design work by achieving a uniform pin design, thus avoiding the need to employ varying pin solutions, as well as complicated housing and securing components.

When new equipment is being manufactured, supports can be made with coarse hole tolerances. This will reduce cost and simplify the manufacturing process. The tapered sections of the bondura® pivot pin ease the assembly process of the pivot joint connections without destroying the high grade bearing surface. When the pin is in place, the conical expanding sleeves are assembled, and the bondura® is torqued to a given value, so that the sleeves expands to create a close to zero tolerance between pin and support.

With bondura®, equipment requiring precision and manoeuvrability will achieve a solid, supportive pin connection, thus preventing the development of play. The bondura® pivot pin technology will enhance the quality and lifecycle of the equipment, as well as reduce assembly time and lower overall cost.

«Using bondura® for the Top Drive dolly frames the main driver is to reduce the amount of welding and machining work when the units are in for 5 yearly overhauls. We keep exchange Top Drives but generally not retract dolly frames where every time need significant welding and large horizontal borer machines to re cut the bores which are not always readily available and normally the bottleneck during a fast turnaround of a TDS retract dolly frame. This came to a head last year where the PBLJ was 2 weeks late due to the extensive welding and machining on these frames. We can not accept our scheduled TDS overhauls to overrun in the shop every time as the Top Drive is normally on the critical path and any delays past schedule can cost us \$500k a day in lost revenue plus lost costs keeping the rig.»

by Dean Young

Program Manager - Top Drive & Pipehandling  
Major Spares & Equipment Exchange, Transocean

## Certification

bondura® is a patented product as well as «Type Approved» by DNV GL. The product has been classified as «Proven Technology» within the drilling-, lifting- and industrybusiness since 1994. bondura® technology AS is certified according to ISO 9001:2008.



# No play

Heavy loads with impact force to a pivot joint will result in excessive wear to the supports over time. The consequence of such wear can be: damage to equipment, safety hazards, maneuverability and accuracy problems during operations, not to mention the time-consuming and costly repairs needed to get the equipment back in operation.

The bondura® pivot pin technology eliminates any wear to occur, ensuring a solid 180 degree distribution of the load within the supports of the pivot joint. Nor will one have the need to repair the supports by subsequent line drilling. The risk of cracks forming in the supports will be reduced, and the equipment's life cycle will be extended significantly by using the bondura® pivot pin.

Typical references :

- Pipehandling systems
- Top drive systems
- Motion Compensation
- Draw Works
- Travelling Equipment
- Iron Roughnecks
- Cranes
- Jacking / Skidding
- Winches
- Manipulators
- Retractable Dolly systems



Derrick, West Alpha

