

Powering Oilwell Drilling to New Depths

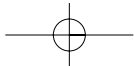
For companies drilling offshore the monitoring and control of the drilling process is of utmost importance. There is so much data to track, correlate, analyze and act upon that it requires a very sophisticated and fully integrated set of software and hardware tools. The ability to make quick, informed decisions regarding drilling operations can mean saving a tremendous amount of money on the operation of a drilling ship or rig which can cost as much as \$100,000 to 250,000 per day to operate.

In its 10 year history, Hitec ASA has become a global leader in the industry by producing equipment and drilling systems designed and built to lower cost by improving the safety and productivity of operations. Good examples of products that have contributed to this success are Smart Drilling Instrumentation (SDI) and Cyberbase.

SDI is a sophisticated monitoring and drilling instrumentation system that provides the operator with a comprehensive overview of the drilling process. The system provides real-time data acquisition, processing, analysis and graphic display of drilling and operational parameters. This dynamic combination of features produces the information necessary to make critical control decisions, which are performed by a single operator using the Cyberbase System. The Cyberbase is a robust man-machine interface (MMI) for control of the drilling operation. With the Cyberbase, the operator controls the complete drilling operation from an ergonomically designed chair. This Cyberbase chair controls all functions of the rig floor through its own computer which communicates to all machines. This greatly improves the safety and performance of the whole drilling operation.

Crucial to the operation of all the equipment and to the ultimate success of the drilling operation is clean, reliable power. In fact, power is so critical that Hitec chose to bundle the SDI, Cyberbase and other essential systems with the Powerware 9315 (50kVA) Uninterruptible Power System (UPS) from Powerware. Because of this, Hitec's customers do not have to worry about unstable or loss of power during critical drilling conditions.

The Powerware 9315, which is available in ratings from 30kVA to 50kVA, is a sophisticated on-line UPS designed and built for mission-critical applications. Its on-line technology completely isolates the load from spikes, surges and sags in the incoming power. The high availability and serviceability of the system is the result of Powerware Hot Sync®, a parallel module architecture which means that each UPS module can synchronize and support the load independent of the other. Also contributing to the industry leading reliability is a design with a low component count and only four printed circuit boards (PCBs). By using software instead of hardware for much of the functionality and other innovative techniques, Powerware's engineering team easily surpassed other typical UPSs that can have 17 or more



PCBs. With each additional PCB the chance of a failure increases. The Powerware 9315 also has redundant fans and control power supplies, further enhancing reliability.

The Powerware 9315 has a rich set of features for management, monitoring and control. Battery management is easy with DC Expert® providing battery runtime indication and automatic battery tests. Also, through Remote Notify, key personnel can be alerted based on over 100 alarm conditions. This rapid warning provides critical time to take necessary action.

Of particular importance for this application is the ability of the UPS to meet American Bureau of Shipping (ABS) requirements for shipboard applications. The American Bureau of Shipping sets the requirements and standards for safety of offshore structures and any equipment located on these structures. The Powerware 9315 (50kVA) has received ABS approval and has been specified for use on projects worldwide. A Powerware UPS has also received Det Norske Veritas (DNV) approval.

“It is extremely critical that the rig not lose valuable data or the operator be unable to control the rig during power loss. With the ability to smooth out power spikes, surges and drops in voltage, we have minimized the expense to repair or replace equipment. Safety is our main concern on an offshore rig so reliability is of the utmost importance. The Powerware 9315 has the dependability our customers need to ensure safe and efficient monitoring and operation of the drilling equipment and it does this in harsh environmental conditions.” said Mark Sorensen, Sales Manager for Hitec Drilling and Marine Systems in Houston, Texas.

The Powerware 9315 provides 4 hours of backup power in the event of an extended power failure. This allows the proper shutdown of the rig without damaging the equipment or losing valuable data concerning the drilling operation. In addition, the UPS provides clean power to the equipment. This eliminates the problem of dirty power that can be quite serious on offshore rigs.

As the efficiency of drilling becomes more and more important, oil companies will turn to Hitec for systems of the highest reliability to increase productivity and their return on the substantial investment required for safe off-shore operations.



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