

Automated drill pipe tong technology can interface with rig management protocols

A NEW AUTOMATED drill pipe tong positioner utilizes a unique positioning device that provides hands-free operations, resulting in increased safety and efficiency. The system uses "Cyber-Eye" technology to locate the seam of the drill pipe connection.

The system can be pedestal mounted, eliminating rails on the rig floor. The system can also be utilized when space is at a premium with a confined space tong positioning device.

Rogers Oil Tools Services in Broussard, Louisiana, offers three different positioning systems, including the confined space device, a fixed base system and a free standing system.

The free standing device (HTP-4) allows for flexibility of movement on the rig floor, allowing the tong to move to the offline holes or to the rotary in a safe, controlled and smooth motion.

The HTP-4 can be operated from the tong, a remote valve package or electronically from an automated control panel, either mechanized or fully automatic.

The HTP-1 for confined space situations is a free standing extension unit that is hydraulically operated from a mobile or fixed-remote valve package.

The HTP-2 fixed base tong positioning device is hydraulically powered and works in conjunction with a cable suspended drill pipe tong.

The hydraulic units can be operated either with mechanized controls or in a totally automated, sequential system. It is capable of accepting most models of casing tongs when the rig is in casing operations.

The system does not require cable suspended in the derrick, eliminating tong cable problems in drilling operations. It also provides up to 17 ft of horizontal reach.

The pedestal mounted, hydraulic powered box boom positioner is designed and manufactured to meet or exceed API-2C specification as well as specific requirements set forth by the US Minerals Management Service (MMS), accord-

ing to the company. The two-stage telescopic box boom provides for a 17 ft extended length, and up to 12 ft vertical reach off the rig floor.

The HTP-1 confined space tong positioning device is designed for any rig floor but especially those with limited floor space. The pedestal utilizes a unique and stable fixed-base trackless design that helps to eliminate trip hazards and increases drill floor safety.

It is hydraulically operated for smooth operations and is capable of 6 ft of vertical lift with hydraulic sequential motions.

The HTP-1 can be positioned at the mousehole and rotary and can be available with hydraulic, mechanized controls or fully automated controls.

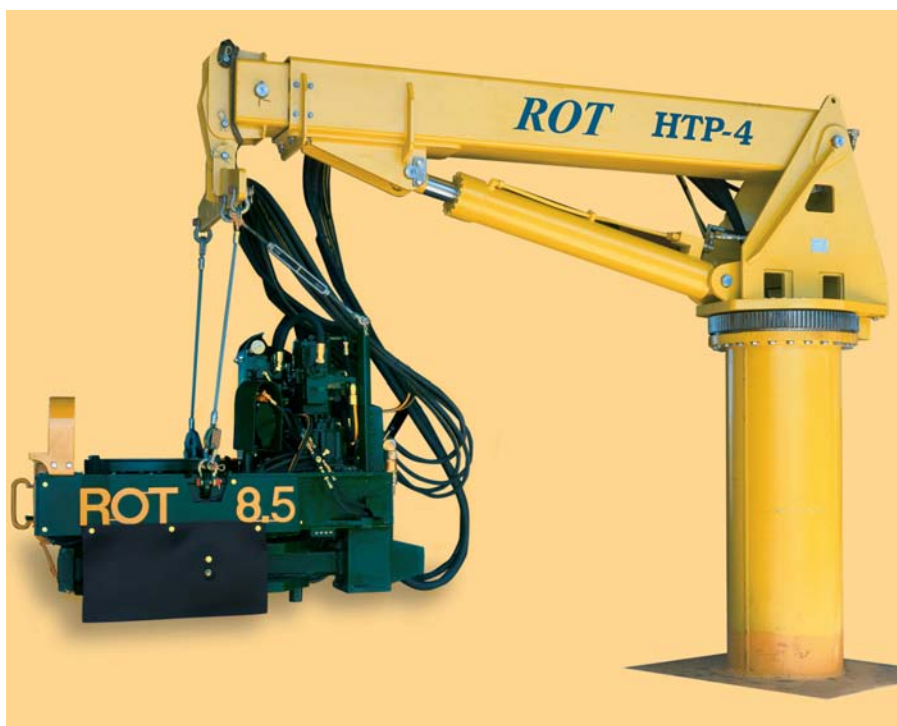
The company's tongs are equipped with Cyber-Eye technology that allows the fully automated tong to locate the seam of the drilling connection, which is always a constant as opposed to the

upset. The tongs can be interfaced to communicate with any rig system via PLC and IBUS systems, including automated pipe handling and racking systems.

The tong system is capable of exerting in excess of 150,000 ft/lbs of torque and can make and break connections for premium pipe as easily as conventional pipe.

The Rogers drill pipe tong system is currently installed on **Diamond Offshore's** jackup Ocean King in the Gulf of Mexico and a platform rig operated by **KCA DEUTAG** in the Caspian Sea. Additionally, two systems were recently sold to **Maersk Drilling** for installation on its jackup rigs.

The system was installed on the Ocean King over a two week period while the rig was being towed and during the surface drilling process without causing any rig downtime. ■



Rogers Oil Tools' automated drill pipe tong technology is fully automated and provides hands-free operation with Cyber-Eye technology that allows the tong to locate the seam of the drilling connection, which is always a constant as opposed to the upset. The HTP-4 free standing pedestal positioning device eliminates rig floor tracks, resulting in greater safety.