BRITISH DRILLING ASSOCIATION

Alphab House, Alfred Street Pinxton, Nottinghamshire NG16 6NQ
Tel: 01773 778751 Fax 01773 782724
Email: office@britishdrillingassociation.co.uk

MAINTENANCE ALERT: STEEL WIRE ROPES AND ACCESSORIES

Circumstances:

Following inspections carried out on cable percussion drilling rigs, a common issue has been identified that relates to the safe working load (SWL) of the steel wire ropes, the associated lifting accessories and the winch mechanism:

1. Steel wire rope SWL is less than the maximum generated load of the winch
2. Lifting accessory SWL is less than the maximum generated load of the winch
3. Lifting accessories not uniquely identifiable
4. Certification noncompliant

Wire Ropes and accessories:

The maximum generated load of the winch should be clearly displayed on the winch, which may be in values of kgs, kN, or daN. This may be a differing unit to the SWL of the steel wire rope and as such conversion may be necessary. The SWL of the steel wire rope, and its accessory, must be, at least equal to the maximum generated load of the winch. To aid conversion:

- 1kN = 101kgs

- 1daN = 1.02kgf or 1kg

Unique Identification:

Each item of drilling equipment that is being used to lift or lower in the drilling process must be uniquely identifiable. Naming the equipment i.e. 'sinker bar' falls short of what would be determined uniquely identifiable. It is good practice to allocate a unique number or combination of numbers and letters that allow the organization to reference that specific item in the fleet.

Certification:

The SWL, including the factor of safety, and Minimum Breaking Load (MBL) should be clearly stated on the certification; whether that certificate pertains to a six monthly check or an annual thorough examination. There have been occasions whereby the MBL has not been listed but the SWL has been, in these circumstances the SWL should be multiplied by the factor of safety to configure the MBL. For example, a SWL of 1 tonne at a factor of safety of 5:1 is calculated by multiplying the SWL by the factor of safety: 1 x 5 which equals 5 tonne and therefore the MBL = 5 tonne.

Safe conditions:

- The SWL of a wire rope MUST at least equal the maximum generated load of the winch
- Lifting accessories SWL MUST at least equal the maximum generated load of the winch
- Lifting accessories MUST be uniquely identifiable
- All lifting accessories and Certificates of Thorough Examination should conform to Schedule 1 of the LOLER 1998 Regulations.

Application:

Owners and operators of cable percussion drilling rigs must satisfy themselves that the listed safe conditions are met at all times. If found to be noncompliant then the drilling rig must be removed from service until the issue is rectified to ensure compliance with Industry custom and practice. It should be noted that the relationship between any winching mechanism and its lifting components should be tested against this relationship os SWL and MBL i.e. the SWL must be at least equal to the maximum generated load of the winch.