

Dropped Object – Retaining Ring

Date of Incident 31.01.05 Type of Rig: Platform Injury to: N/A

Description of Incident

Whilst the HP riser was being pulled, the Assistant Rig Manager noticed that a 6.5 ton shackle did not have a retaining ring attached. As he was removing the shackle the floorman appeared on the drill floor with the missing retaining ring stating that it had fallen and struck his left shoulder (Fig.1). No injury was sustained. The weight of the retaining ring was checked and found to be 122 grams (1.25 Lbs). Height of the fall was 16 metres (50 Ft). The lifting arrangement for the HP riser formed part of the newly certified lifting equipment. The lifting equipment had been examined and accepted 4 weeks previously. Corrosion of the break indicated that the ring had been broken for some time before this incident.



Fig. 1



Fig. 2

Investigation

As a consequence of this incident the containers in the yard were inspected for similar issues. Only 30% of those inspected had retaining rings fitted. Four were found to be broken (Fig. 2) and a number of others were deformed. Two of these containers had recently been inspected and certified.

Conclusion

This incident has identified a shortcoming in standards regarding the testing and safe use of lifting equipment. The lifting bridles had recently successfully undergone inspection by a competent lifting examiner but damaged retaining rings had not been identified.

The retaining rings have been fitted to ensure that the lifting bridles are kept in sets and cannot be easily separated. Whilst these retaining rings are not part of the critical load path and not necessarily part of the current inspection criteria it is not unreasonable to include them in any inspections.

Recommendations

All similar lifting configurations require to be inspected as soon as is practical and before each use. Where equipment is in unsatisfactory condition they should be removed from service.

DSG Comment

This is a classic case of a good intentioned improvement creating a further hazard.

Whilst this particular ring was small we have observed other damaged rings of sufficient size to cause a major injury.

We are conducting an assessment regarding the suitability of the retaining rings against the risk of them failing.

We are also considering alternative methods of securing the shackles using a less hazardous / more robust material. I.e. Ty-Wraps in a figure - 8 configuration.