Dropped Object Survey Standards
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DROPS Overview

• Our system

• The Incident

• Step Change
Dropped Objects Survey Standards

- First published in 2009 to standardise DROPS surveys across the fleet
- Before its publication, scope, report format and methodology of DROPS surveys were left largely to the survey companies
- Dropped object survey must be completed every two years by an approved independent survey company

- Dropped Object Inspection picture Book
- The Dropped Object Survey report
- Failed items list
Tracking Failed Items

DROPS FAILED ITEMS TRACKER

Failed item list from each rig department

DERRICK AREA 1-3
SUBSTRUCTURE
TRAVELLING EQUIPMENT
CRANES
COMM MAST & LIFEBOATS

DRILLING
SUBSEA
MAINTENANCE
DECK
MARINE
DROPPED OBJECTS

32 Potential Fatalities In The Last 30 Months

7 Potential Fatalities In The Last 4 Weeks (Since 8th June-6th July)
Static DROP Incident

- Aviation warning light fell from the derrick and landed on the pipe deck
- Lens retainer weighed 2.4kg and the total distance dropped = 43 metres

- The lens retainer bounced and deflected off rig structure and then fell across to the starboard aft pipe deck striking the top front of the casing joints that were laid out on deck.
Outcomes

- TOPSET Investigation
- Notification to NOPSEMA

Conducted a review of our DROPS process

- Items passed by Third party – failed
- pass/fail Inspections carried out by Transocean personnel
- Inspection criteria not prescriptive
- Inspection frequencies unrealistic
- Training
• Meet with Inspectors prior/post mobilisation to Rig

• Inspectors training is up to date – including verification

• Mandate the installation of safety mesh

• The Responsible Person for the area must validate all inspection frequencies.

• If deviations are required, a formal risk assessment must be conducted using the Company approved Risk Matrix
### Inspection Book & Rope Access

**Likelihood of the object dropping**
- exposed to vibration?
- possibility of collision?
- exposed to weather resulting in corrosion?
- equipment exposed to high wind?
- How robust is the primary fastening method?

#### Risk Matrix

<table>
<thead>
<tr>
<th>LIKELIHOOD</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEVERITY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Medium</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Low</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**Severity**
- Determine approximate weight
- Determine distance the item could drop
- FAC/MTC/RWC = Low
- LTI = Medium
- FAT = High

The level of risk determines inspection frequency
Reference number on the plan match the photograph references on the inspection book i.e. GINF004, GINF005 and GINS003.
Development of a DROPS Inspectors course

• Two day theoretical and Practical Inspection training course based on K2 Rope access training Course

• Training adapted to meet Transocean’s requirements
  ▪ Company DROPS Awareness OJT is a prerequisite

9. Heavily corroded bracket
10. Frame and lens retainer.

11. Bolt #1 showing that it had not been screwed in adequately.
13. Bolt #2 Also showing that it had only been made up on two threads.
DROPS Inspectors course Training

Inspection criteria is now defined –

**Knowledge** - Detailed inspection criteria

**Demonstrate** - Use of the Dropped Object Inspection Book
Roles and Responsibilities

- Drops Inspectors = Drops Champions onboard
- The Rig Subject Matter Expert who ensures compliance with Transocean Dropped Object prevention policy
- Ensure Third party Drops surveys are conducted in accordance with standards – Validate
- Key to effective Steering Committee meetings = ownership
- Verification through Rig WIN plans (What’s Important Now)
- Internal Auditors and Focal points to assist Responsible Persons
Summary

• Improved Third party DROPS Survey standard and deliverables

• Verification that items are adequately closed in maintenance system

• Formalised DROPS inspectors training for Transocean personnel

• Improved ownership of Rig crew performing Inspections