Corrosion Awareness for Drilling Equipment

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Why do you think it is important to understand the corrosion threats to drilling equipment?
Corrosion related drilling incidents

2007 Brent Alpha - Near miss - Dropped object
What happened: High wind caused shackle safety pin to drop from Derrick. Pin severely corroded.

2007 Nelson - Near miss - Dropped object
What happened: L shaped Drill line drum structure bracket dropped to heavy tool store roof as a result of corrosion of the retaining bolts.
Corrosion related drilling incidents

2008 J W McLean - Near miss - Dropped object
What happened: Threads of the retaining bolt on the pivot pin for the top racking arm latch corroded. Corrosion was a contributing factor causing pivot pin to drop to drill floor.

2008 North Cormorant - Near miss - Dropped object
What happened: Bad weather caused the severely corroded V door rubbing strake to drop onto drill floor. Galvanic corrosion cause of degradation.
We can not demonstrate control of corrosion threats of drilling equipment!
Corrosion Management

Shell EPE HSE Policy infers that...

Corrosion threats shall be identified, quantified and controlled to safeguard technical and operational integrity throughout the life of the asset.
DROPS Trending

EPE Dropped Objects

Revitalised DROPS Campaign

No of Dropped Objects
No. of Rigs
No. of Potential DO
Frequency / Rig

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 Projected
DROPs - High Potential Incidents (UK)

Revitalised DROPs Campaign:
- DROPs Focal Point
- DROPs Train the Trainer
- DROPs Awareness DVD – Tools at Height
- Structured Mgmt Visits – DROPs focus
- Red Zone Implementation
- New Global DROPs Standard

2008
8 HiPOs

2009
3 HiPOs

2

8
Is this cause for concern?
Target areas

- Housekeeping / DROPs
- Caternary trays for cables
- Derrick and Structure
- Pipework
- Bulkheads / Doghouse
- Windwalls
What does this mean for me?

PLEASE REPORT:

- Potential Dropped Objects
- Coating Breakdown
- External Corrosion
- Damaged Handrails
- Damaged Gratings
- Corroded Bolting
- Loss of Structural Integrity

USING SHAPE / START/ STOP → (MCDR)
Corrosion awareness will help to prevent corrosion related incidents

Corrosion of ageing equipment - What are you doing about it?
Corrosion Guidance Handbooks

External corrosion handbook
Upstream oil and gas production plant
Together we can make a difference!

For more information call your Asset Corrosion Engineer