Statoil Prevention of Falling Objects Conference

“How we work, what we look for and what we find”

Lars Rodvelt – CAN AS
Håvard Fosse – AAK AS
Who is CAN?
One of the leading Rope Access Companies

- 20 years of experience world wide
- Located in Stavanger (HQ) and Sandnessjøen
- 125 Employees
- We have worked on almost all fixed and floating installations at NCS

• Competent and experienced workforce
  - Knowledgeable management team with long experience
  - Hands on engineering team
  - 80% multi-skilled workforce
About AAK

AAK is a leading supplier of inspection, maintenance and modification solutions involving demanding access, complex rigging and multi-disciplined work at height.

- Scandinavia’s leading competence center for rope access & safe work at height
- Piping & Structural Workshop Facilities
- 26 years of Oil & Energy experience
- 180 dedicated employees
- Independent Qualified Supplier
- Approved EPCI System
- Proud holder of Statoil’s Dropped Object contract
HOW WE WORK?

• CAN AS and AAK AS awarded by STATOIL ASA framework agreement “Prevention of Falling Objects”

• The frame agreement covers all installations
  - Covers Statoil Rig activities world wide agreement
  - Fixed and floating drilling units
  - Production installations
  - Installations which are under constructions
Activities

• **Inspection**
  On-site inspection securing of equipment at height and removal of loose items.

• **Survey**
  Reviewing the management system procedures and routines.

• **Training**
  Onshore & offshore
  Observation Technique course
WHAT WE LOOK FOR?

- **DO Inspection**
  - Ensure all equipment is installed according to the correct standards and regulation.
  - Find and secure potential dropped objects.

- **DO Survey**
  - Through questions and interviews the 3rd party will be able to provide a spot a check of the management system.
  - Are there any weak points?
  - New routines required?
WHAT WE FIND?
Dropped Object findings

- Loose Lifting equipment
- Incorrect securing of equipment at height
- Incorrect bolted connections
- Loose items at height
- Best Practice Handbook not being used when installing equipment
DO FINDINGS

Loose Lifting Equipment

• Shackles, clamps and other lifting equipment which has not been removed after use.

NORSOK – 003

• Lifting equipment which are not in use shall be removed and returned to designated storage area.
DO FINDINGS

Incorrect securing of equipment at height

- Lack of secondary retention on equipment at height.
- Equipment at height secured incorrectly.
- Incorrect installation of Talurit ferrules.
- Wrong dimension on wires (fall factor)
- Stainless wire in combination with aluminum Talurit ferrules

Recommendation

- Training and awareness.
DO FINDINGS

Incorrect bolted connections

- Securing of bolted connections. Dual nuts extensively used. Not recommended.
- Mixed materials in connections
- Incorrect dimensioning.
- Loose bolts, bolts are not torqued to the correct moment or have come loose due to improper use of secondary retention.

Recommendation

- Training and awareness.
DO FINDINGS

**Unnecessary equipment at height**

- Inspections reveals equipment at height which not are in use and therefor should be removed.

**Recommendation**

- Perform final check of work-site.
- Regular inspections
- Awareness.
DO FINDINGS
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FINDINGS ON NEW RIGS

- Equipment (flood lights, CCTV) installed with a risk of getting hit by crane activities.
- Equipment installed at height are often not designed to be equipped with secondary retention.
- Large openings between decks and modules.
- Hand rails not fulfilling NORSOK
- Unsatisfactory securing of bolted connections
- Unsatisfactory secondary retention on equipment.
- Galvanic corrosion
WHY DO WE STILL MEET THE SAME PROBLEMS?

EVEN THOUGH:

• Suppliers delivers in accordance with specifications
• Equipment is installed in accordance with specifications
• Lifting operations is performed in accordance with procedures
• Work is executed in accordance with procedures
• …
It all starts with design and specifications…
SUMMARY

MAINTAINING

- Remove equipment not in use
- Secure equipment at height
- Prevent galvanic corrosion
- Periodic FO Inspections
- Train personnel
  - Observation technique
SUMMARY

NEW INSTALLATIONS

- Set requirements to suppliers of equipment and tools!
- Set requirements to planning and design!
- Involve competent personnel in design
- Encourage equipment suppliers to develop securing methods of their equipment
THANKS!