DROPPED OBJECTS

PETROLEUM SAFETY AUTHORITY

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www.ptil.no / www.psa.no

Agenda

- Statistics
- Reporting to the PSA
- Follow up
- Our regulations
- History
- Ongoing work for improvements

Statistics - RNNP

12.1 DFU21 Falling objects

- During the period 2002-2013, an average of 220 incidents related to falling objects were reported to RNNP each year.
- In 2013, a total of 258 incidents were reported, which is the highest figure since 2008.

- **http://www.psa.no/getfile.php/PDF/RNNP_2013/Trends%20summary%202013.pdf**

Reporting to the PSA

MANAGEMENT REGULATIONS

Section 29 regarding notification and reporting of hazard and accident situations to the supervisory authorities

- Follow up on these reports are on a case by case basis, depending on severity
- Reports may trigger investigations
- Trends from reports may be used as part of basis for supervisory activities, or other initiatives

Reporting to the PSA

PETROLEUM SAFETY AUTHORITY NORWAY	Confirmation of alert/notification to Petroleum Safety Authority Norway about situation of hazard and accident E-mail: varsling@ptil.no		
The incident occurred: Date: Time:	**Operator/the responsible:** Field: Installation/onshore facility:	**Reporting person:** Name: Telephone: E-mail:	GPS position (by acute pollution):

Description of incident/near-miss:

Supplementary information:

- ☐ 1.Non-ignited HC leak (sea/air)
- ☐ 2. Ignited HC leak
- ☐ 3. Well incident
- ☐ 4. Fire/explosion in other areas, not HC
- ☐ 5. Ship on collision course
- ☐ 6. Drifting object
- ☐ 7. Collision, field related vessel/facility/tanker
- ☐ 8. Damage to installation/ structure/anchoring/DP
- ☐ 9. Leak from subsea-system/pipeline
- ☐ 10. Damage to subsea-system/pipeline
- ☐ 11. Evacuation (Precautionary/emergency evacuation/ down manning)
- ☐ 12. Helicopter incidents
- ☐ 13. Man over board
- ☐ 14. Personnel injury
- ☐ 15. Illness
- ☐ 16. Power failure
- ☐ 17. Acute pollution – not HC
- ☐ 18. Diving Incident
- ☐ 19. H2S emission
- ☐ 20. Crane and lifting operations
- ☐ 21. Falling objects
- ☐ 22. Other incidents (Terror/threat/criminal acts/radioactive source etc.)

Reported incident to PSA
Scaffolding – dropped objects

	2014	2013	2012	2011
Scaffolding	11	16	22	18
Total	77	122	126	136
% of total	14%	13%	17%	13%

Figures for 2014 are for the first 6 months.

Source: PSA incident database

Follow up

Musts!

- Thorough knowledge of the major direct and underlying causes

Apples and pears MUST NOT be mixed

- Dropped loads and/or objects as results from **lifting operations** requires a different follow up than other dropped objects cases
- BECAUSE: **The causes are different**

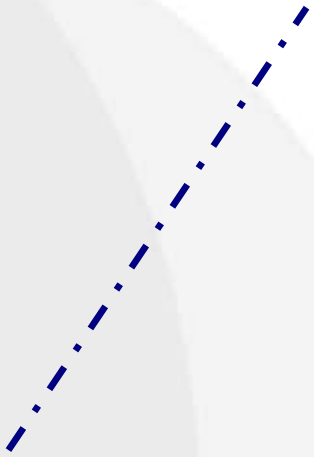
Example of falling load - production pipe from conveyer (2013)

Our regulations

Our regulations contains mainly functional requirements

This means that the detailed «requirements» must be found in our guidelines and recommended referenced standards

Standards



Bridging the gap

History - OFFSHORE FATALITIES SINCE 1994

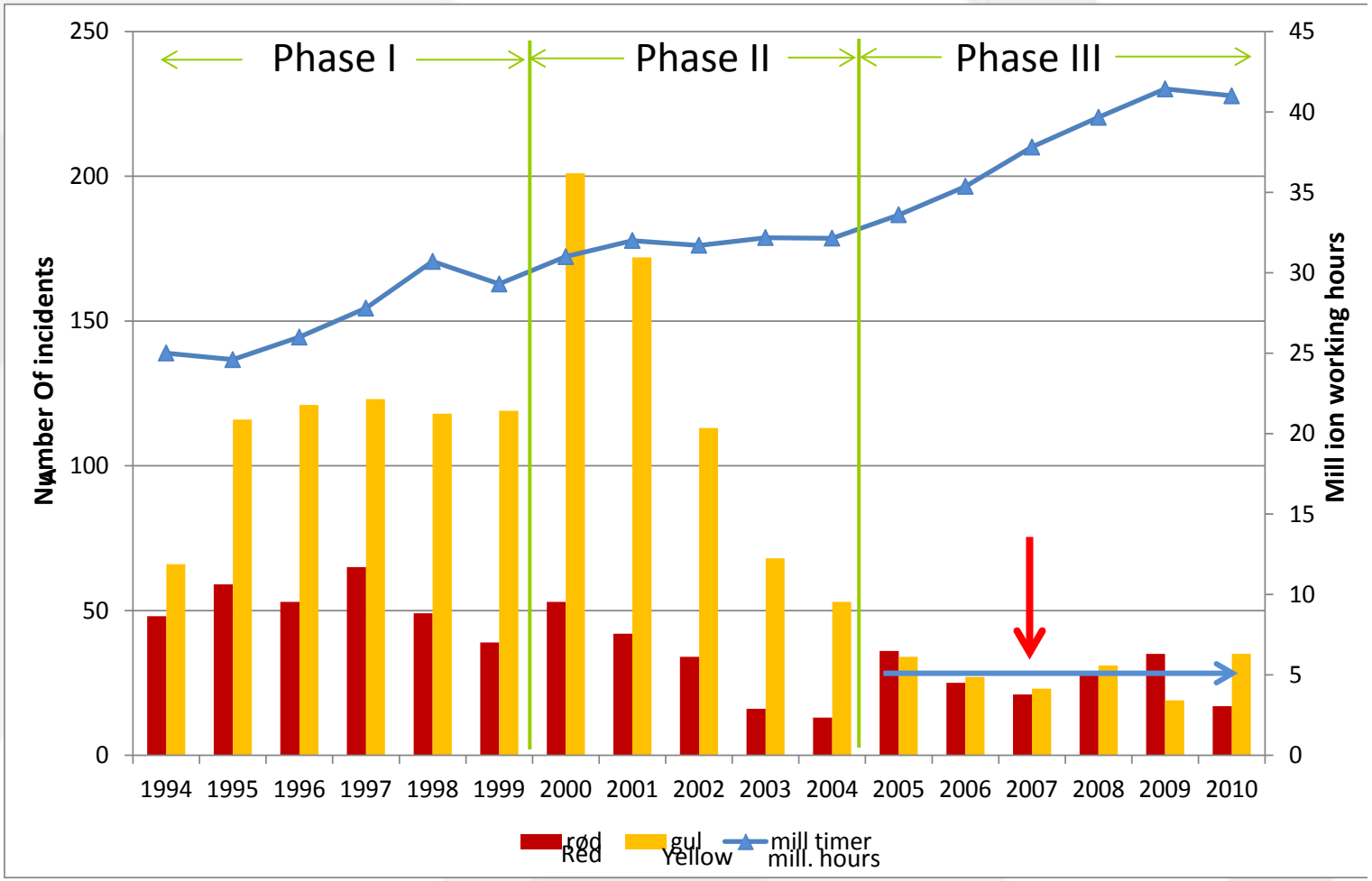
- 1994 Odin — Roughneck killed by falling pipe from lift by tugger winch.
- 1994 Oseberg A — Deckhand at installation killed by falling bulk hose.
- 1995* Snorre — Slinger at supply vessel killed by sliding containers.
- 1996* Polycrown — Slinger at supply vessel killed by sliding containers.
- 1999 Heidrun — Manriding
- 2000 Oseberg East — Person at pipe deck killed by pipe lift. (not involved in lift)
- 2002 Byford Dolphin — Person at cellar deck killed by falling sub. Event started by a blind lift at drill floor by tugger winch.
- 2002 Gyda — Slinger at installation killed by falling stacked container.
- 2007 Saipem 7000 — Deckhand drowned. Thrown overboard by bursting hydraulic hose.

STATUS: 9 Fatalities – **ALL RELATED TO LIFTING!!!!!!!!**

(Others: 12 helicopter, 3 anchor handling, 1 pipe laying)

*= PSA/NMD interface

Trends of yellow and red incidents All lifts



Ongoing Work - R-002

NORSOK R-002 Lifting equipment

Revision of the Edition 2, September 2012

Requirements for design in order to prevent dropped objects from lifting equipment

5.4.9 Falling objects

Any components fitted externally on lifting equipment and which may be subjected to vibrations or impacts from contact with other objects during operation, shall be analysed with respect to the hazard of falling objects. If such hazard is unacceptable, the components shall be secured with a double physical barrier against detachment.

NOTE An example of such mechanical component with a double physical barrier is a shackle pin secured in a shackle bow using a threaded nut locked by a split pin. Another example is an additional wire strap or a chain that is capable of catching and holding the falling object without damage.

Bolts used in lifting equipment shall normally be secured. Exceptions are bolts which represent no hazard.

The following methods/products are considered to be properly secured:

- controlled pretension to 70 % of yield;
- nut with split-pin through the bolt;
- through metal nuts;
- locking plates.

Other well proven methods and designs may also be used.

Ongoing Work – R-003N

NORSOK R-002 Safe use of Lifting equipment

Revision of the Rev. 2, July 2004 – Now on hearing

- The majority of the direct and underlying causes to incidents and accidents in lifting operations are still operational errors
- Therefore it has been focusing of improving the requirements for:
  - ***Training and competence***
  - ***Adherence to requirements***

SFS's work on developing guidelines for reduction in numbers of falling objects is highly appreciated

www.samarbeidforsikkerhet.no

REMEMBER

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Questions?