

**Oil Industry Safety Directorate  
Safety Alert**

E&P (Offshore)

No. 13/06

**Title: Hot Bolting Fire**

**Location: Offshore**

**Activity Type  
(Result/outcome): Fire with no injury**

**What happened:**

Hot bolting, the practice of removing and replacing or freeing and re-tightening bolts on live piping and equipment, was being performed on a contact tower's inlet valve flange when the operator inadvertently struck and broke a grease fitting with a hammer. The fitting released high pressure gas into the direction of the line heater located approximately 10 feet from the contact tower's inlet valve. The gas ignited and was eventually extinguished using dry chemical. No injuries were associated with the incident.

**What caused it:**

Investigation into this incident revealed that although a task-specific Job Safety Analysis (JSA) was conducted prior to initiating the hot bolting project, the following critical hazards and mitigating measures were not identified:

- The fired component of the line heater was not shut-in prior to initiating the project.
- The close proximity of the grease fitting was not identified as being a potential hazard.

**Corrective actions:**

- Although hot bolting is a common practice, each case should be evaluated for feasibility. In a situation where there is a heat source in the immediate area with the possibility of flammable contents being released, hot bolting is not advised.
- A safer option would be to shut-in the effected equipment and bleed off all pressure before commencing the bolting operation.
- A JSA should be conducted to identify all potential hazards, the potential consequences, with necessary mitigations and/or precautions. Specific consideration should be given to potential sources of release and ignition points.
- Operators should use only non-sparking tools when conducting hot bolting operations.

It is provided for information purpose. This information should be evaluated to determine if it is applicable in your operations, to avoid reoccurrence of such incidents.