

# Step Change Safety Alert Template

STEP CHANGE IN SAFETY



## Alert Title

Gas detection at Export Gas Compressor lube/seal oil skid

## Incident Date

12<sup>th</sup> October, 2012

## Summary

The gas compression system was being started after completion of TAR work scopes, including export compressor seal change. The LP/IP compressor and HP machines had been run with no obvious anomalies noted. The Export Compressor was then started and ran for approximately 30 minutes until vapour/ smoke was seen discharging from the lube oil tank vent.

## Incident Consequences

Hydrocarbon Release

## Cause of Accident or Incident

Uncontrolled Release of a Flammable Gas or Liquid

## Location

Fixed Installation

## Activity

Production Operations

## Description of What Happened

The Export Gas Compressor was started following completion of TAR work scopes and ran for approx 30 minutes until vapour/ smoke was seen discharging from the lube oil tank vent.

The investigation revealed a new & recently installed seal had failed on start-up, allowing gas ingress to the seal/lube oil system. The design of the seal is not considered an issue as this type of seal has been used successfully in the past. It was identified that this was a common failure mode on another installation. It is believed the failure is linked to a manufacturing fault which has been exacerbated by a failure to detect the manufacturing fault in QA. The fitting of the seal had been carried out by the OEM vendor.

## Specific Equipment

Gas export compressor

## Lessons Learnt

- The seal was found to have failed due to poor bonding between a white metal seal ring and the main seal shell creating a leak path.
- OEM vendor has now been instructed to NDT seals to ensure competent bonding.

## Task Description:

Start up operations of export gas compressor

## Recommendations

- Replace defective seal with a new seal which has been inspected to ensure proper bonding.
- Send seal back to OEM vendor for full analysis.
- Ensure OEM vendor NDT inspects all future seals supplied for competent bonding.

## Contact Details:

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