

Safety Alert: 13

Date: April 2019

Unplanned plant modification resulting in hydrocarbon release

This safety alert is shared in order to promote learning and improve safety. You should seek appropriate guidance regarding the relevance, accuracy, and completeness of this alert to your circumstances prior to implementation.

Theme

Work control, management of change, worksite checks and competence

Issue

High pressure gas released (circa 560kg) when a small-bore tubing fitting assembly ruptured as a result of vibration fatigue after 11 days in service.

The assembly as shown in the picture was not as per the original design.

Root cause

Non-application of the Management of Change (MOC) procedure

Inadequate work control (safe isolation and reinstatement of plant, e.g. no flange break controls).

Lack of appreciation of the effect of vibration on unsupported small-bore tubing assemblies



Learning

1. Improvements to Management of Change and Control of Work process compliance
 - Work pack information
 - Permit to work and ICC (isolation control certificate, flange break controls)
 - Management of change education
2. Small bore tubing training and appreciation of vibration fatigue risks
3. Procedure Simplification
 - Human factor – strengthen compliance
 - Improved dialogue with workforce and safety representatives

The Process Safety Forum has been set up to provide an industry association platform whereby initiatives, best practice, lessons from incidents and process safety strategy can be distilled and shared across sectors, to influence our stakeholders (including the Regulators), and to drive the process safety management agenda. The Process Safety Forum consists of representatives from across industry, refer to the website for details

The website is www.p-s-f.org.uk