



#### **HEAD OFFICE**

Enterprise Drive Westhill Aberdeen AB32 6TQ

T: +44 (0)1224 740145 F: +44 (0)1224 740172

# HSE Alert No. HSE001-2011

# **HY-FEX FIRE EXTINGUISHER INSPECTION & TESTING**

**Part No's** 7.5Ltr - SE480AB, SE4852 & SY104188

3ltr - SE4811AA & SE4850

Date: 01/09/11 Country: UK Location: Divex (HQ) Aberdeen Workshop

#### **DESCRIPTION**

A 7.5Ltr Hy-Fex fire extinguisher cylinder that was returned to Divex has experienced a leakage of gas from the cylinder base during Divex workshop testing. Subsequent internal inspection revealed an unexpected level of degradation.

# **INVESTIGATION FINDINGS**

The defect was in the form of through thickness cracks in the base of the cylinder and it has been concluded that this has resulted from a combination of a manufacturing fault, material grade and in-service corrosion.

Upon review of the required maintenance and inspection carried out by Client it was discovered that the Hy-Fex cylinder involved had not been inspected within the last 6 months.

Further inspection of the 7.5Ltr Hy-Fex cylinders from the same Divex Work Order were also found to have no inspection conducted within the 6 monthly requirements and the same level of degradation was observed.

The problem is limited to cylinders from a specific manufacturing source and material grade and can be identified as having a serial number listed in the ranges:

# GLOBAL LOCATIONS

Aberdeen Chertsey Portsmouth Bremen Dubai Cape Town Perth Sydney

### 3 Ltr Capacity

7810 to 8068 11060 to 11113 11747 to 11800

# 7.5 Ltr Capacity

7884 to 8167 11312 to 11363

# **LESSONS LEARNED**

- The manufacturing method, although well proven and used for normabaric extinguishers has the risk of a defect in the base location.
- Servicing and tests were not carried out as per Divex requirements.
- Internal inspection was not carried out as per Divex Operations and Maintenance Manual (6 months).









# CAUTIONARY NOTICE Hy-Fex Fire Extinguisher September 2011



#### **CORRECTIVE ACTION**

- · Divex has performed an incident investigation, including discussions with the Clients involved.
- Destructive testing has been carried out by Divex to establish root cause of degradation.
- Burst test have been carried out on new cylinders and found to be of acceptable strength.
- New cylinders are being sourced avoiding this manufacturing method and material grade.
- · Issue Divex HSE Alert to UK HSE and Lloyds Register.
- Issue Divex HSE Alert to all trade associations (e.g. IMCA, ADC (UK) and ADC (USA).
- Issue Divex HSE Alert to all known purchasers of Hy-Fex Extinguishers with a serial number as
  identified above.
- · Distribute Divex HSE Alert to all Divex locations.



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#### RECOMMENDATIONS

- Advise Clients using cylinders from this particular manufacturer to undertake internal
  inspection as soon as is practical giving particular attention to the base area looking for any
  defects. If there is evidence the cylinder is to be taken out of service pending a hydro test. If
  successful, the cylinder can be returned to service. The recommended 6 monthly inspection
  regime should then be adhered to (see Divex Hy-Fex Operations and Maintenance Manual for
  details).
- All Clients are reminded to undertake the recommended 6 monthly internal inspection for all Hy-Fex Extinguishers regardless of their serial number.
- If cylinders fail the hydro or gross defects are observed the cylinder is to be returned to Divex for investigation and possible replacement.
- Clients (users) need to refill Hy-Fex Extinguishers with Divex AFFF Refill Packs (SE4816 (3Ltr) and SE4817 (7.5 Ltr) every 6 months.
- Users must ensure their sub-contractors are fully aware of technical requirements and hold the necessary factory / manufacturers training for internal inspection, pressure testing and / or re-fill.
- Consideration will be given by Divex to undertaking cyclic testing of cylinders from this manufacturing method.

Signed:

Kevin Smith General Manager - QHSE for and on behalf of Divex Ltd.

LOCATIONS

**GLOBAL** 

Aberdeen Chertsey Portsmouth Bremen Dubai Cape Town Perth Sydney





Date: 18/08/11

