

# The storage of flammable liquids in tanks

Technical Bulletin

Allianz Engineering Inspection Services Ltd



The main hazards associated with the storage and handling of flammable liquids are **fire and explosion**, involving either the liquid or the vapour given off from it. These hazards are likely to occur when vapour is released into areas where there may be an ignition source.

The HSE has produced a document entitled '**The Storage of Flammable Liquids in Tanks (HSG176)**' which provides guidance on the design, construction, operation and maintenance of installations used for the storage of flammable liquids in fixed tanks operating at or near atmospheric pressure.

**The guidance** applies to above and below ground fixed bulk storage tanks. It may also be applied to portable or skid mounted vessels with capacities in excess of 1000 litres.

## Definitions:

**Flammable liquid** – A liquid with a flashpoint of 55°C or below and stored at or near atmospheric pressure (except those liquids with a flashpoint between 21°C and 55°C which do not support combustion).

**Flashpoint** – The minimum temperature at which a liquid, under specific test conditions, gives off sufficient vapour to ignite momentarily on the application of an ignition source.

These tanks, and any associated pipework and fittings, should be maintained in a safe condition and **examined** on a regular basis by a **competent person**.

A **Written Scheme of Examination** that identifies the scope and periodicity of a thorough examination should be agreed between the user of the tank and the competent person.

The content of the Written Scheme of Examination should be determined using a **risk based approach** based on the service and maintenance history, taking into account all deterioration and damage mechanisms and degradation rates.

**Allianz Engineering** can help you meet your obligations under the requirements of this HSE guidance. We can offer the following services:

- **Production of a Written Scheme of Examination**
- **Examination in accordance with a Written Scheme of Examination**

**For further technical information** on this subject please contact Engineering Standards Department on 01428 726121.

**For all contract/costing enquiries** please contact Special Services Department on 0845 0760 138 or email at [special.services@allianz.co.uk](mailto:special.services@allianz.co.uk)