



Jet fire and hydrocarbon fire tests

Oil and Gas qualification for Efectis

CONTEXT

For many years, fireproofing requirements for petroleum, petrochemical and gas plants for onshore and offshore installations have been carried out without technical specifications.

Faced with this situation, the Oil and Gas industry finally adopted the ISO 22899-1 standard, and also the UL 1709 standard.

WHO IS CONCERNED?

- The manufacturers of thermal passive fire protection products (cable trays, structural members, pipes, penetration seals, actuators...)
- Oil and gas industry



Jet fire test bench

WHY WORKING WITH EFECTIS

- At Efectis, customers can perform both hydrocarbon and jet fire tests
- Comprehensive product and testing knowledge with over 60 years of experience
- A well established brand name and service portfolio
- An excellent customer track record in many countries
- Dedicated highly qualified and multilingual project managers

METHODOLOGY JET FIRE AND HYDROCARBON FIRE

JET FIRE STANDARD ISO 22899-1

The jet fire standard ISO 22899-1:2007 consists in simulating the thermal and mechanical loads resulting from high-pressure releases of flammable gas, pressurized liquefied gas or flashing liquid fuels.

Jet fires give rise to high convective and radiative heat fluxes as well as high erosive forces.

This ISO standard was formulated on the basis of experience obtained by performing tests according to the Health & Safety Executive, Offshore Technology Report OTI 95 634: 1995.

According to the jet fire standard, in order to produce thermal and kinetic impact on a protected pipe, a 0.3 kg/s release of gas is injected into a shallow chamber, producing a fireball with an extended tail.

UL 1709 STANDARD

The UL 1709 standard "Rapid Rise Fire Test of Protection Materials for Structural Steel" is one of the oldest and most frequently used furnace test standards for the Oil and Gas industry.

The temperature rise of the UL1709 is more severe than the European hydrocarbon fire (HC).

The temperature rises from ambient temperature to 1093°C close to the test specimen within 5 minutes is 154°C above the HC temperature time curve at 5 minutes.

Calibration column according to UL 1709 standard



ACCREDITATIONS

The tests will be realized under ISO 17025 accreditation, with or without witnessing from third party organizations (Lloyd's,...).



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Efectis is the Expert in fire science, engineering, design and modelling, risk analysis, testing, inspection and certification.

Efectis covers all fire safety capabilities and know-how in testing and modelling around the world with offices and laboratories located in France, the Netherlands, Spain, Turkey, North Africa and the Middle-East area.