



Exploration & Production

GENERAL SPECIFICATION

SAFETY

GS EP SAF 332

Water mist and gaseous fixed fire extinguishing systems

03	10/2009	Complete review, update and change of previous title "Alternative to Halon in fire extinguishing systems"
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1. Scope

1.1 Purpose of the specification

The purpose of this General Specification is to set out the requirements for the design and use of fixed fire extinguishing systems in new and existing installations.

In particular, it describes the water mist and gaseous fixed fire extinguishing systems, which constitute alternatives to Halon fire extinguishing systems.

1.2 Applicability

This General Specification applies to onshore and offshore facilities intended for drilling, production, treatment or storage of liquid, liquefied or gaseous hydrocarbons.

It applies to all systems used for fire extinguishing as well as to explosion suppression and inerting systems. It also applies to all new systems for which Halon was previously required in safety specifications.

This document shall primarily apply to buildings, rooms and machinery spaces/ enclosures in the above-mentioned facilities.

2. Reference documents

The reference documents listed below form an integral part of this General Specification. Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the effective date of the CONTRACT.

Standards

Reference	Title
EN 12845:2008 + A2:2009	Fixed firefighting systems – Automatic sprinkler – Design, installation and maintenance
ISO 14001:2004	Environmental management systems - Requirements with guidance for use
ISO 14520-1:2006	Gaseous fire-extinguishing systems - Physical properties and system design – Part 1: General requirements
ISO 14520-5:2006	Gaseous fire-extinguishing systems - Physical properties and system design – Part 5: FK-5-1-12 extinguishant
ISO 14520-12:2005	Gaseous fire-extinguishing systems - Physical properties and system design – Part 12: IG-01 extinguishant
ISO 14520-13:2005	Gaseous fire-extinguishing systems - Physical properties and system design – Part 13: IG-100 extinguishant
ISO 14520-14:2005	Gaseous fire-extinguishing systems - Physical properties and system design – Part 14: IG-55 extinguishant
ISO 14520-15:2005	Gaseous fire-extinguishing systems - Physical properties and system design – Part 15: IG-541 extinguishant

**Professional Documents**

Reference	Title
CEN/TS 14972:2008	Fixed firefighting systems – Water mist systems – Design and installation
NFPA 10	Standard for Portable Fire Extinguishers, 2007
NFPA 750	Standard on Water Mist Fire Protection Systems, 2006
NFPA 2001	Standard on Clean Agent Fire Extinguishing Systems, 2007

Regulations

Reference	Title
Kyoto Protocol	Kyoto Protocol to the United Nations Framework Convention on Climate Change, 1998 and subsequent amendments
Montreal Protocol	The Montreal Protocol on Substances that deplete the Ozone Layer, September 1987 and subsequent amendments
Regulation (EC) No.2037/2000	Regulation of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer
Regulation (EC) No.842/2006	Regulation of the European Parliament and of the Council of 17 May 2006 on certain fluorinated greenhouse gases
98/C 355/02	Communication from the Commission to the Council and the European Parliament: Strategy for the phaseout of CFCs in the meter-dose inhalers

Codes

Reference	Title
Not applicable	

Other documents

Reference	Title
Not applicable	

Total General Specifications

Reference	Title
GS EP ELE 161	Electrical cables
GS EP ENV 001	Environmental Requirements for Projects Design and E&P Activities
GS EP MEC 290	Rotating machines packages
GS EP SAF 311	Rules for the selection of fire-fighting systems
GS EP SAF 312	Guidelines for selecting and installing fire and gas detection systems
GS EP SAF 322	Fixed fire water systems
GS EP SAF 331	Carbon dioxide fire extinguishing systems
GS EP SAF 334	Foam fire extinguishing systems

3. Terms and definitions

There are three types of statements in this specification: “shall”, “should” and “may”. They shall be understood as follows:

Shall	Is to be understood as mandatory. Any deviation from a “shall” statement requires a derogation approved by the COMPANY.
Should	Is to be understood as strongly recommended to comply with the requirements of the specification. Alternatives shall provide a similar level of protection and this shall be documented.
May	Is used where alternatives are equally acceptable.

For the purpose of this specification, the following definitions shall apply.

Fire Control	Limitation of fire growth and prevention of structural damages (by cooling of the objects, adjacent gases and/or by pre-wetting adjacent combustibles), (CEN/TS 14972:2008).
Fire Extinguishment	Complete suppression of a fire until there are no burning combustibles (NFPA 750).
Fire Suppression	Sharp reduction of the rate of heat release of a fire and the prevention of regrowth (NFPA 750).
GWP	Global Warming Potential.
Inert gas	An inert gas agent used as an extinguishing agent contains as primary components one or more of the following gases: Nitrogen, Argon, Neon and Helium. Inert gas agents that are used for extinguishing purposes shall not contain carbon dioxide as a secondary agent in concentrations dangerous to health (COMPANY).