



Exploration & Production

GENERAL SPECIFICATION

SAFETY

GS EP SAF 351

Escape, evacuation and rescue from fixed installations

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1. Scope

1.1 Purpose

The purpose of this general specification is to define the rules to be applied to allow personnel on a hydrocarbon production, processing and/or storage installation to leave safely an area where a hazardous event has occurred, or is likely to occur. This includes, by order of chronology, the following steps:

- To maintain the safety of personnel when they escape to another location to avoid the effects of a hazardous event (refer to **section 5.2**)
- To provide safe refuges on the installation for as long as required for a controlled evacuation (refer to **section 5.3** and **5.4**)
- To ensure safe evacuation of the installation (refer to **sections 6.1** to **6.3**)
- To facilitate rescue of personnel in distress or injured (refer to **section 7.2**).

This shall be achieved:

- For all persons in the installation
- Within a time delay compatible with the fire resisting duration time of the means of protection and with the human resistance duration time of persons
- Under safe conditions, for all possible weather conditions.

The general architecture and organisation of EER facilities are summarised in chart displayed in **section 1.3** ("Escape, evacuation and rescue scheme").

1.2 Scope and limitations of use

1.2.1 Scope

This general specification is applicable to fixed offshore platforms and onshore installations handling hydrocarbon, for production, processing and/or storage purposes. Permanently anchored tankers, barges, FSOs or FPSOs are considered as fixed installations and recommendations for escape (refer to **chapter 4**) shall be applicable; it may happen however that **requirements for evacuation** from this type of facilities, in particular as imposed by **SOLAS**, are more stringent than those developed in **chapter 5** of the present document. In such a case **SOLAS** requirements shall apply.

Important notice: Although the scope of the present document is not to provide guidelines for the establishment of proper evacuation procedures, it must not be overlooked that all recommendations conveyed below are making sense only if a proper evacuation and emergency situation management philosophy has been set up and put in force.

1.2.2 Limitations of use

This general specification does not cover:

- Mobile offshore units, and in particular the Mobile Offshore Drilling Units, that are covered by the **MODU Code**, last revision 1989 with amendments published in 1991, based on **SOLAS**
- Helicopters, helidecks and heliports

- Speed boats for the routine transportation of personnel
- Cranes used for transportation of personnel in baskets
- Supply boats for the routine transportation of equipment.

This general specification is limited to highlight safety considerations and should not be considered as a substitute for proper design, specification of miscellaneous pieces of structures, essential, emergency and vital electrical services and communications.

1.3 Escape, evacuation and rescue scheme

See **figure 1** (Evacuation and Rescue scheme).

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.

Codes, standards and recommended practices

For **onshore** installations, and in the absence of more stringent local regulations or particular specification, the **French regulation, Règlement du 23 mars 1965**, dealing with the risks of fire and panic in public installations has been used as a basis of the present document. Furthermore some of the requirement it conveys, in particular those dealing with escape routes and emergency lighting, have been considered applicable to offshore fixed installations too.

For **offshore** fixed installations, and once again in the absence of more stringent local regulations or particular specifications, it has been adhered to the common practice in the oil and gas offshore industry to consider a **manned** platform as a passenger ship, and therefore to follow the **International Maritime Organisation (IMO), Safety Of Life At Sea (SOLAS)**, consolidated texts of the 1974 **SOLAS** convention, 1978 **SOLAS** protocol, 1981, 1988, 1989, 1990 and 1991 amendments.

Note: It is important to note that **SOLAS** assumes ships as being permanently manned, and therefore there is no reference document for **unmanned** fixed offshore platforms, such as wellhead platforms.

The **International Standardisation Organisation (ISO)** is preparing a set of requirements and guidelines for fixed offshore oil and gas installations, **ISO/CD 13702, Part 14**, which has not yet been officially published but has nevertheless been used as another reference document to draft the present specification.

Standards

Reference	Title
ISO/CD 13702	Control and Mitigation of Fires and Explosion on Offshore Installations - Part 14

Professional Documents

Reference	Title
Not applicable	

Regulations

Reference	Title
Not applicable	

Codes

Reference	Title
MODU	Code for the construction and equipment of Mobile Offshore Drilling Units
SOLAS	Consolidated text of international convention for the Safety Of Life At Sea (SOLAS), 1974 and subsequent amendments
IMO	International Maritime Organisation

Other documents

Reference	Title
Not applicable	

Total General Specifications

Reference	Title
GS EP SAF 221	Safety rules for buildings
GS EP SAF 371	Emergency control facilities
GS EP TEL 140	Public address and general alarm system

3. Terminology and definitions

Escape, Evacuation and Rescue (EER) General term to describe the range of possible actions including escape, muster, refuge, evacuation, escape to the sea and rescue/recovery (ISO).

Embarkation area Place from which personnel leave the installation during evacuation e.g.:

- a helideck and associated waiting area
- or a Totally Enclosed Motor Propelled Survival Craft (TEMPSC) muster station (ISO).

Emergency response (ER) Actions taken by personnel on or off the installation to control and/or mitigate a hazardous event (ISO).

Emergency response team	Personnel who have designated duties in an emergency (ISO).
Emergency station	Place where emergency response personnel go to undertake their emergency duties (ISO).
Escape	Act of personnel moving away from a hazardous event to a place where its effects are reduced or removed (ISO).
Escape route	Route from an area of an installation leading to a muster area, a Temporary Refuge (TR), an embarkation area and/or means to escape (ISO).
Evacuation	Planned method of leaving the installation in an emergency (ISO).
Evacuation route	Those escape routes which lead from the muster areas and/or the Temporary Refuge(s) (TR) to the place(s) used for evacuation from the installation.
Life jacket	Device worn by personnel which has sufficient buoyancy and stability to turn the body of an unconscious person and keep the person's mouth clear of the water (ISO).
Mobile offshore unit	Mobile platform, including drilling ships, equipped for drilling for subsea hydrocarbon deposits, and mobile platform for other purposes than production and storage of hydrocarbon deposits (ISO).
Muster area	Designated area where personnel report when required to do so (ISO).
PAGA	Abbreviation for Public Address and General Alarm system.
Primary method (for evacuation)	Preferred method of leaving the installation in an emergency (ISO).
Rescue	Process by which those who, in an emergency situation, have been injured, and/or have been blocked in the escape ways, and/or have evacuated the installation by unusual means, are retrieved to a place where medical assistance is available (COMPANY from ISO).
Secondary method (for evacuation)	Method for evacuation which can be carried-out in a fully controlled manner, under the direction of the person in charge, and independently of external support (ISO).
Survival suit	Protective suit made of waterproof materials which reduces the body heat-loss of a person wearing it in cold water (ISO).
TEMPSC (Totally Enclosed Motor Propelled Survival Craft)	Craft capable of sustaining the lives of persons in distress from the time of abandoning the installation (ISO).
Tertiary method (for escape and evacuation)	Method for escape and evacuate to the sea which relies considerably on the individual's own action (ISO).
TR (Temporary Refuge)	Place provided where personnel can take refuge for a pre-determined period whilst investigations, emergency response and evacuation pre-planning are undertaken (ISO).