

INTERNATIONAL STANDARD

ISO 15544

First edition
2000-09-15

Petroleum and natural gas industries — Offshore production installations — Requirements and guidelines for emergency response

*Industries du pétrole et du gaz naturel — Installations de production en
mer — Exigences et lignes directrices pour les réactions d'urgence*

Preview



Reference number
ISO 15544:2000(E)

© ISO 2000

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

Copyright
Preview

© ISO 2000

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.ch
Web www.iso.ch

Printed in Switzerland

Contents

Page

Foreword.....	iv
Introduction.....	v
1 Scope.....	1
2 Terms, definitions and abbreviated terms.....	1
3 Framework for emergency response.....	5
4 Emergency response strategy (ERS).....	6
5 Emergency response plan (ERP).....	7
6 Command and control.....	8
7 Detection of the need for emergency response.....	9
8 Competence.....	10
9 Maintenance of emergency response equipment.....	11
10 Communications.....	12
11 Escape, refuge, evacuation and rescue.....	14
12 Environmental emergency response.....	15
13 Medical emergency response.....	16
Annex A (informative) Guidelines on the development and assessment of an emergency response strategy.....	18
Annex B (informative) Guidelines on emergency response plans.....	22
Annex C (informative) Guidelines on detection.....	29
Annex D (informative) Guidelines on competence.....	31
Annex E (informative) Guidelines on communication.....	33
Annex F (informative) Guidelines on escape, refuge, evacuation and rescue.....	35
Annex G (informative) Guidelines on environmental emergency response.....	42
Bibliography.....	43

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 15544 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum and natural gas industries*, Subcommittee SC 6, *Processing equipment and systems*.

Annexes A, B, C, D, E, F and G of this International Standard are for information only.

Preview
ISO 15544:2000

Introduction

The successful development of the arrangements required to promote safety and environmental protection during the recovery of hydrocarbon resources requires a structured approach to be applied to the identification and assessment of the hazards which may be present during the various phases in the lifecycle of an offshore installation. These principles also apply to the development of the strategy, arrangements and procedures required to respond to emergencies. An understanding of the hazards can be achieved by the application of ISO 17776 [4], which gives guidelines for the processes of hazard identification and assessment for the offshore industry.

The content in this International Standard on escape, refuge, evacuation and rescue is consistent with the content of ISO 13702 [1] but addresses in more detail how these aspects are built into development of emergency response measures.

This International Standard has been prepared primarily to assist in the development of new installations, and as such it may not be appropriate to apply some of the requirements to existing installations. Retrospective application of this International Standard should only be undertaken where it is reasonable to do so. During the planning of a major change to an installation there may be more opportunity to implement the requirements, and a careful review of this International Standard should be undertaken to determine those clauses which can be utilized in the change.

This International Standard is based on an approach where the selection of measures for emergency response is determined by an evaluation of hazards on the offshore installation. The methodologies employed in this assessment and the resultant recommendations will differ depending on the complexity of the production process and facilities, type of facility (i.e. open or enclosed), manning levels, and the environmental conditions associated with the area of operation.

The verbal form “shall” indicates provisions that are mandatory and “should” indicates provisions to be considered.

Users of this International Standard should note that, while observing its requirements, they should at the same time ensure compliance with such statutory requirements, rules and regulations as may be applicable to the individual offshore installation concerned.

The principal objectives of this International Standard are to describe both the approach to be used and important considerations in determining the emergency response measures that are required on an offshore installation in order to:

- assure the safety of all personnel;
- minimize impact on the environment;
- minimize impact on assets and operations.

The technical guidance in clauses 4 to 13 of this International Standard is arranged as follows:

Objectives identify the goals to be achieved by the emergency response measures being described.

Functional requirements represent the minimum conditions which shall be satisfied to meet the stated objectives. The functional requirements are performance-orientated measures and, as such, should be applicable to the variety of offshore installations utilized for the development of hydrocarbon resources throughout the world.

Guidelines describe recognized practices which should be considered in developing the measures for emergency response. The guidelines are limited to principal elements and are intended to provide specific guidance which, due to the wide variety of offshore operating environments, may in some circumstances not be applicable.

The functional requirements and guidelines are supplemented by annexes A to H. The guidelines and annexes should be considered in conjunction with statutory requirements, industry standards and individual company philosophy, to determine the particular measures that are necessary for emergency response.

Voorbereiding
Preview

Petroleum and natural gas industries — Offshore production installations — Requirements and guidelines for emergency response

1 Scope

This International Standard describes objectives, functional requirements and guidelines for emergency response (ER) measures on installations used for the development of offshore hydrocarbon resources. It is applicable to fixed offshore structures or floating production, storage and off-take systems.

NOTE For mobile offshore units, the ER plans developed in conformance with the requirements and recommendations of the International Maritime Organization (IMO) are generally adequate for the normal, independent operation of the unit in most locations. The following aspects of ER planning are generally not addressed by IMO and should be specially considered:

- area evacuation, e.g. precautionary evacuation in areas of tropical revolving storms;
- combined operations wherein an integrated command and ER system should be developed;
- arctic operations;
- uncontrolled flow from a well.

2 Terms, definitions and abbreviated terms

For the purposes of this International Standard, the following terms, definitions and abbreviated terms apply.

2.1 Terms and definitions

2.1.1

abandonment

act of personnel onboard leaving an installation in an emergency

2.1.2

accommodation

place where personnel onboard sleep and spend their off-duty time

NOTE It may include dining rooms, recreation rooms, lavatories, cabins, offices, sickbay, living quarters, galley, pantries and similar permanently enclosed spaces.

2.1.3

control

<of hazards> limiting the extent and/or duration of a hazardous event to prevent escalation

2.1.4

control station

place on the installation from which personnel can monitor the status of the installation, initiate appropriate shutdown actions and undertake emergency communication

2.1.5

embarkation area

place from which personnel leave the installation during evacuation

EXAMPLES A helideck and associated waiting area or a lifeboat/liferaft boarding area.

2.1.6

emergency

hazardous event which cannot be handled by normal measures and requires immediate action to limit its extent, duration or consequences

2.1.7

emergency command centre

location from which the person in overall charge coordinates ER activities

2.1.8

emergency response

ER

action taken by personnel on or off the installation to control or mitigate a hazardous event or initiate and execute abandonment

2.1.9

emergency response arrangement

plant and equipment provided for use under emergency conditions

2.1.10

emergency response measure

anything provided to facilitate the management of an emergency

NOTE This is a generic term which includes emergency response arrangements, as well as the planning, procedural and organizational aspects of managing emergencies.

2.1.11

emergency response team

group of personnel who have designated responsibilities in an emergency for the safety of the installation, the safety of others or for environmental protection

2.1.12

emergency station

place to which emergency response personnel go to undertake their emergency duties

2.1.13

escalation

increase in the consequences of a hazardous event

2.1.14

escape

act of personnel moving away from a hazardous event to a place where its effects are reduced or removed

2.1.15

escape route

route leading to the place where people muster, or to an area from which people may leave the installation in an emergency

2.1.16

essential safety system

system which has a major role in the control and mitigation of a hazardous event and in any subsequent evacuation, escape and rescue activities

2.1.17**evacuation**

planned method of leaving the installation in an emergency

2.1.18**evacuation, escape and rescue****EER**

range of possible actions in an emergency

NOTE

Such actions may include escape, muster, refuge, evacuation, escape to the sea and rescue/recovery.

2.1.19**evacuation, escape and rescue strategy****EERS**

strategy that results from an evaluation of events that may require EER

NOTE

This strategy describes the measures required and their role.

2.1.20**evacuation route**

escape route which leads from the muster area to the place(s) used for primary or secondary evacuation from the installation

2.1.21**hazard**

potential for human injury, damage to the environment, damage to property or a combination of these

2.1.22**hazard assessment**

process whereby the results of an analysis of a hazard or hazardous event are considered against either judgement, standards, or criteria which have been developed as a basis for decision-making

2.1.23**hazardous event**

incident which occurs when a hazard is realized

EXAMPLES

Release of gas, fire, loss of buoyancy.

2.1.24**life-jacket**

device worn by personnel which has sufficient buoyancy and stability in water to turn the body of an unconscious person and keep the person's mouth clear of the water

2.1.25**mitigation**

limitation of the undesirable effects of a particular event

2.1.26**manned installation**

installation which is normally occupied

2.1.27**mobile offshore unit**

mobile platform, including drilling ships, equipped for drilling for subsea hydrocarbon deposits and/or for purposes other than production and storage of hydrocarbon deposits

2.1.28**muster**

movement of people to a designated area so that the person in overall charge can account for all people and thereby facilitate subsequent emergency response actions

Bestelformulier

Stuur naar:

NEN Standards Products & Services
t.a.v. afdeling Klantenservice
Antwoordnummer 10214
2600 WB Delft



NEN Standards Products & Services

Postbus 5059
2600 GB Delft

Vlinderweg 6
2623 AX Delft

T (015) 2 690 390
F (015) 2 690 271

www.nen.nl/normshop

Ja, ik bestel

__ ex. ISO 15544:2000 en Aardolie- en aardgasindustrie - Buitengaatsse productie-installaties - Eisen en richtlijnen voor noodresponsie € 132.95

Wilt u deze norm in PDF-formaat? Deze bestelt u eenvoudig via www.nen.nl/normshop

Gratis e-mailnieuwsbrieven

Wilt u op de hoogte blijven van de laatste ontwikkelingen op het gebied van normen, normalisatie en regelgeving? Neem dan een gratis abonnement op een van onze e-mailnieuwsbrieven. www.nen.nl/nieuwsbrieven

Gegevens

Bedrijf / Instelling

T.a.v. O M O V

E-mail

Klantnummer NEN

Uw ordernummer BTW nummer

Postbus / Adres

Postcode Plaats

Telefoon Fax

Factuuradres (indien dit afwijkt van bovenstaand adres)

Postbus / Adres

Postcode Plaats

Datum Handtekening

Retourneren

Fax: 015 2 690 271

E-mail: klantenservice@nen.nl

Post: NEN Standards Products & Services,

t.a.v. afdeling Klantenservice
Antwoordnummer 10214,
2600 WB Delft

(geen postzegel nodig).

Voorwaarden

- De prijzen zijn geldig tot 31 december 2018, tenzij anders aangegeven.
- Alle prijzen zijn excl. btw, verzend- en handelingskosten en onder voorbehoud bij o.m. ISO- en IEC-normen.
- Bestelt u via de normshop een pdf, dan betaalt u geen handeling en verzendkosten.
- Meer informatie: telefoon 015 2 690 391, dagelijks van 8.30 tot 17.00 uur.
- Wijzigingen en typfouten in teksten en prijsinformatie voorbehouden.
- U kunt onze algemene voorwaarden terugvinden op: www.nen.nl/leveringsvoorwaarden.