



IEC 61892-1

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INTERNATIONAL STANDARD

Mobile and fixed offshore units – Electrical installations –
Part 1: General requirements and conditions



INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MOBILE AND FIXED OFFSHORE UNITS – ELECTRICAL INSTALLATIONS –

Part 1: General requirements and conditions

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61892-1 has been prepared by IEC technical committee 18: Electrical installations of ships and of mobile and fixed offshore units.

This third edition cancels and replaces the second edition published in 2010. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition.

- a) The general requirement to harmonic distortion has been changed from IEC 61000-2-4 Class 2 to Class 1.
- b) The voltage tolerance for a DC system has been changed from $\pm 10\%$ to $+10\%, -15\%$.
- c) Annex C (informative) regarding specification of surface treatment and protective painting system has been added.

The text of this standard based on the following documents:

CDV	Report on voting
18/1385/CDV	18/1449/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 61892 series can be found, under the general title *Mobile and fixed offshore units – Electrical installations*, on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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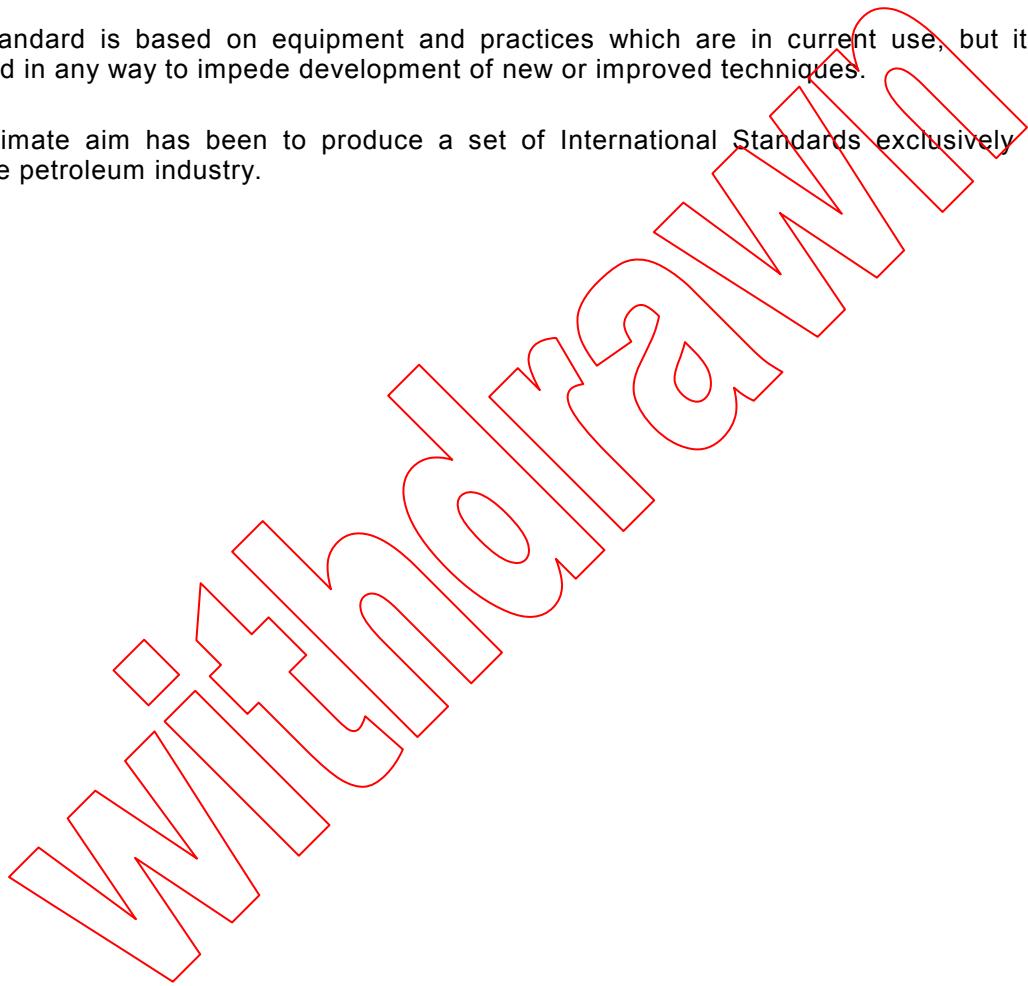
INTRODUCTION

The IEC 61892 series of International Standards is intended to enable safety in the design, selection, installation, maintenance and use of electrical equipment for the generation, storage, distribution and utilization of electrical energy for all purposes in offshore units which are used for the purpose of exploration or exploitation of petroleum resources.

This part of the IEC 61892 incorporates and co-ordinates, as far as possible, existing rules and forms a code of interpretation, where applicable, of the requirements of the International Maritime Organization, a guide for future regulations which may be prepared and a statement of practice for offshore unit owners, constructors and appropriate organizations.

This standard is based on equipment and practices which are in current use, but it is not intended in any way to impede development of new or improved techniques.

The ultimate aim has been to produce a set of International Standards exclusively for the offshore petroleum industry.



MOBILE AND FIXED OFFSHORE UNITS – ELECTRICAL INSTALLATIONS –

Part 1: General requirements and conditions

1 Scope

This part of IEC 61892 contains provisions for electrical installations in mobile and fixed offshore units including pipeline, pumping or 'pigging' stations, compressor stations and exposed location single buoy moorings, used in the offshore petroleum industry for drilling, processing and storage purposes.

This International Standard applies to all installations, whether permanent, temporary, transportable or hand-held, to AC installations up to and including 35 000 V and DC installations up to and including 1 500 V (AC and DC voltages are nominal values).

This standard does not apply either to fixed equipment for medical purposes or to the electrical installations of tankers.

NOTE For medical rooms, IEC 60364-7-710 provides more information.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60034 (all parts), *Rotating electrical machines*

IEC 60034-1:2010, *Rotating electrical machines – Part 1: Rating and performance*

IEC 60079 (all parts), *Explosive atmospheres*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

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IEC 61140, *Protection against electric shock – Common aspects for installation and equipment*

IEC 61892-2:~~2005~~ 2012, *Mobile and fixed offshore units – Electrical installations – Part 2: System design*

IEC 61892-5, *Mobile and fixed offshore units – Electrical installations – Part 5: Mobile units*

IEC 61892-6, *Mobile and fixed offshore units – Electrical installations – Part 6: Installation*

IEC 61892-7, *Mobile and fixed offshore units – Electrical installations – Part 7: Hazardous areas*

~~IMO 110E, IMO 111F and IMO 113S, International Convention for the Safety of Life at Sea (SOLAS):1974, Consolidated edition 2009~~

IMO MODU Code, *Code for the construction and equipment of mobile offshore drilling units*

~~Withdrawn~~



IEC 61892-1

Edition 3.0 2015-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Mobile and fixed offshore units – Electrical installations –
Part 1: General requirements and conditions

Unités mobiles et fixes en mer – Installations électriques –
Partie 1: Exigences générales et conditions



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WITHDRAWN

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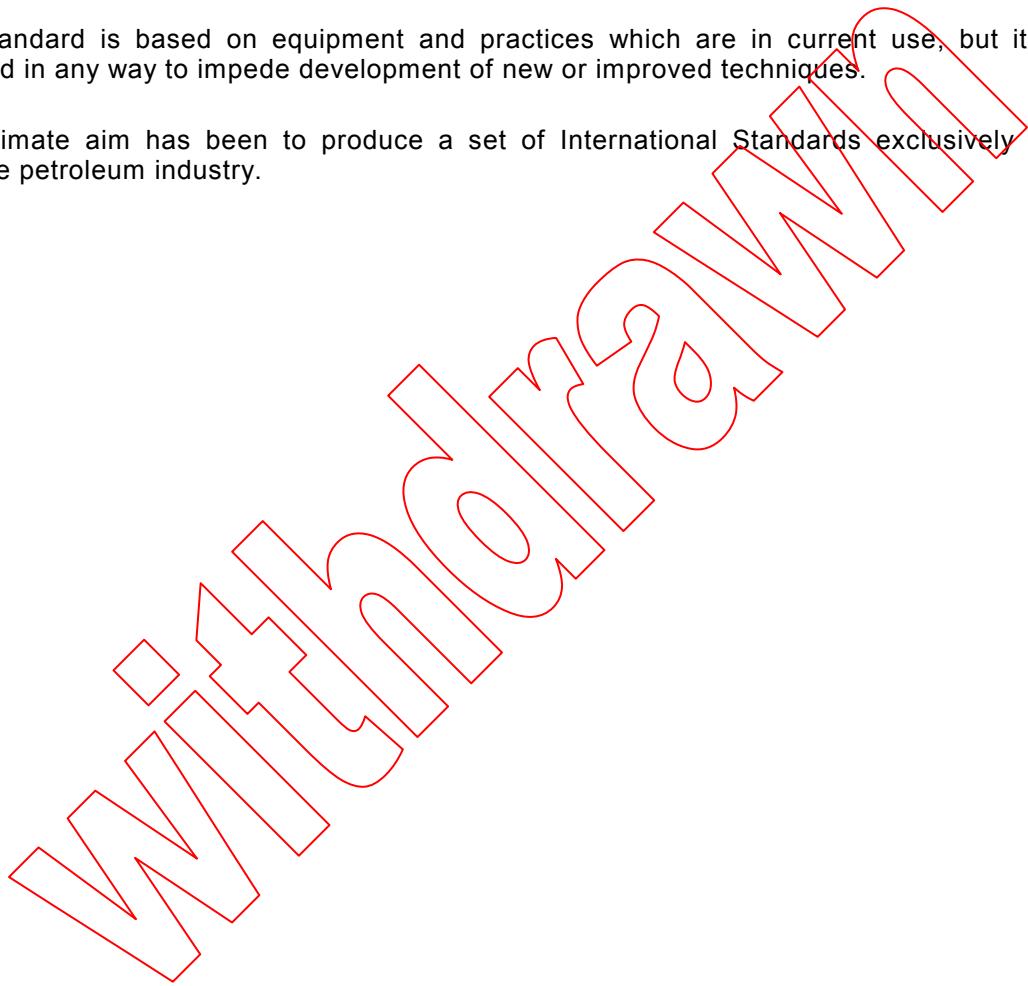
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Withdrawing

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

UNITÉS MOBILES ET FIXES EN MER – INSTALLATIONS ÉLECTRIQUES –

Partie 1: Exigences générales et conditions

AVANT-PROPOS

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La Norme internationale IEC 61892-1 a été établie par le comité d'études 18 de l'IEC: Installations électriques des navires et des unités mobiles et fixes en mer.

Cette troisième édition annule et remplace la deuxième édition parue en 2010. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) L'exigence générale relative à la distorsion harmonique est passée de la Classe 2 à la Classe 1 (voir IEC 61000-2-4).
- b) La tolérance de tension d'un système à courant continu est passée de $\pm 10\%$ à $+10\%, -15\%$.

- c) L'Annexe C (informative) concernant la spécification du traitement de surface et du système de peinture protectrice a été ajoutée.

Le texte de cette norme est issu des documents suivants:

CDV	Rapport de vote
18/1385/CDV	18/1449/RVC

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette norme.

Cette publication a été rédigée selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 61892, publiées sous le titre général *Unités mobiles et fixes en mer – Installations électriques*, peut être consultée sur le site web de l'IEC.

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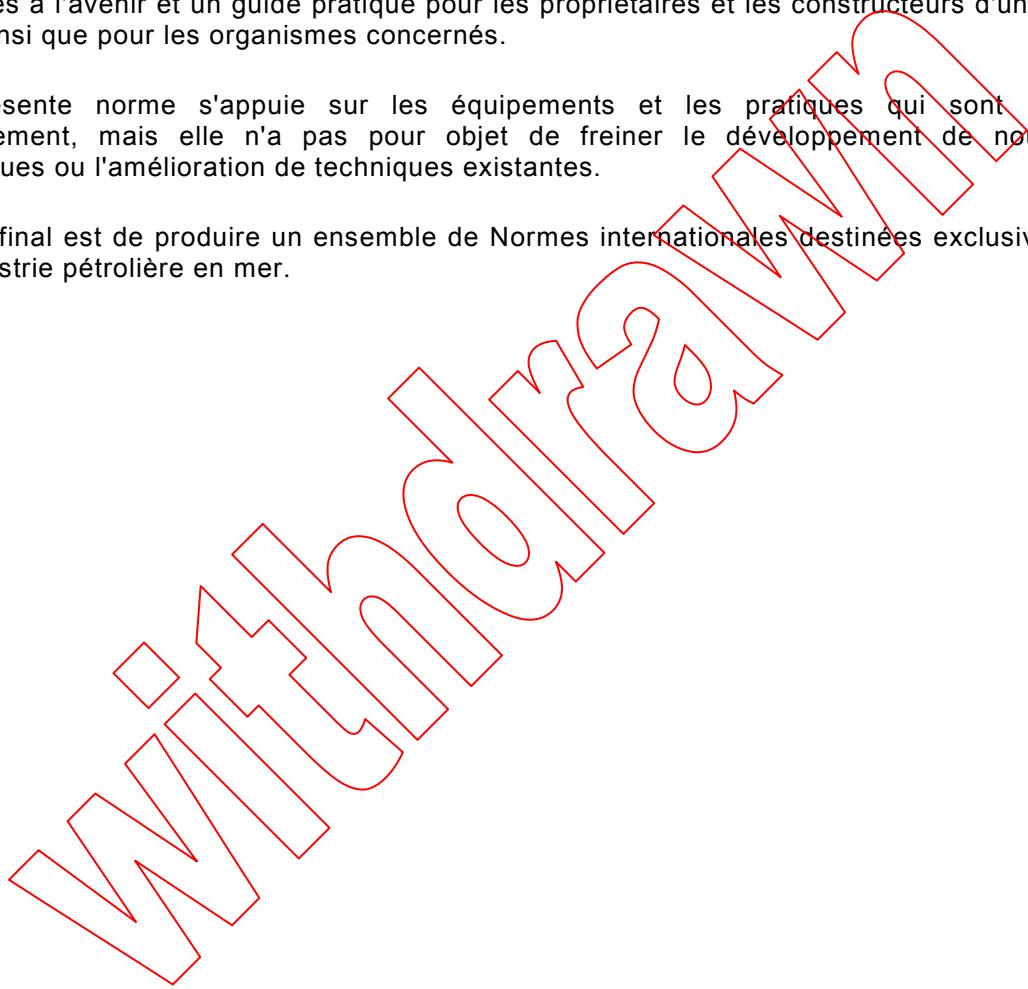
INTRODUCTION

La série IEC 61892 de Normes internationales est conçue pour assurer la sécurité de la conception, de la sélection, de l'installation, de la maintenance et de l'utilisation des équipements électriques destinés à la production, au stockage, à la distribution et à l'utilisation de l'énergie électrique, et ce à toutes fins, dans les unités en mer employées pour l'exploration ou l'exploitation des ressources pétrolières.

La présente partie de l'IEC 61892 comprend et coordonne autant que faire se peut, les règles existantes et constitue un code d'interprétation, le cas échéant, des exigences de l'Organisation Maritime Internationale (OMI), un guide pour les règlements qui peuvent être préparés à l'avenir et un guide pratique pour les propriétaires et les constructeurs d'unités en mer, ainsi que pour les organismes concernés.

La présente norme s'appuie sur les équipements et les pratiques qui sont utilisés actuellement, mais elle n'a pas pour objet de freiner le développement de nouvelles techniques ou l'amélioration de techniques existantes.

Le but final est de produire un ensemble de Normes internationales destinées exclusivement à l'industrie pétrolière en mer.



UNITÉS MOBILES ET FIXES EN MER – INSTALLATIONS ÉLECTRIQUES –

Partie 1: Exigences générales et conditions

1 Domaine d'application

La présente partie de l'IEC 61892 contient des dispositions concernant les installations électriques des unités mobiles et fixes en mer, y compris les canalisations, les stations de pompage ou de raclage, les stations de compression et les systèmes d'amarrage à point unique en zone exposée, qui sont utilisées dans l'industrie pétrolière en mer (offshore) pour le forage, le traitement et le stockage.

La présente Norme internationale s'applique à toutes les installations, qu'elles soient permanentes ou provisoires, transportables ou portatives, aux installations en courant alternatif jusqu'à 35 000 V inclus et aux installations en courant continu jusqu'à 1 500 V inclus (les tensions alternatives et continues sont des valeurs nominales).

La présente norme ne s'applique pas aux équipements fixes destinés aux applications médicales ni aux installations électriques destinées aux navires pétroliers.

NOTE Pour les locaux médicaux, l'IEC 60364-7-710 fournit des informations supplémentaires.

2 Références normatives

Les documents suivants sont cités en référence de manière normative, en intégralité ou en partie, dans le présent document et sont indispensables pour son application. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60034 (toutes les parties), *Machines électriques tournantes*

IEC 60034-1:2010, *Machines électriques tournantes – Partie 1: Caractéristiques assignées et caractéristiques de fonctionnement*

IEC 60079 (toutes les parties), *Atmosphères explosives*

IEC 60529, *Degrés de protection procurés par les enveloppes (Code IP)*

IEC 61000-2-4:2002, *Compatibilité électromagnétique (CEM) – Partie 2-4: Environnement – Niveaux de compatibilité dans les installations industrielles pour les perturbations conduites à basse fréquence*

IEC 61140, *Protection contre les chocs électriques – Aspects communs aux installations et aux matériels*

IEC 61892-2:2012, *Mobile and fixed offshore units – Electrical installations – Part 2: System design* (disponible en anglais seulement)

IEC 61892-5, *Unités mobiles et fixes en mer – Installations électriques – Partie 5: Unités mobiles*

IEC 61892-6, *Unités mobiles et fixes en mer – Installations électriques – Partie 6: Installation*

IEC 61892-7, *Unités mobiles et fixes en mer – Installations électriques – Partie 7: Emplacements dangereux*

Convention internationale pour la sauvegarde de la vie humaine en mer (SOLAS):1974, édition consolidée 2009

IMO MODU Code, *Code for the construction and equipment of mobile offshore drilling units*
(disponible en anglais seulement)

Withdrawn