MALAYSIAN STANDARD

MS 2690-2:2019

Petroleum and natural gas industries - Specific requirements for offshore structures - Part 2: Seismic design procedures and criteria (ISO 19901-2:2017, MOD)

ICS: 75.180.10

Descriptors: petroleum, natural gas, offshore structures, seismic design

DEPARTMENT OF STANDARDS MALAYSIA

DEVELOPMENT OF MALAYSIAN STANDARDS

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Contents

Page

Committee representation

The Industry Standards Committee on Petroleum and Gas (ISC H) under whose authority this Malaysian Standard was adopted, comprises representatives from the following organisations:

Department of Occupational Safety and Health Malaysia
Department of Standards Malaysia
Energy Commission
Federation of Malaysian Manufacturers - Malaysian Industrial Gases Manufacturers Group
Fire and Rescue Department Malaysia
Malaysia Automotive Institute
Malaysian Gas Association
Malaysian Oil & Gas Engineering Council
Malaysian Palm Oil Board
Malaysian Plastics Manufacturers Association
Ministry of Domestic Trade, Co-operatives and Consumerism
Ministry of International Trade and Industry
Petroliam Nasional Berhad
PETRON Malaysia Refining & Marketing Bhd
Road Transport Department
Royal Malaysian Customs Department
Shell Malaysia Trading Sdn Bhd
SIRIM Berhad (Secretariat)
The Institution of Engineers, Malaysia
Universiti Kebangsaan Malaysia
Universiti Teknologi Malaysia
Universiti Teknologi PETRONAS

The Technical Committee on Offshore Structures which recommended the adoption of the ISO Standard as Malaysian Standard consists of representatives from the following organisations:

Asian Geos Sdn Bhd
Department of Occupational Safety and Health Malaysia
Malaysia Joint Branch, Royal Institution of Naval Architects & Institute of Marine Engineering, Science and Technology
Malaysia Marine and Heavy Engineering Sdn Bhd
Malaysian Structural Steel Association
Muhibbah Engineering (M) Bhd
Petroliam Nasional Berhad (Group Technical Solutions)
PETRONAS Carigali Sdn Bhd
SIRIM Berhad (Secretariat)
TechnipFMC
Universiti Teknologi Malaysia
Universiti Teknologi PETRONAS

National foreword

The adoption of the ISO Standard as a Malaysian Standard was recommended by the Technical Committee on Offshore Structures under the authority of the Industry Standards Committee on Petroleum and Gas.

This Malaysian Standard is a modified adoption of ISO 19901-2:2017*, Petroleum and natural gas industries - Specific requirements for offshore structures - Part 2: Seismic design procedures and criteria*, published by the International Organization for Standardization (ISO) with the following modifications:

a) in the source text, "this International Standard" should read "this Malaysian Standard";

b) the comma which is used as a decimal sign (if any), to read as a point;

c)

Clause/Subclause	**Modifications**
Figure 2	Replace "C_v x $S_{a,map}$ (0,1)" with "C_v x $S_{a,map}$ (1,0)"

Explanation: To be consistent with the overall content of the standard.

National Annex D	Inclusion of offshore Malaysian maps

Explanation: To replace the 5 % damped spectral response accelerations for Malaysia in Figure B.7.

d) reference to International Standards should be replaced by corresponding Malaysian Standards as follows:

Referenced International Standards	Corresponding Malaysian Standards
ISO 19900, *Petroleum and natural gas industries - General requirements for offshore structures*	MS ISO 19900, *Petroleum and natural gas industries - General requirements for offshore structures*
ISO 19902, *Petroleum and natural gas industries - Fixed steel offshore structures*	MS 19902, *Petroleum and natural gas industries - Fixed steel offshore structures*

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.

NOTE. MOD on the front cover indicates a modified standard i.e. a standard adapted from an International Standard with permitted technical deviations, which are clearly identified and explained. The changes in structure are permitted provided that the altered structure permits easy comparison of the content of the two standards. Modified standards also include the changes permitted under identical correspondence.

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 7, *Offshore structures*.

This second edition cancels and replaces the first edition (ISO 19901-2:2004), which has been technically revised.

A list of all parts in the ISO 19901 series can be found on the ISO website.