



# MALAYSIAN STANDARD

MS 2495:2012

**Pipework - Stainless steel fittings threaded in  
accordance with MS 1989: Part 1  
(ISO 4144:2003, MOD)**

**ICS: 23.040.40**

Descriptors: pipework, stainless steel, fittings threaded

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## Committee representation

The Industry Standards Committee on Mechanical Engineering (ISC F) 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  
Jabatan Kerja Raya Malaysia  
Machinery and Equipment Manufacturers' Association  
Malaysian Industrial Development Authority  
Malaysian Iron and Steel Industry Federation  
Ministry of International Trade and Industry  
National Institute of Occupational Safety and Health  
Petroleum Nasional Berhad  
Science and Technology Research Institute for Defence  
SIRIM Berhad (Secretariat)  
SIRIM QAS International Sdn Bhd  
Suruhanjaya Perkhidmatan Air Negara  
Suruhanjaya Tenaga  
The Institution of Engineers, Malaysia  
Universiti Kebangsaan Malaysia  
Universiti Malaya  
Universiti Sains Malaysia  
Universiti Teknologi Malaysia

The Technical Committee on Metallic Pipes and Fittings which recommended the adoption of the ISO Standard as Malaysian Standard consists of representatives from the following organisations:

Amalgamated Industrial Steel Berhad  
Association of Consulting Engineers Malaysia  
Gas Malaysia Sdn Bhd  
Jabatan Kerja Raya Malaysia  
Malaysian Iron and Steel Industry Federation  
Mega Steel Sdn Bhd  
Ministry of Energy, Green Technology and Water  
SIRIM Berhad (Pusat Penyelidikan Bahan Termaju)  
SIRIM Berhad (Secretariat)  
SIRIM QAS International Sdn Bhd  
Suruhanjaya Perkhidmatan Air Negara  
Suruhanjaya Tenaga  
Syarikat Bekalan Air Selangor Sdn Bhd  
Tenaga Nasional Berhad (Bahagian Penjanaan)  
Universiti Teknologi Malaysia

## NATIONAL FOREWORD

The adoption of the ISO Standard as a Malaysian Standard was recommended by the Technical Committee on Metallic Pipes and Fittings under the authority of the Industry Standards Committee on Mechanical Engineering.

This Malaysian Standard is a modified adoption of ISO 4144:2003, *Pipework - Stainless steel fittings threaded in accordance with ISO 7-1*, 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) <b>Clause/Subclause</b>	<b>Modifications</b>
Title	The title has been changed to Pipework -
6.1	Stainless steel fittings threaded in accordance with MS 1989: Part 1

**Explanation:** MS 1989-1 cancels and replaces ISO 7-1.

5 Manufacturing and materials	Replace the steel grade TS 47 (ISO 2604-2) with steel grade GX5CrNi19-9 (ISO 4991)
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**Explanation:** ISO 2604-2 has been withdrawn and the suitable technical reference is ISO 4991.

8.4 Intergranular corrosion test	Replace the reference from B9.1 to B10.1 in ISO 4990
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**Explanation:** To change the correct reference.

10 e) material	Add new subclause and reference to ISO 4991
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**Explanation:** To give alternative identification marking.

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

**NATIONAL FOREWORD** (*continued*)

Referenced International Standards

Corresponding Malaysian Standards

ISO 7-1, *Pipe threads where pressure-tight joints are made on the threads - Part 1: Dimensions, tolerances and designation*

MS 1989: Part 1, *Pipes threads where pressure tight joints are made on the threads - Part 1: Taper external threads and parallel internal threads - Dimensions, tolerances and designations* and MS 1989: Part 2, *Pipes threads where pressure tight joints are made on the threads - Part 2: Taper external threads and taper internal threads - Dimensions, tolerances and designations*

ISO 7-2, *Pipe threads where pressure-tight joints are made on the threads - Part 2: Verification by means of limit gauges*

MS 1989: Part 3, *Pipes threads where pressure tight joints are made on the threads - Part 3: Verification by means of limits gauges*

ISO 68-1, *ISO general purpose screw threads - Basic profile - Part 1: Metric screw threads*

MS ISO 68-1, *ISO general purpose screw threads - Basic profile - Part 1: Metric screw threads*

ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation*

MS ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation*

ISO 261, *ISO general-purpose metric screw threads - General plan*

MS ISO 261, *ISO general-purpose metric screw threads - General plan*

ISO 262, *ISO general-purpose metric screw threads - Selected sizes for screws, bolts and nuts*

MS ISO 262, *ISO general-purpose metric screw threads - Selected sizes for screws, bolts and nuts*

ISO 724, *ISO general-purpose metric screw threads - Basic dimensions*

MS ISO 724, *ISO general-purpose metric screw threads - Basic dimensions*

ISO 4990, *Steel castings - General technical delivery requirements*

MS ISO 4990, *Steel castings - General technical delivery requirements*

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 4144 was prepared by Technical Committee ISO/TC 5, *Ferrous metal pipes and metallic fittings*, Subcommittee SC 5, *Threaded or plain end butt-welding fittings, threads, gauging of threads*.

This second edition cancels and replaces the first edition (ISO 4144:1979), which has been technically revised.