

COMPLIMENTARY



MALAYSIAN STANDARD

MS 2668:2016

Alloy steel bars for special application bolting materials

ICS: 77.140.20

Descriptors: bolting materials, special application, alloy steel bars

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Committee representation

The Industry Standards Committee on Metallic Materials and Semi-Finished Products (ISC P) under whose authority this Malaysian Standard was developed, comprises representatives from the following organisations:

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Association of Marine Industries of Malaysia
Construction Industry Development Board Malaysia
Department of Standards Malaysia
Federation of Malaysian Manufacturers
IKRAM QA Services Sdn Bhd
Institute of Materials Malaysia
Jabatan Kerja Raya Malaysia
Malaysia Steel Association
Malaysia Steel Institute
Malaysian Iron and Steel Industry Federation
Master Builders Association Malaysia
Ministry of International Trade and Industry
Pertubuhan Akitek Malaysia
SIRIM Berhad (National Centre for Machinery and Tooling Technology)
SIRIM Berhad (National Precision Tooling Sdn Bhd)
SIRIM Berhad (Secretariat)
SIRIM QAS International Sdn Bhd
The Institution of Engineers, Malaysia
Universiti Malaya
Universiti Sains Malaysia
Universiti Teknologi Malaysia

The Technical Committee on Alloy Steels which developed this Malaysian Standard consists of representatives from the following organisations:

Amsteel Mills Sdn Bhd
Ann Joo Steel Berhad
BlueScope Steel (Malaysia) Sdn Bhd
IKRAM QA Services Sdn Bhd
Kanzen Telsu Group
Malaysian Iron and Steel Industry Federation
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Southern Steel Berhad
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Universiti Kebangsaan Malaysia
Universiti Sains Malaysia

Co-opted member:

Malaysia Steel Institute

Alloy steel bars for special application bolting materials

1 Scope

This Malaysian Standard specifies the alloy steel bars to be used for bolts, stud bolts, washers, nuts and similar products for the nuclear reactor and other special applications (hereafter referred to as "steel bars").

2 Normative references

The following normative references are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the normative reference (including any amendments) applies.

MS 1846:2016, *Steel and steel products - General technical delivery requirements*

MS ISO 148-1, *Metallic materials - Charpy pendulum impact test - Part 1: Test method*

MS ISO 6506-1:2009, *Metallic materials - Brinell hardness test - Part 1: Test method*

MS ISO 6892, *Metallic material - Tensile testing at ambient temperature*

ISO 377:2013, *Steel and steel products - Location and preparation of samples and test pieces for mechanical testing*

ISO 10474:2013, *Steel and steel products - Inspection documents*

JIS G 0320, *Standard test methods for heat analysis of steel products*

JIS G 0321:2010, *Product analysis and its tolerance for wrought steel*

JIS G 3191, *Dimensions, mass and permissible variations of hot rolled steel bars and bar in coil*

JIS Z 2241, *Metallic materials - Tensile testing - Method of test at room temperature*

3 Class, symbol and applicable diameter

The class, symbol and applicable diameter of the steel bars shall be as given in Table 1.

Acknowledgements

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