

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS H 5203 : 2022

(JMA/JSA)

Magnesium alloy castings

ICS 77.150.20

Reference number : JIS H 5203 : 2022 (E)

PROTECTED BY COPYRIGHT

12 S

H 5203 : 2022

Date of Establishment: 1958-04-26

Date of Revision: 2022-12-20

Date of Public Notice in Official Gazette: 2022-12-20

Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area

JIS H 5203 : 2022, First English edition published in 2023-05

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

© JSA 2023

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 the publisher.

Printed in Japan

HN

PROTECTED BY COPYRIGHT

Contents

		Page
Introduction	1
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Class, symbol of class and classification of mould	2
5	Materials	5
6	Quality	6
6.1	Appearance	6
6.2	Chemical composition	6
6.3	Mechanical properties	9
7	Shapes, dimensions and mass	11
8	Tests	11
8.1	Chemical analysis	11
8.2	Mechanical tests	11
9	Inspection	13
10	Marking	13
11	Report	13
Annex JA (informative)	Solution heat treatment and age hardening of magnesium alloy castings	14
Annex JB (informative)	Comparison table between JIS and corresponding International Standard	16

Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Magnesium Association (JMA)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS H 5203** : 2006), which has been technically revised.

This **JIS** document is protected by the Copyright Act.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, published patent application or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, published patent application or utility model rights.

Magnesium alloy castings

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 16220** : 2017, Edition 3, with some modifications of the technical contents in order to reflect the actual situation in the Japanese market.

Annex JA is unique to **JIS** and not given in the corresponding International Standard. The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standard. A list of modifications with the explanations is given in Annex JB.

1 Scope

This Standard specifies the requirements for the magnesium alloy castings (hereafter referred to as castings) of sand mould castings, metal mould castings and precision castings.

NOTE The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 16220 : 2017 *Magnesium and magnesium alloys — Magnesium alloy ingots and castings* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

2 Normative references

Part or all of the provisions of the following standards, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

- | | |
|------------|---|
| JIS B 0403 | <i>Castings — System of dimensional tolerances and machining allowances</i> |
| JIS H 0001 | <i>Aluminium, magnesium and their alloys — Temper designation</i> |
| JIS H 0321 | <i>General rules for inspection of non-ferrous metal materials</i> |
| JIS H 1331 | <i>Magnesium and magnesium alloys — General rules for sampling and analytical methods</i> |
| JIS H 1332 | <i>Methods for determination of aluminium in magnesium and magnesium alloys</i> |
| JIS H 1333 | <i>Methods for determination of zinc in magnesium and magnesium alloys</i> |