JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS G 0559 : 2025

(JISF)

Steel — Determination of surface hardening depth after flame hardening or induction hardening

ICS 77.040.99

Reference number: JIS G 0559 : 2025 (E)

Date of Establishment: 1967-02-01

Date of Revision: 2025-04-21

Date of Public Notice in Official Gazette: 2025-04-21

Developed by: The Japan Iron and Steel Federation

Investigated by: The Japan Iron and Steel Federation,
Standardization Center

JIS G 0559 : 2025, First English edition published in 2025-08

Translated and published by: Japanese Standards Association
Mita Avanti, 3-11-28, 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.

Printed in Japan HN

Contents

Page

Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry based on the provision of Article 14, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act in response to a proposal for revision of Japanese Industrial Standard with a draft being attached, submitted by The Japan Iron and Steel Federation (JISF), an accredited standards development organization. This edition replaces the previous edition (**JIS G 0559** : 2019), which has been technically revised.

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 is not responsible for identifying any of such patent rights, published patent application or utility model rights.

Steel — Determination of surface hardening depth after flame hardening or induction hardening

Introduction

This Japanese Industrial Standard has been prepared based on ISO 18203 : 2016, Edition 1, with some modifications of the technical contents to specify only the matters related to the measuring methods of surface hardening depth obtained by flame hardening and induction hardening.

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 JA.

1 Scope

This Standard specifies the methods for measuring the surface hardening depth and total thickness of surface hardening depth, normally greater than 0.3 mm, of steel hardened by flame hardening and induction hardening (hereafter referred to as the hardening depth). However, the methods may be used for the measurement of hardening depth of 0.3 mm or under by agreement between the purchaser and the manufacturer.

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

ISO 18203 : 2016 *Steel — Determination of the thickness of surface-hardened layers* (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 7726 *Rockwell hardness test — Verification and calibration of testing machines and indenters*

JIS G 0201 *Glossary of terms used in iron and steel (Heat treatment)*

JIS G 0202 *Glossary of terms used in iron and steel (Testing)*

JIS G 0557 *Methods of measuring case depth hardened by carburizing treatment for steel*