

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS E 5401-1 : 1998

**Carbon steel tyres
for railway rolling stock—
Quality requirements**

ICS 45.060

Descriptors : railway vehicles, unalloyed steels, tyres, steels

Reference number : JIS E 5401-1 : 1998 (E)

PROTECTED BY COPYRIGHT

15S

E 5401-1 : 1998

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of International Trade and Industry and Minister of Transportation through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law: By this Standard, **JIS E 5401 : 1989** is withdrawn. **JIS E 5401-1 : 1998** is intended to conform to the International Standard. The corresponding International Standard, **ISO 1005-1 : 1994** *Railway rolling stock material—Part 1 : Rough-rolled tyres for tractive and trailing stock—Technical delivery conditions* is fully employed in this Standard, while some items or contents of the requirements of the former Standard, **JIS E 5401 : 1989** are supplemented at a minimum range for users' selection, for the purpose of avoiding confusion of users due to full revision of the former Standard which is familiar with users for more than ten years.

Date of Establishment: 1998-07-25

Date of Public Notice in Official Gazette: 1998-07-27

Investigated by: Japanese Industrial Standards Committee

Divisional Council on Railways and Rolling
Stock

JIS E 5401-1:1998, First English edition published in 1999-10

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

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

© JSA 1999

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

PROTECTED BY COPYRIGHT

Contents

	Page
Introduction	1
1 Scope	1
2 Normative references	1
3 Designated items by purchaser.....	2
4 Grades	3
5 Requirements	7
6 Manufacture	9
7 Inspection.....	10
8 Delivery	17
9 Guarantee	17
Annex A (informative) Examples of sulfur prints	18

Carbon steel tyres for railway rolling stock—Quality requirements

Introduction This Japanese Industrial Standard has specified the quality requirements of tyres for railway rolling stock as **JIS E 5401-1** *Carbon steel tyres for railway rolling stock—Quality requirements*, upon fully amending the former **JIS E 5401-1989** *Carbon steel tyres for railway rolling stock* on the view-point to contrive the conformity with the corresponding **ISO** Standards.

The former **JIS E 5401-1989** has been arranged of the quality requirements and the dimensional requirements into a single standard, however, since the corresponding **ISO** Standard has been divided into the two standards of **ISO 1005-1** : 1994, *Railway rolling stock material—Part 1 : Rough-rolled tyres for tractive and trailing stock—Technical delivery conditions* and **ISO 1005-2** : 1994, *Railway rolling stock material—Part 2 : Tyres, wheel centres and tyred wheels for tractive and trailing stock—Dimensional, balancing and assembly requirements*, the coordination has been proceeded on the basis of the system of the International Standards (adoption of the style of the International Standard, and introduction of branch number system), as the result, the quality requirements have been specified as Part 1, and dimensions and assembling requirements have been specified as Part 2.

The Annex A of this Standard is for informative reference.

At present, the tyres are in the tendency to be used for repairing, and the new wheels are manufactured as the solid wheels.

1 Scope

1.1 This Standard specifies requirements for the manufacture and supply of carbon steel tyres for railway rolling stock based on Table 1-1 or Table 1-2 and 4 (grades).

1.2 In addition to this Standard, the requirements of **ISO 404** : 1992, *Steel and steel products—General technical delivery requirements* are applicable.

2 Normative references The following standards contain provisions which, through reference in this text, constitute provisions of this part of **JIS E 5401**. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of **JIS E 5401** are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

JIS E 5401-2 *Carbon steel tyres for railway rolling stock—Wheel centres and tyred wheels—Dimensional, balancing and assembly requirements*

JIS G 0303 *General rules for inspection of steel*

JIS G 1211 *Iron and steel—Methods for determination of carbon content*

JIS G 1212 *Iron and steel—Methods for determination of silicon content*

JIS G 1213 *Methods for determination of manganese in iron and steel*

JIS G 1214 *Iron and steel—Methods for determination of phosphorus content*