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**Rolling stock — Wheelsets — Quality
requirements**

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Foreword

This Japanese Industrial Standard has been revised by the Minister of Land, Infrastructure, Transport and Tourism through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Association of Rolling Stock Industries (JARI)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS E 4504** : 2004 is replaced with this Standard.

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Rolling stock — Wheelsets — Quality requirements

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 1005-7** : 1982, Edition 1, with some modifications of the technical contents to meet the actual situations in Japan.

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 and field of application

1.1 This Standard specifies the requirements for the assembly of solid wheels, wheel centres, wheel centres complete with tyres, axle-mounted brake discs, dynamo pulleys, gear wheels, chain wheels, and components of wheelsets ¹⁾ specified by the purchaser onto axles of rolling stock by press fitting, shrink fitting, or hydraulic pressure fitting. It also specifies the shapes, dimensional tolerances, and inspections of the completed assembly and the conditions of delivery.

Note ¹⁾ For the purposes of this Standard, a wheelset is defined as the complete unit constituted by the assembly of an axle and two complete wheels together with any gear wheels, dynamo pulleys, brake discs, bearings, and components specified by the purchaser.

Throughout this Standard, the word “seat” describes a wheel seat of an axle, gear seat, disc seat, etc., and “bore” describes a shaft hole for a wheel, gear, disc, etc.

Furthermore, wheel-related components is used as a generic term for solid wheels, wheel centres, and wheel centres complete with tyres.

1.2 This Standard includes requirements for both driving and trailing wheelsets for all railway applications and applies to wheelsets having the following wheelset components.

a) Type of axle

- Position of journals (axle bearings): outside journal or inside journal (see Figure 2)
- Shape of wheel seat: cylindrical (or conical) ²⁾
- Mounting seat of axle between wheels: plain-axle body or with seats for gear wheels, traction motor bearings (traction motor suspension), dynamo pulleys, chain wheels, brake discs, or any other axle-mounted component

b) Type of wheel

- Solid wheels: solid-rolled, forged, or cast