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(JARI/JSA)

**Rolling stock — Bogie — General rules  
for design of bogie frame strength**

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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 4207:2004** is replaced with this Standard.

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# Rolling stock — Bogie — General rules for design of bogie frame strength

## Introduction

This Japanese Industrial Standard was established in 1984 and has gone through three revisions up to the present. The last revision was made in 2004, and the revision at this time is to respond to the recent advances in technology.

No corresponding International Standard has been established at this point.

## 1 Scope

This Japanese Industrial Standard specifies the conditions of strength design that are common to steel components used for bogie frames and beams comprising main strength members (excluding unsprung components and carbody mounting components), among bogies used for a rolling stock (excluding that for specified railway cars).

This Standard does not apply to the bogie frames used for specified railway cars (such as a trolleybus, a monorail car, a modified-personal-rapid-transit car, a magnetically supported vehicle, etc.), which use e.g. a rubber tire; however, this Standard may apply to the allowable stress of material used for bogie frames of these cars.

## 2 Normative references

The following standards contain provisions which, 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 E 4001 *Railway rolling stock — Vocabulary*

JIS G 3106 *Rolled steels for welded structure*

JIS G 3114 *Hot-rolled atmospheric corrosion resisting steels for welded structure*

JIS G 3445 *Carbon steel tubes for machine structure*

JIS G 5101 *Carbon steel castings*

JIS G 5102 *Steel castings for welded structure*

JIS Z 2273 *General rules for fatigue testing of metals*

## 3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in **JIS E 4001** and **JIS Z 2273**, and the following apply.

### 3.1

**bogie frame**