

Railway rolling stock materials —

Part 6: Specification for wheelsets for traction and trailing stock

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Iron and Steel Standards Policy Committee (ISM/-) to Technical Committee ISM/69, upon which the following bodies were represented:

- British Railways Board
- British Steel Industry
- London Underground Ltd.
- Ministry of Defence
- Railway Industry Association of Great Britain

This British Standard, having been prepared under the direction of the Iron and Steel Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 November 1992

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Amendments issued since publication

Amd. No.	Date	Comments
10752	March 2000	Amendment to Table 2; substitution of Figure 1.
16283	March 2006	Changes to Scope, 4.2.1, 5.2, Table 3, 9.1 and Bibliography indicated by sidelines

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Foreword

This part of BS 5892 was prepared under the direction of the Iron and Steel Standards Policy Committee and supersedes BS 5892-6:1980, which is withdrawn. BS 5892, which covers railway rolling stock material, is published in the following six parts:

- *Part 1: Specification for axles;*
- *Part 2: Specification for wheel centres;*
- *Part 3: Specification for monobloc wheels;*
- *Part 4: Specification for tyres;*
- *Part 5: Specification for steel bars for tyre-retaining rings;*
- *Part 6: Specification for wheel-sets for traction and trailing stock.*

The format of BS 5892 has been revised, with the tolerancing requirements for components moved from Part 6 to the part relevant to the particular component. It has been possible to relax certain of the tolerances for the wheelset assembly. This part of BS 5892 is related to ISO 1005-7; however, it has not been possible to obtain full equivalence. It is also related to UIC 813.0.

BS 5892-1 to BS 5892-4 have also been revised to ensure consistency with the requirements of this part.

Product certification. Users of this British Standard are advised to consider the desirability of third party certification of product conformity with this British Standard based on testing and continuing surveillance, which may be coupled with assessment of a supplier's quality systems against the appropriate part of BS 5750.

Enquiries as to the availability of third party certification schemes will be forwarded by BSI to the Association of Certification Bodies. If a third party certification scheme does not already exist, users should consider approaching an appropriate body from the list of Association members.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 11 and a back cover.

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Sidelining in this document indicates the most recent changes by amendment.

1 Scope

This part of BS 5892 specifies requirements for the assembly of wheelsets. It includes requirements for the shrink fitting or press fitting of monobloc wheels, wheel centres, wheel centres complete with tyres, axle mounted brake discs, gearwheels, or other components on to the axle. It also includes requirements for fitting tyres on to wheel centres already mounted on the axle.

This part of BS 5892 covers wheelsets of the following types.

- a) *Type of axle*:
 - 1) Outside or inside journal bearings;
 - 2) Cylindrical wheelseats;
 - 3) Plain axle body, or with seats for gear wheels, brake discs, traction motor suspension bearings, etc.
- b) *Type of wheel*:
 - 1) Monobloc, rolled and forged;
 - 2) Tyred, with rolled tyres and forged/rolled wheel centres.
- c) *Type of axlebox bearing*: Plain or roller.
- d) *Type of traction motor bearing*: Plain or roller.

NOTE The titles of the publications referred to in this part of BS 5892 are listed on the inside back cover.

BS 5892-6 is not applicable for wheelset assembly where the axles have been designed in accordance with BS EN 13103 or BS EN 13104, the wheelset assembly for which is specified in BS EN 13260.

2 Definitions

For the purposes of this part of BS 5892 the following definitions apply.

2.1

wheelset

a complete unit comprising an axle and two complete wheels together with any gear wheels, brake discs, etc., but without axlebox bearings and their end caps, spacers, seals and other associated fittings

2.2

finished

condition of components which have been machined to the requirements of the relevant part of BS 5892 and/or of the design drawing but requiring further machining to meet the assembly requirements

NOTE This includes the bores of wheels, wheel centre traction gears, brake discs and the corresponding seats on the axle, the mating surfaces on tyres and wheel centres. Subject to the purchaser's agreement this may also apply to the tread profile.

2.3

ready for assembly

condition of components which have received all machining operations required for assembly

3 Information to be supplied by the purchaser

The following information to be supplied by the purchaser in the enquiry and order shall be fully documented:

- a) the number of this British Standard, i.e. BS 5892-6;
- b) a fully dimensioned drawing of the wheelset and the constituent component;
- c) which of the following types of wheelset is required:
 - 1) locomotive driving wheelsets;
 - 2) wheelsets for passenger rolling stock;
 - 3) wheelsets for freight rolling stock;
 - 4) other;
- d) which of the following maximum operating speeds V is applicable:

$V \leq 120 \text{ km/h}$	$120 \text{ km/h} < V \leq 160 \text{ km/h}$	$160 \text{ km/h} < V \leq 200 \text{ km/h}$	$V > 200 \text{ km/h}$
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- e) a list of the items comprising the wheelset;
- f) whether the wheels or wheel centres, and any other items fitted to the wheelset, e.g. brake discs, gearwheels, etc. are to be shrink fitted or press fitted (see 5.2);
- g) the method of non-destructive testing of the axle, and the criteria to be used (see 9.4);
- h) the requirements for protection against corrosion (see 5.7);
- i) any optional tests required (see 8.1);
- j) any other special requirements;
- k) the type of inspection and quality assurance system required (see clause 7);
- l) whether any special marking is required (see clause 6);
- m) whether an electrical resistance test is required (see 4.2.2);
- n) whether dynamic balancing is required (see 4.2.3).