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# International Standard



# 6305/4

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## **Railway components — Technical delivery requirements —**

### **Part 4 : Untreated steel nuts and bolts and high-strength nuts and bolts for fish-plates and fastenings**

*Éléments constitutifs de la voie ferrée — Spécifications techniques de livraison — Partie 4 : Vis et écrous en acier non traité et vis et écrous à haute résistance pour éclisses et attaches*

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**Descriptors :** railway equipment, steel products, fishplates, bolts, nuts (fasteners), specifications, tests, marking.

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6305/4 was prepared by Technical Committee ISO/TC 17, *Steel*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

# Railway components — Technical delivery requirements —

## Part 4 : Untreated steel nuts and bolts and high-strength nuts and bolts for fish-plates and fastenings

### 1 Scope and field of application

This part of ISO 6305 defines the specifications regarding product quality and acceptance conditions for nuts and bolts made of untreated steel and high-strength nuts and bolts for fish-plates and fastenings.

### 2 References

ISO 898/1, *Mechanical properties of fasteners — Part 1 : Bolts, screws and studs.*

ISO 898/2, *Mechanical properties of fasteners — Part 2 : Nuts with specified proof load values.*

ISO 965/1, *ISO general purpose metric screw threads — Tolerances — Part 1 : Principles and basic data.*

ISO 2859, *Sampling procedures and tables for inspection by attributes.*<sup>1)</sup>

ISO 4759/1, *Tolerances for fasteners — Part 1 : Bolts, screws and nuts with thread diameters between 1,6 (inclusive) and 150 mm (inclusive) and product grades A, B and C.*

### 3 Manufacturing conditions

#### 3.1 Steelmaking process

The steelmaking process is the prerogative of the manufacturer. However, at the request of the purchaser, the manufac-

turer shall indicate in his offer the nature and main characteristics of the steelmaking process; he may not amend these without advising the purchaser's agent of this.

The bolts and nuts are of the property classes indicated in the table, defined by the values of the mechanical properties specified in ISO 898/1 and ISO 898/2.

Table

	Property classes				
<b>Bolts</b>	4.6	5.6	6.8	8.8	10.9
<b>Nuts</b>	4/5	5	6	8	10

#### 3.2 Manufacture

The bolts shall be made from one single piece without welding. The heads of the bolts shall be produced by hot or cold upsetting and the nuts shall be hot or cold shaped. In the case of heat-treated bolts and nuts, the treatment is left to the discretion of the manufacturer. However, if requested by the purchaser, the manufacturer shall indicate the heat treatment conditions; he may not amend them without informing the purchaser's agent of this.

The manufacturing drawing provided by the purchaser shall state the type of thread required for the bolt and the nut.

Throughout the manufacturing process, the steel manufacturer and processor shall apply the best available practices so that the bolts comply with the requirements of this specification. In addition to the blooms from ingots, those obtained from continuous casting may also be used.

1) At present at the stage of draft. (Revision of ISO 2859-1974.)