INTERNATIONAL STANDARD

ISO 7641

First edition
2012-11-15

Road vehicles — Trailers up to 3,5 t — Calculation of the mechanical strength of steel drawbars

Véhicules routiers — Remorques jusqu'à 3,5 t — Calcul de la résistance mécanique des timons en acier

Reference number
ISO 7641:2012(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 7641 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 4, *Exterior fittings of car/trailer-caravan combinations*.

This first edition of ISO 7641 cancels and replaces ISO 7641-1:1983, which has been technically revised.

Road vehicles — Trailers up to 3,5 t — Calculation of the mechanical strength of steel drawbars

1 Scope

This International Standard gives a simplified procedure for the calculation of the mechanical strength of steel drawbars, whether there are welds or not, for centre-axle trailers Categories O1 and O2 as specified in the UNECE, *Consolidated Resolution on the Construction of Vehicles (R.E.3)*. Consequently, it only applies to simple constructions that enable a calculation in bending.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

UNECE, *Consolidated Resolution on the Construction of Vehicles (R.E.3)*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1
mechanical coupling device
mechanical coupling component
part fixed to the frame, to self-carrying parts of the bodywork and to the chassis of the tractor and the trailers, used to couple the vehicles

NOTE 1 This includes parts used to attach the coupling device or the components to the vehicle or to actuate the coupling device.

NOTE 2 Mechanical coupling devices transmit horizontal forces in the driving direction or the lateral direction. Vertical supporting forces are also transmitted.

3.1.2
drawbar
separate technical unit attached to the frame of the trailer with or without inertia control devices and comparable equipment parts at the front of the towed vehicles or at the vehicle chassis, adapted to couple with the tractor with help of drawbar eyes, coupling heads of similar devices

NOTE 1 They are fixed in the vertical direction; they are able to receive vertical forces (rigid drawbars). Rigid drawbars can be fixed completely rigid or by means of a suspension. Drawbars can be composed of more than one component. They can be adjustable in height.

NOTE 2 Examples of configurations are shown in Annex A.

3.1.3
chassis part
part of the frame and the bodywork of the trailer, that participate in connecting the bodywork and its load to the axle