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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Commercial road vehicles — Drawbar couplings and eyes for hinged drawbars — Strength test

Véhicules routiers utilitaires — Pivots et anneaux pour barres d'attelage articulées — Essai de résistance

Reference number
ISO 8718 : 1988 (E)

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.

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 8718 was prepared by Technical Committee ISO/TC 22, *Road vehicles*.

Printed in Switzerland

Commercial road vehicles — Drawbar couplings and eyes for hinged drawbars — Strength test

1 Scope

This International Standard lays down test conditions and strength requirements to be met by 40 mm and 50 mm drawbar couplings, and the corresponding drawbar eyes for hinged drawbars.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1102 : 1986, *Commercial road vehicles — Mechanical connections between towing vehicles and trailers — 50 mm drawbar couplings.*

ISO 1176 : —[1], *Road vehicles — Masses — Vocabulary and codes.*

ISO 3584 : 1975, *Road vehicles — Mounting of mechanical coupling devices on rear cross members of trucks.*

ISO 8755 : 1986, *Commercial road vehicles — Mechanical connections between towing vehicles and trailers — 40 mm drawbar couplings.*

3 General test requirements

3.1 The test shall be carried out with drawbar couplings and drawbar eyes having functional dimensions as given in ISO 1102 or ISO 8755.

3.2 The strength tests described in this International Standard are dynamic tests to be performed on a test bed.

3.3 The fixing arrangements for the drawbar coupling on the test bed shall be those intended for its attachment to the towing vehicle in accordance with the coupling manufacturer's fitting instructions.

3.4 Drawbar couplings and drawbar eyes shall be tested separately.

3.5 At the discretion of the manufacturer, any flexible components may be neutralized.

4 Determination of F rating

The horizontal load F shall be taken as a basis for the assumed loads given below. This is a comparative value determined by calculation for the longitudinal forces occurring between towing vehicle and trailer.

The F value, expressed in kilonewtons, shall be calculated with the equation:

$$F = g_n \frac{m_1 \cdot m_2}{m_1 + m_2}$$

where

m_1 is the maximum design total mass of the towing vehicle to which the drawbar coupling is to be attached, in tonnes;

m_2 is the maximum design total mass of the trailer which is to be drawn with the drawbar coupling, in tonnes;

g_n is the acceleration due to gravity:

$$g_n = 9{,}806\ 65\ \text{m/s}^2$$

Terminology used for the different masses shall be taken with the meanings given in the corresponding definitions in the revision of ISO 1176 : 1974.

1) Second edition to be published (revision of ISO 1176 : 1974).

5 Test conditions

5.1 Application of test load

5.1.1 The horizontal test load F_t simulating practical loads under driving conditions shall be applied.

5.1.2 The horizontal test load F_t shall be an alternating force (see figure 1) and shall alternate between $+0{,}6\ F$ and $-0{,}6\ F$.

F_t may be applied by means of a special slack-free trailer coupling ring.

5.2 Loading cycle

The dynamic test shall be carried out sinusoidally and the number of cycles shall be 2×10^6.

5.3 Frequency

The selected frequency shall not exceed 30 Hz, and shall not coincide with the natural frequency of the system.

6 Strength criteria

The dynamic test in 5.1 shall not cause permanent deformation, breaks or cracks.

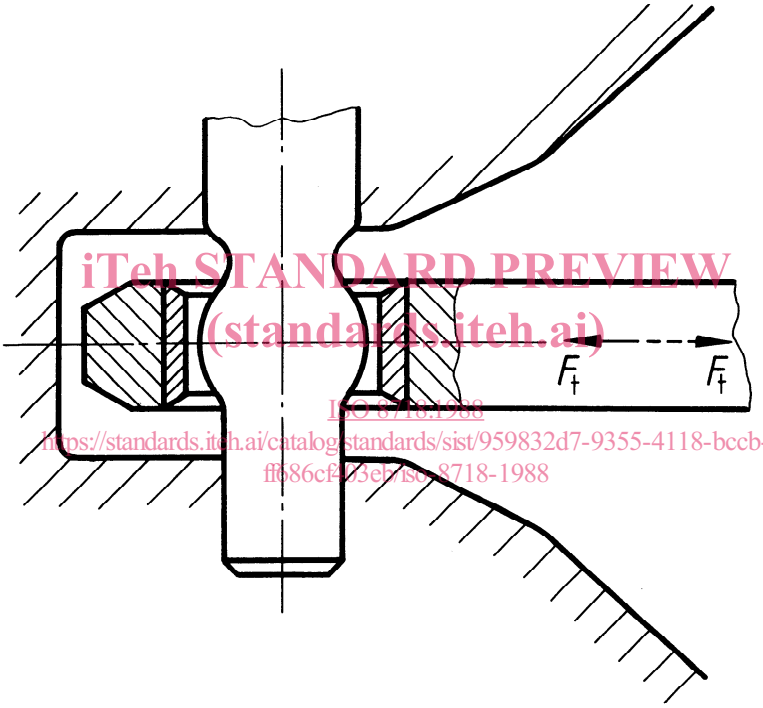

Figure 1 — Application of horizontal test load F_t

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Descriptors : road vehicles, commercial road vehicles, couplings, drawbars, tests, performance tests.

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