

BUREAU OF INDIAN STANDARDS

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भारतीय मानक मसौदा

परिवहन ट्रैक्टरों और ट्रेलरों – बालयुग्मनों पर स्थिर भार
(IS 12606 का पहला पुनरीक्षण)

Draft Indian Standard

TRANSPORT TRACTORS AND TRAILERS — STATIC LOAD ON BALL COUPLINGS
(First Revision of IS 12606)

ICS: 43.040.70

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Transport Tractors, Trailers and Industrial Trucks Sectional Committee, TED 22

FOREWORD

(Formal clause to be added later)

This Standard was first published in 1989. This revision incorporates the experience gained with the use of this standard and brings the standard in line with the latest development in the field.

In order to achieve international coordination on the subject, this standard is based on ISO/TR 4114-1974 'Road vehicles-caravans and light trailers - Static load on ball couplings', issued by International Organization for Standardization (ISO).

The composition of the Committee responsible for the formulation of this standard is given in **Annex A (Will be added later)**.

Draft Indian Standard

TRANSPORT TRACTORS AND TRAILERS — STATIC LOAD ON BALL COUPLINGS
(First Revision)

1 SCOPE

1.1 This standard lays down the limiting values of static load applied vertically by transport tractors and trailers on ball coupling fitted to the towing vehicles.

1.2 This standard applies to transport tractors and trailers for which the maximum authorized weight does not exceed 3.5 tonnes.

1.3 This standard does not apply to unbraked trailers and twin-axle trailers.

2 REFERENCES

The standard given below contain provisions which, through reference in this text, constitutes provision of this standard. At the time of publication, the edition indicated was valid. All standard are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standard given below:

<i>IS No.</i>	<i>Title</i>
IS 12351: 1988	Specification for coupling ball for caravans and light trailers

3 TERMINOLOGY

3.1 Maximum Authorized Weight — Weight calculated by the administrative authority for operating conditions laid down by the authority.

3.2 Maximum Manufacturer's Total Weight — Weight calculated by the manufacturer for specific operating conditions, taking into account such elements as, strength of materials, tyre loading capacity.

4 CONDITIONS FOR MEASUREMENT OF STATIC LOAD

4.1 The towed vehicle shall be placed on a horizontal surface and the centre of engagement of the coupling ball within the coupling head shall be situated within the limits of height given in IS 12351.

4.2 The value of the static load shall be measured along the vertical line of action passing through the centre of engagement of the coupling ball in the coupling head

4.3 The towed vehicle shall be loaded up to its maximum authorized weight. The load shall be distributed according to the manufacturer's specification.

5 VALUES OF STATIC LOAD

5.1 The values of load measured under the conditions specified above shall be within the following limits (see Fig. 1).

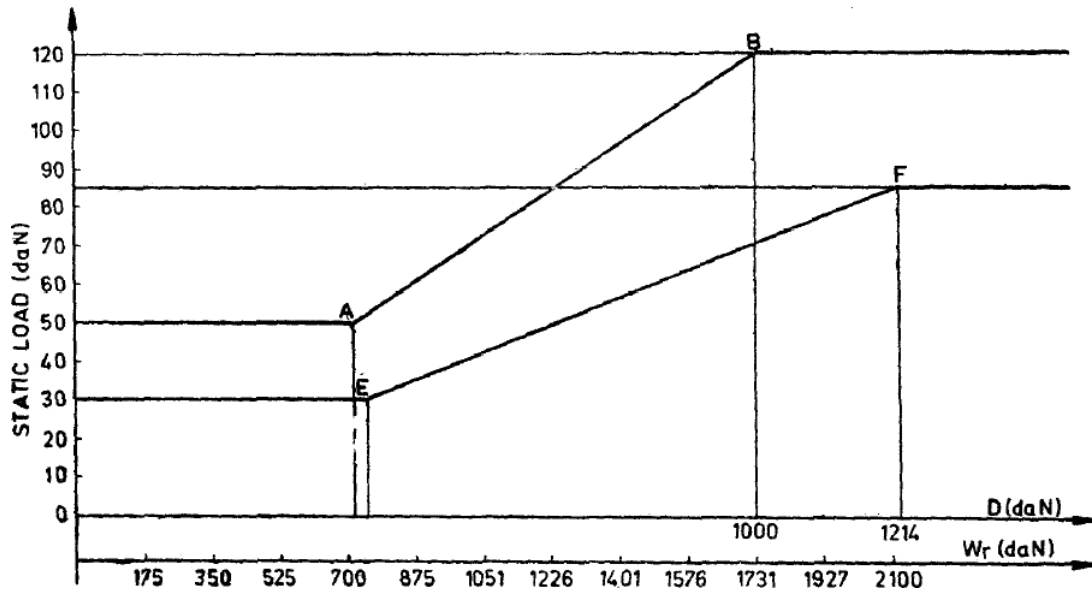


FIG. 1 LIMITS OF THE STATIC LOAD

5.1.1 Upper Limit

Straight line AB of equation $Y = 0.12 D$, limited to point A with a coordinate of 50 daN and B with a coordinate of 120 daN, completed by the horizontal line $Y = 50$ daN for the coordinates below that of A and $Y = 220$ daN for the coordinates above that of B .

5.1.2 Lower Limit

Straight line EF of equation $Y = 0.07 D$, limited to point E with a coordinate of 30 daN and F with a coordinate of 85 daN, completed by the horizontal line $Y = 30$ daN for the coordinates below that of E and $Y = 85$ daN for the coordinates above that of F .

where,

$$D = \frac{W_m + W_r}{W_m + W_r}$$

W_m = maximum manufacturer's total weight (towing vehicle) in deca newton, and
 W_r = maximum authorized weight (towed vehicle) in deca newtons.

5.3 Application to the Towing Vehicle

The maximum authorized static road load is to be fixed by the motor vehicle manufacturer

between the upper and lower limits given by the above formula.

5.4 Application to the Trailer

In order to calculate the static load for the trailer the maximum towing vehicle weight is defined as follow:

$$W_m = 1.33 W_r \text{ (regardless of the actual weight of the towing vehicle)}$$

6 MARKING

The limits of the values of static load shall be shown on the plate fixed to the front of the towed vehicle.

ANNEX A
(Foreword)

COMMITTEE COMPOSITION

TRANSPORT TRACTORS, TRAILERS AND INDUSTRIAL TRUCKS SECTIONAL
COMMITTEE, TED 22

Will be added later