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IS 12157 (1987): Requirements for construction of work platform of powered industrial trucks (for maintenance purposes) [TED 22: Transport Tractors and Trailers]



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“Knowledge is such a treasure which cannot be stolen”



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*Indian Standard*

## REQUIREMENTS FOR CONSTRUCTION OF WORK PLATFORM OF POWERED INDUSTRIAL TRUCKS ( FOR MAINTENANCE PURPOSES )

**1. Scope** — Prescribes the requirements for work platforms intended as ancillary devices for occasional use in conjunction with forklift trucks for maintenance purpose.

**1.1** It neither pertain to medium or high-lift order picking trucks nor to permanently vehicle mounted elevating and rotating work platforms.

**2. Terminology** — For the purpose of this standard, the following definitions shall apply.

**2.1 Work Platform** — A platform designed for mounting on the elevating device of a high-lift fork truck for the purpose of providing a safe working place.

**2.2 Operator's Platform** — It is that part of the truck from which the operator normally controls the truck.

**2.3 Supplementary Platform** — A load-carrying platform accessible from the operator's platform designed for mounting on the elevating device of a high-lift order-picking truck.

### 3. Requirements

**3.1** All work platforms shall have:

- a) a slip resistant floor surface;
- b) a toe plate having a minimum height of 100 mm;
- c) provision to protect personnel, when on the work platform, from moving parts of the truck that represent a hazard;
- d) means to restrain and/or confine personnel on the work platform. The means shall be railings. However, where permitted by national regulations, chains, ropes and/or tethers may be used; and
- e) in-built stability of platform to withstand jerks.

#### 3.1.1 Railings

**3.1.1.1** A top railing shall be positioned not less than 900 mm measured from the upper surface of the railing to the floor of the platform.

**3.1.1.2** An intermediate rail shall be positioned approximately midway between the top of the toe plate and the underside of the top railing.

**3.1.1.3** The rails shall be able to withstand a concentrated, horizontal force of 900 N applied at the point of least resistance, without permanent deformation.

**3.1.1.4** If hinged or removable sections for access are provided, they shall be constructed in such a manner that proper positioning is readily accomplished and a secured condition is visibly discernable. Hinged sections shall open either upwards, inwards or sideways.

#### 3.1.2 Chains or ropes

**3.1.2.1** Chains or ropes shall meet the dimensional requirements of 3.1.1.

#### 3.1.3 Tether attachments, lanyards, safety belts and testing

**3.1.3.1** National regulations, where provided, shall apply. Where national regulations do not exist,

the following shall apply:

- a) The tether or lanyard shall be nylon rope ( or equivalent stretch material ). The tether or lanyard shall be of such length that the personnel attached has freedom of movement in the work area, but shall be limited to a maximum slack length of 1.5 m measured from the point of fixed attachment to the operator and shall be so arranged as not to cause a condition where the operator(s) could trip on the tether or lanyard.
- b) The tether or lanyard shall be attached either to an overhead member of the platform at a point located above and near the center of the platform or any other suitable anchoring point.
- c) The safety belt used in conjunction with a tether or lanyard shall have a minimum width of 44 mm.
- d) The complete tether or lanyard, safety belt, attachments and anchoring point(s) shall be capable of withstanding three consecutive drop tests of 115 kg falling through a height of 1.8 m without failure or permanent deformation of any of the components.
- e) When conducting the test, the waistband of the belt shall support the test mass in the same manner as it would support a worker.

**3.2** Means shall be provided to firmly and rigidly attach the work platform to the fork arms or fork carriage of the truck so that the platform cannot move independently of the carriage.

**3.3** Overhead protection shall be provided as required by the operating conditions.

**3.4** The floor dimensions of the work platform shall neither exceed 2 times the rated load centre distance, measured parallel to the longitudinal centre plane of the truck, nor have a width greater than the width of the truck ( measured across the drive tyres ) plus 500 mm.

**3.5** The platform shall be centered laterally on the truck and shall be secured to the forks or carriage of the truck.

#### **4. Marking**

**4.1** The following information shall be prominently indicated or marked on the work platform:

- a) Maximum load to be handled, and
- b) Mass of empty platform.

**4.2** The combined maximum load and mass of the platform shall not exceed one-third the capacity at the related load centre and maximum forklift height as indicated on the information plate of the truck on which the platform is used.

#### **5. Operating Rules and Practices for the User**

**5.1** Passengers shall not ride on trucks except where specific provision is made to accommodate them. Riding by passengers on the elevating mechanism or attachments is not permitted, except under the following conditions.

**5.2** For a truck, other than a high-lift order-picker truck, when fitted with a work platform:

- a) the platform shall be secured to the lifting carriage and/or forks;
- b) when personnel are on a platform not equipped with elevating controls, the operator shall be in the operator's position on the truck;
- c) only the elevating controls on the platform shall be used when personnel are on a platform equipped with elevating controls; and
- d) the combined mass of the platform, load and personnel shall not exceed one-third the capacity at the related load centre and maximum fork-lift height as indicated on the information plate of the truck on which the platform is used.

### **EXPLANATORY NOTE**

This standard has been prepared with a view to lay down the requirements for work platforms intended as ancillary devices for occasional use in conjunctions with fork-lift trucks for maintenance purposes. While framing this standard, ISO/DP 8200 'Powered industrial trucks—Work platform ( for maintenance purposes )—Construction requirements' issued by the International Organization for Standardization (ISO), was also consulted.