


INTER PLANT STANDARD - STEEL INDUSTRY		
 IPSS	SPECIFICATION FOR HAND TROLLEY (Reaffirmed in 2014)	IPSS:1-07-025-14
	<i>Corresponding IS does not exist</i>	Formerly: IPSS:1-07-025-00 (First revision)

0. FOREWORD

- 0.1 This Inter Plant standard has been prepared by the Standards Committee on Portable Maintenance Equipment, IPSS 1:7, with the active participation of the representatives of all the steel plants, reputed consultants and established manufacturers of trolleys and was first revised in August 2000 and reaffirmed in July, 2014.
- 0.2 Inter Plant Standards for steel industry primarily aims at achieving rationalisation and unification of parts and sub-assemblies used in steel plant equipment and accessories, and provide guidance in indenting stores or equipment for existing (or while placing orders for additional requirements) by individual steel plants. For exercising effective control on the inventories, it is advisable to select a fewer number of sizes (or types) of products mentioned in this standard for the purpose of Company Standards of individual steel plants; it is not desirable to make deviation in technical requirements.
- 0.3 This standard for steel industry was first published in 1984. This revision of the standard has been carried out because of the difficulties faced by consumers in steel plants during procurement of the above item.

1. SCOPE

- 1.1 This standard gives the technical specification for the 4-wheeled trolleys of ½ tonne and 1 tonne capacity to be hauled manually, and used for transporting materials.

2. MAXIMUM CAPACITY

- 2.1 The trolleys shall be capable of carrying a load of 0.75 tonne and 1.25 tonnes for ½ and 1 tonne trolleys respectively.

3. DIMENSIONS

- 3.1 The approximate overall dimensions of the trolleys shall be as given in **Table-1 read with Fig-1.**

4. CHASIS

- 4.1 The chasis shall be of steel fabricated construction. The load shall be concentrated on certain areas depending on the material to be transported. The spacing of the angle iron frames, etc, shall be close enough to prevent the distortion of the top plate.

5. PLATFORM

- 5.1 The platform shall preferably be of minimum 4 mm thick plate. These mild steel plates shall be ribbed and welded with 25 x 6 mm flats at 300 mm centres. The plates shall be fitted to chasis by means of 10 mm csk bolts at 450 mm centres. The platform shall have hinged toe boards on all four sides as shown in **Fig.1**.

6. TURNTABLE

- 6.1 The turntable shall be easily manoeuvrable. The pivot pin for the turntable shall be of adequate size made from class 4 of IS 1875:1992 'Specification for carbon steel billets, blooms, slabs and bars for forgings (*fifth revision*)' and hardened at the journal portion. It shall have a lock nut and split pin at the bottom to prevent the separation of the turntable after assembly. Provision for preventing dirt or water ingress into the bearing shall be made. Provision for greasing shall be made.

7. HANDLE AND HOOKS

- 7.1 T-type pulling handle shall be fabricated from 32 mm heavy duty pipes and shall be fitted to the front axle of the turntable arrangement.
- 7.2 On the sides some hooks shall be provided to tie ropes for securing material.

8. WHEEL EQUIPMENT

- 8.1 Four solid cured on type rubber tyred wheel of 300x90 mm size category A, conforming to IS 7369:1983 (reaffirmed in 1991) 'Specification for wheels and castors (*first revision*)' shall be provided. Each wheel shall withstand a maximum load of 400 kg without showing any permanent deformation. The wheel shall be fitted with rims and single row deep grooved ball bearing provided with dust seal and arrangement for lubrication. The axles shall be made from 50 mm mild steel square billet.

9. PAINTING

- 9.1 The trolley shall be painted with anti-corrosive bituminised black paint on the under carriage and inside the box. The sides shall be painted with synthetic enamel of golden yellow colour on top of primer coat.

10. LUBRICATION POINTS

- 10.1 Hydraulic grease fittings of size M 10 x 1 conforming to IS 4009 (Part-1):1981(reaffirmed in 1992) `Specification for grease nipples:Part 1 Button head grease nipple (*first revision*)' shall be fitted at the following points for lubrication :

- a) Wheel bearings
- b) Turntable pivot, and
- c) Turntable guide ring.

11. GUARANTEE

- 11.1 The manufacturer shall guarantee satisfactory performance of the hand trolley for a period of one year in operation or 18 months from the date of supply whichever is earlier.
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TABLE – 1
DIMENSIONS OF HAND ROLLEY
 (Clause 3)

All dimensions in millimetres

Item No.	½ tonne trolley – 500 kg	1 tonne trolley – 1000 kg
A	1200	1500
B	900	1200
C	1100	1100
D	900	1000
E	100	100
F	400	500
G	< H	< H
H	600	700

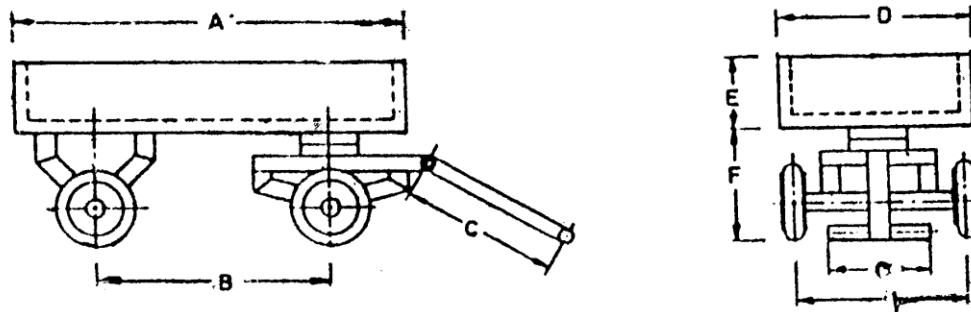


Fig. 1 General arrangement of Hand Trolley