INTERPLANT STANDARD — STEEL INDUSTRY

IPSS

SPECIFICATION FOR HYDRAULIC PULLERS

IPSS : 1-07-028-85

CORRESPONDING INDIAN STANDARD DOES NOT EXIST

0. Foreword

0.1 Interplant standardization activity in steel industry has been initiated under the aegis of the Indian Standards Institution (ISI) and the Steel Authority of India Limited (SAIL). This Interplant Standard, prepared by the Standards Committee on Paints and Portable Maintenance Equipment, IPSS 1 : 7, with the active participation of representatives of all the steel plants and established manufacturers of hydraulic pullers was adopted by the Approval Committee on Consumable Stores and General Equipment, IPSS 1, on 30 January 1985.

0.2 Interplant Standards for steel industry primarily aim at achieving rationalization 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 new installations by individual steel plant. For exercising effective control on inventories, it is advisable to select a fewer number of sizes (or types) from among those mentioned in this standard for the purpose of company standards of individual steel plants. It is not desirable to make deviations in technical requirements.

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1. Scope — This Interplant Standard covers the main dimensions, capacities, materials, workmanship, test for hydraulic pullers used in the steel industry.

2. Types — Hydraulic pullers shall be of following two types:

a) Grip type (Type HG) *see* Fig. 1, and

b) Push type (Type HP) *see* Fig. 2.

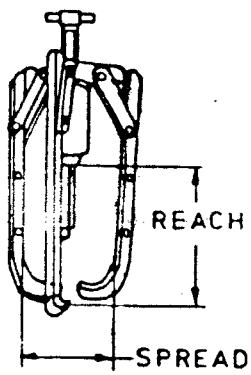

FIG. 1 TYPE HG

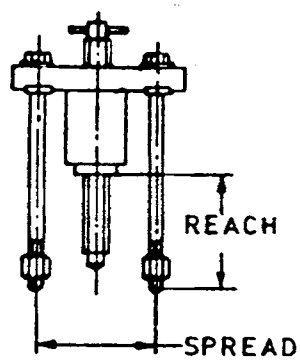

FIG. 2 TYPE HP

3. Capacities and Dimensions — The main dimensions and capacities of hydraulic pullers of Types HG and HP shall be as given in Tables 1 and 2 read with Fig. 1 and 2 respectively.

4. Designation — Hydraulic pullers shall be designated by:

a) Type (*see* **2.1 and 2.2**)

b) Capacity in tonnes (*see* **3**)

c) Number of this standard.

Examples :

Hydraulic puller of grip type (Type HG) of 20 tonnes capacity, shall be designated as:

Hydraulic Puller (Type HG) 20 t IPSS : 1-07-028-85

Amendments Issued (*to be filled up by the user department*) :

No.	Date of Issue	No.	Date of Issue
1		3	
2		4	

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TABLE 1 CAPACITY AND MAIN DIMENSIONS OF HYDRAULIC GRIP PULLER (TYPE HG PULLER)

(*Clauses* 2 *and* 3)

All dimensions in millimetres.

Pulling Capacity, Tonnes	Hydraulic Jack*	Reach *Max*	Spread *Max*	Adjusting Screw			
				Thread Size (Trapezoidal)	Top Thread Length	Bottom Thread	Total Length
20	SHP 20 t×50	220	400	30×6	45	320	500
30	DHP 30 t×80	250	550	34×6	55	325	600
50	DHP 50 t×140	345	800	52×8	65	380	800

*The hydraulic jack shall be according to IPSS : 1-02-002 'Specification for remote control hydraulic jack'.

TABLE 2 CAPACITY AND MAIN DIMENSIONS OF HYDRAULIC PUSH PULLER (TYPE HP PULLER)

(*Clauses* 2 *and* 3)

All dimensions in millimetres.

Pushing Capacity, Tonnes	Hydraulic Jack*	Reach		Spread		Tie Rod			Adjusting Screw			
		Minimum	Maximum	Minimum	Maximum	Dia Size	Thread		Thread Length Size	Top Thread Length	Bottom Thread Length	Total Length
							Top Length	Bottom Size				
20	SHP 20 t×50	245	630	160	310	28	20	M 24×3	20 TR 30×6	45	320	500
30	DHP 30 t×80	245	725	190	410	32	25	M 30×3·5	25 TR 34×6	45	350	600
50	DHP 50 t×140	260	820	245	550	36	45	M 34×4	45 TR 52×8	65	380	800

*The hydraulic jack shall be according to IPSS : 1-02-002.

5. Material

5.1 Jaws of hydraulic pullers (Type HG) shall be of C65, conforming to IS : 2004-1978 'Specification for carbon steel forgings for general engineering purposes (*second revision*)', hardened and tempered, UTS 800 MN/m², minimum.

5.2 Tie rods of hydraulic pullers Type HP shall be of C55Mn75, conforming to IS : 1570-1961 'Schedules for wrought steels for general engineering purposes', hardened and tempered, UTS 800 MN/m², minimum.

5.3 Adjusting screws of the hydraulic pullers shall be of 35Mn2Mo28, IS : 1570-1961, hardened and tempered, UTS 1 000 MN/m², minimum.

6. Workmanship — The hydraulic pullers shall be of rugged construction and shall be free from all inperfections which may affect the performance of pullers.

7. Test — Each hydraulic puller shall be subjected to a test load of 150 percent of pulling/pushing capacity. Supply of each hydraulic puller shall be accompanied by a test certificate stating the load test, capacity, reach and spread.

8. Guarantee — Each hydraulic puller shall be guaranteed for satisfactory performance for 18 months from the date of supply or 12 months of putting into service whichever is early.

9. Marking — The hydraulic pullers shall be legibly and indelibly marked with the following:

a) Name/Trade-mark of the manufacturer,
b) Serial/batch number, and
c) Designation of the hydraulic puller (*see* 4).

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