INTER PLANT STANDARD - STEEL INDUSTRY		
IPSS	**SPECIFICATION FOR BOTH ENDS SPLICED WIRE ROPE SLING**	**IPSS:1-07-045-14** ***(First Revision)***
	Based on IS:2762-1982	***Formerly-: IPSS; 1-07-045-88***

0. FOREWORD

0.1 This Inter Plant standard has been prepared by the Standards Committee on Paints & Portable Maintenance Equipment, IPSS 1:7, with the active participation of the representatives of all the steel plants and established manufacturers of Wire Rope Slings and was adopted in 1988 and revised in July, 2014 keeping in view of latest developments.

0.2 Inter Plant Standards for steel industry primarily aims at achieving rationalization and unification of parts and sub-assemblies used in steel plant equipment and accessories, and provide guidance in indenting stores for existing equipment (or while placing orders for additional requirements) by individual steel plants. 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.

1. SCOPE

1.1 This interplant standard covers the requirements of dimensions, constructions, loading test and marking of single leg single part both ends spliced, wire rope slings of nominal diameter 8 to 44 mm.

2. DIMENSIONS

2.1 The dimensions of wire rope and load capacity shall be as given in Table-1.

3. WIRE ROPE

The wire rope used in the manufacture of single part spliced sling legs shall consist of six round strands over a fibre core, R.H. ordinary lay, ungalvanized or galvanized as required by the purchaser and shall conform to IPSS:1-08-003-2014.

4. CONSTRUCTION

4.1 Construction 6 x 19 (12/6/1) for 8 mm and 10 mm dia, rope and construction 6 x 36 (14 x 7 and 7/7/1) for higher diameter ropes shall be followed for the construction of rope.

4.2 Minimum Length of Leg – To provide adequate flexibility and to allow splicing, the effective length of a single part spliced sling leg shall be not less than 70 times the diameter of the ropes.

4.3 Splicing – Sling shall be made with mechanical or hand splicing. Each splice shall have at least five tucks, three tucks with a whole strand of the rope and two tucks with a whole strand of the rope and two tucks with one half of the wires, out of each strand. The tacks shall be over and under against the lay of the rope. The splice shall be tightly drawn and neatly made.

4.3.1 Serving – The portion of the splice which contains the wire ends, shall be neatly and effectively served with spun yarn or sizing strand to give protection to user in handling.

4.4 In case of ferruled wire rope slings, the following physical inspection should be done before use.

4.4.1 The variation of the diameter of the ferrule after pressing should not be more than 5 percent between maximum and minimum diameters.

4.4.2 The dead end of the rope should be visible outside the ferrule.

4.4.3 There shall not be any crack in the ferrule due to pressing.

5. **THIMBLES** – Thimble shall be conforming to ordinary type in accordance with IS:2315-1978 `Specification for thimbles for wire ropes (first revision)'.

6. **SAFE WORKING LOAD** – For normal condition of service, the safe working load shall not exceed one sixth of the minimum breaking strength.

7. **DESIGNATION** – Wire rope sling shall be designated by the nominal size of the wire rope, minimum effective length and coating, for example, a single leg both end spliced, wire rope sling of nominal size 20 mm and minimum effective length 2 m and galvanized, shall be designated as

GALVANIZED SINGLE LEG WIRE ROPE SLING

20 x 2 M – IPSS:1-07-045-14

8. **TESTS** – Each sling shall be accompanied by a test certificate issued by any recognized test house, stating size, effective length, permissible working load, proof and identification mark on the sling.

9. MARKING – Each sling shall be permanently marked on a metallic tag with the following information:

a) Name of the manufacturer and trade-mark
b) Designation (see 7)
c) Serial Batch No. and
d) Date & year of manufacturing

TABLE-1 : EFFECTIVE LENGTH, SPLICING LENGTH AND PERMISSIBLE WORKING LOAD FOR DIFFERENT ROPE DIAMETER

(Clause 2)

Rope Dia mm	Effective Length L m											Splicing Length s (20 d) mm	Loop Length l mm	Permissible Working Load KN					
	2	3	4	5	6	7	8	10	12	16	20			Single	Double 0 degree	Double 30 degree	Double 60 degree	Double 90 degree	Double 120 degree
8	x	x	x		x							160	300	6	12	11.5	10.0	8	6
10	x		x		x		x					200	400	9	18	17.0	15.5	12	9
12	x		x		x		x					240	400	14	28	27.0	24.0	19	14
14		x										280	400	19	38	36.5	32.5	26	19
16	x	x	x	x	x		x	x	x			320	450	25	50	48.0	43.0	35	25
18		x	x		x		x					360	450	36	72	69.0	62.0	50	36
20		x			x			x				400	450	39	78	75.0	67	55	39
22	x		x		x		x	x				440	500	47	94	91.0	81	66	47
24		x			x				x			480	500	56	112	108.0	96.5	79	56
28			x	x	x		x	x	x	x		560	500	76	152	147.0	131	107	76
30			x		x		x	x				600	600	88	176	170.0	152	124	88
32			x		x		x	x	x	x	x	640	600	98	196	189.0	169.5	138	98
36									x	x		720	600	126	252	243.0	218	177	126
40					x		x	x	x	x	x	800	750	155	310	299.0	268.0	218	155
44						x	x		x			880	750	190	380	366.0	328	267	190

x – Indicate recommended lengths.