INTER PLANT STANDARD IN STEEL INDUSTRY		
IPSS	**SPECIFICATION FOR FLEXIBLE SNAP WRAP JAW COUPLINGS**	**IPSS:1-01-034-18 (First Revision)**
	Corresponding IS does not exist	Formerly : IPSS:1-01-034-95

0. FOREWORD

0.1 Interplant standardization in steel industry was initiated under the aegis of the Indian Standards Institution (ISI) and the Steel Authority of India Limited (SAIL). This IPSS was prepared by the standard committee on Mechanical Drives, IPSS 1:1 and adopted in December 1995. Lastly, this has been revised with first revision by the standard committee in **November, 2018** with the active participation of the representatives from major Indian steel plants and leading consultants.

0.2 This standard for steel industry primarily aim at achieving rationalization and unification of parts and assemblies used in steel plant equipment and accessories and provide guidance in intending stores or equipment (or while placing orders for additional requirements) by individual steel plants. For exercising effective control on inventories, it is advisable to select a fever 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. Technical difficulties, if any, encountered in the implementation of this standard should be intimated to the IPSS Secretariat for appropriate remedial measures.

1. SCOPE

1.1 This Inter Plant Standard specifies the requirement of Snap Wrap type Flexible Jaw Couplings used for connecting two shaft ends.

NOTE -: The special features of this coupling is faster and easier maintenance, reduces downtime, lubrication free service, no need to disturb driver and driven equipment for changing snap wrap sprockets, no special skill or tool required for maintenance. This type of coupling is very useful in hydraulic & lubrication pump drives.

2. RATING AND DIMENSIONS

2.1 The rating and dimensions of the couplings shall be as specified in Table – 1 read with Fig. – 1.

3. MATERIALS

3.1 The materials for the component parts of the snap wrap jaw coupling shall be as specified in Table – 2.

4. DESIGNATION

4.1 The coupling shall be designed by the outer dia along with prefix S W J C (see Table 1). For example, a snap wrap jaw flexible coupling having outside dia 65 mm shall be designated as :

SWJC 65 IPSS: 1-01-034-18

5. GENERAL REQUIREMENTS

5.1 The hubs shall be free from any harmful defects. They shall be machined all over for proper balancing.

5.2 The snap wrap spider shall be smooth and free from cuts or other damages.

5.3 Unless otherwise specified all dimensional tolerances shall be the same as specified in IS: 2102 (Part I) – 1993 “General tolerance for linear and angular dimensions without individual tolerance indications”.

6. MARKING

The coupling shall be punchmarked with the designation of coupling and manufacturer’s name / logo / trade mark.

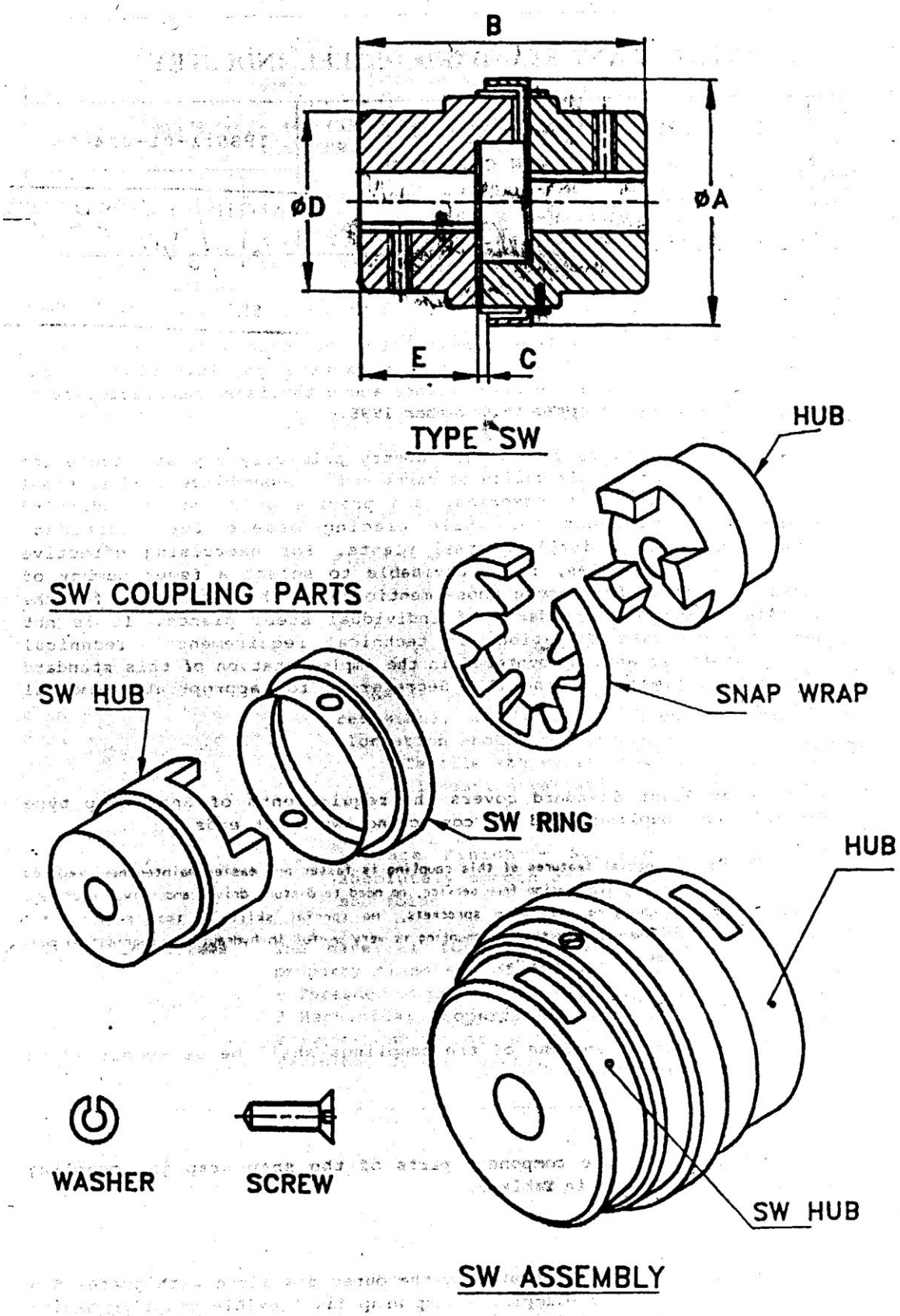

FIG. 1 SNAP WRAP JAW COUPLING

TABLE - 1

(Clause 2)

RATING AND DIMENSIONS OF SNAP WRAP JAW COUPLINGS

Coupling Designation	Rated Torque	kW/100 rpm Kg. Mtrs. (Min)	Weight in Kg at Min Bore	kW Capacity at varying speeds (rev/ min)				
				500	750	1000	1500	3000
SWJC 65	2.02	0.22	0.75	1.03	1.54	2.0	3.0	6.18
SWJC 75	3.05	0.37	1.1	1.54	2.32	3.1	4.6	9.25
SWJC 80	4.35	0.48	1.5	2.2	3.3	4.4	6.6	13.25
SWJC 95	7.97	0.92	3.2	4.0	6.0	8.1	12.13	24.25
SWJC 110	12.32	1.47	3.9	6.75	9.4	12.5	18.75	37.5
SWJC 130	15.94	1.98	7.5	8.15	12.14	16.2	24.26	48.5
SWJC 150	23.92	2.72	10.5	12.15	18.2	24.25	36.4	72.8

Coupling Designation	Outside Dia	Over all Length	Gap between Jaw & Body	Hub Dia	Length through Bore	Max. Angular offset degrees	Max Parallel Offset (mm)	Bore	
	A	B	C	D	E			Min	Max
SWJC 65	65	63	2	25	49	1	0.4	10	28
SWJC 75	75	72	2	27	51	1	0.4	10	30
SWJC 80	80	88	2	35	57	1	0.4	10	38
SWJC 95	95	108	3	43	76	1	0.4	15	42
SWJC 110	110	115	3	45	90	1	0.4	15	48
SWJC 130	130	135	3	54	102	1	0.4	20	55
SWJC 150	150	153	3	64	108		0.4	20	60

NOTE : 1. Ratings based on S F =1

2. Maintain Gap C at the time of Assembly.

TABLE – 2

(Clause 3)

MATERIALS OF COMPONENT PARTS OF THE SNAP WRAP JAW COUPLINGS			
i.	Coupling Hubs	Clause 3 A designation 35 C 8 of IS: 2004 – 1991 (R2012) carbon steel forging for general engineering purposes.	
ii.	Snap Wrap Ring	The material for rubber snap wrap rings should have following properties :	
		a.	Hardness 70 + 5 degree A shore (IRHD)
		b.	Tensile strength: 100 kgf / sq. cm (min) when tested as per dumb bell method of IS: 3400 – 2012 methods of tests for vulcanized rubbers.
		c.	Permanent Elongation : 20% at break
		d.	Elongation: 250% (Min) at break when tested as per IS : 3400 – 1977.
		e.	After aging at 70 ± 1 degree C for a period of 72 hours by oven method as per IS: 3400 (Part IV)– 2012 "Method of tests for vulcanized rubbers: part - 4" Accelerated aging (second revision), variation in tensile strength and elongation should not exceed – Tensile strength variation : + 20 Elongation variation : - 20 or +10
		f.	Surface Finish – Surface of ring must be absolutely smooth and shall not have swellings and folds.
iii.	Locking Screws	The material for lock screws should be steel of property class 4.6 of IS: 1367 (Part 3) – 2002 "Fasteners – Threaded steel – Technical supply conditions: Part 3" Mechanical properties and test methods for bolts, screws and studs with full load ability or equivalent.	