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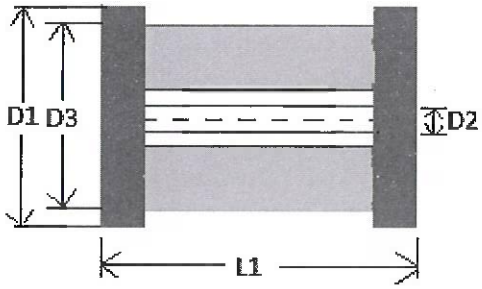
CELL INTERCONNECT - 4 BB

1.0 TECHNICAL SPECIFICATION :

1.1	ITEM	Cell Interconnect – 4 BB
1.2	MATERIAL & GRADE	Copper as per IS 191-2007 & Grade - Electrolytic tough pitched (ETP)
1.3	WIDTH	1.3 + 0.02mm / -0.06mm
1.4	THICKNESS	0.2 ± 0.01 mm (Basic copper Thickness)
1.5	CONDUCTIVITY (%IACS)	101%
1.6	ELONGATION	> 25%
1.7	TENSILE STRENGTH (MPa)	150 ≤ TS ≤ 260
1.8	YIELD STRENGTH (N/mm^2)	< 70
1.9	SURFACE FINISH	a) Coating - Coated with 62:36:2 Tin-lead-Silver Solder. - Coating thickness: 16 to 25 microns all around. - Uniform and bright coating, good adhesion all around. - Coating should be free of spots & blister.
		b) Edge - Natural rounded edges.
		c) Edge & Corners should be free of Burrs.
1.10	CAMBER	≤ 5 mm / meter
1.11	TYPICAL SPOOL DIMENSION WITH TYPE- "H"(ALL DIMENSIONS ARE IN mm)	 ▪ Dia. D1 ≤ 152 ▪ Dia. 16 ≤ D2 ≤ 17 ▪ L1 ≤ 122
		D3 dimension shall be decided by vendor to meet the weight of spool mentioned in this specification.
		The construction of spool should be strong enough for loading and operation in automated Tabber and Stringer.

2.0 WINDING OF INTERCONNECT :

2.1 The winding of interconnect in the spool shall be uniform & have good tension which shall retain till use.

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2.2 There shall not be any slackness, unwinding, overlapping, twisting & gap between the spool flanges & interconnect winding.

3.0 FUNCTIONAL REQUIREMENT :

3.1 Required to be attached to silicon solar cells by automated soldering process in high speed Tabber Stinger.

4.0 PACKING & MARKING :

4.1 Net Cell Interconnect weight should be 5.0 ± 0.5 Kg. per spool.

4.2 The wounded spool shall be covered with anti-rust paper before vacuum packing.

4.3 Each spool to be vacuum sealed in air tight polythene covers and shall be placed in large box having partition / pouches for each of the spools. This shall avoid physical contact of individual spools.

4.4 Maximum three levels of spools shall be stacked in each pallet.

4.5 Orientation of spool shall be clearly indicated on the pallet so as to move the pallet across the direction of flanges and it shall be clearly marked "**DIRECTION OF MOVMENT** ⟹" while mechanical handling. Outer case of the pallet shall be strong wood or multilayer paper carton to withstand mechanical handling.

4.6 Outer box shall be supplied along with wooden pallet firmly fixed to box for lifting & placement.

4.7 To be labelled on the packing consignment:

i) Manufacturers Name
ii) Lot No
iii) Specification No. - BHEL / PS-901-01-0010
iv) Cell interconnect-4 BB (Tin-Lead-Silver 62:36:2)
v) Dimension : 1.3 * 0.2 mm, Coating: 16 to 25 μ
vi) Date of Manufacture
vii) No of spools
viii) Weight
   a) Each Spool – on the spool
   b) Packed Box – net of packed spools.

4.8 Details of the spool as per clause no. 4.8 to furnished for each spool in each lot.

5.0 PRECAUTION :

5.1 Wound interconnector on spool shall be free from dents, scratches, burrs and loose winding.

5.2 The Design of spools, winding and packing to ensure safe packing & avoid any possibility of handling / transit damages.

5.3 Coating shall be uniform and free from blister / peel-off.

6.0 TEST CERTIFICATE :

6.1 Vendor to submit inspection report for each lot / batch of manufacture for the parameters indicated in this specification viz., visual, dimensional and properties.

7.0 INSPECTION :

7.1 BHEL reserves the right for pre-dispatch inspection at vendor works.

7.2 BHEL at its discretion may waive the pre-dispatch inspection at vendors work based on review of vendor inspection report. However, the vendor responsibility is not absolved till the material is finally inspected and accepted at BHEL. Rejections if any at BHEL, vendor is liable to replace good quality materials confirming with this purchase specification.

8.0 INSPECTION AT BHEL :

8.1 Visual Inspection, Dimensional and properties evaluation

8.2 Single sampling plan as per IS : 10673-1983, Special inspection level S-4, AQL 1.0

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