PSHVE/21-22/1	**Product Specifications For Spherical Electrodes**	Drg. No.	DWG RD DG 434 207_3100
		Date	17.08.21

1.0 **Application** : Spherical arcing electrodes surrounded by air insulation

2.0 **Configuration** : 1. Sintered W-Cu (70-30 %), welded (by electron Beam welding process) to the high conductivity copper.
2. Machined to drawing dimensions.

Specifications:

3.0 1. Dimension Drawings : Refer Drg No. RD DG 434 100_0001

2. Material: : Tungsten-Copper, ETP copper

4.0

(a). **W-Cu**

A sintered matrix of W-Cu (70-30 %) shall be produced by PM technique. The sintering shall be carried out in neutral or reducing atmosphere. The ingredient (powders) shall have high purity.

(b). ETP Copper

ETP copper shall have the following specifications:

1) The specified copper material shall have minimum conductivity of 95 % IACS. Supplied material will be tested at BHEL for conductivity and the same will be rejected in case they do not meet specified conductivity.
2) The material shall be good for brazing, soldering and for electrical applications where high current transfer in involved.

5.0 **Electron Beam Welding (EBW):**

The component shall be finished to size before electron beam welding at the interface. The interface will be between High conductivity copper and W-Cu Tip. The interface shall be welded to full depth. The welding joint between high conductivity copper and W-Cu tip shall exhibit minimum contact resistance. The Component shall be free from dirt, grease and loose particles.

6.0 **Tests:**

(a). Dimensional : All dimensions shall comply to drawing measures.

7.0 **Packing :**

The contacts shall be packed in high density cardboard boxes, with a primary wrapped in polyethylene and packed individually in dust free boxes after degreasing. The component shall be guaranteed against all manufacturing defects.

8.0 **General :**

1. Surface finish of the components shall be at least RA 1.6.
2. The component shall be free from dirt, grease and loose particles.

In case of doubts in drawings or specifications the supplier shall contact BHEL for clarifications.