

PSGSG/ 2020- 2021/ 008, Rev-00	Specifications for DS Switching contacts	Drg. No.	RD DG 4 35 1131 2001
		Date	13.01.2021
		Product	CGSM-145

S.No	BHEL Specification	Vendor Compliance	
		Yes/No	Remarks

1.0	Application: Switching contacts for Gas Insulated Switchgear Equipment		
2.0	Configuration:		
2.1	Sintered W-Cu (70-30 %), welded (by electron Beam welding process) to the high conductivity copper-chromium alloy.		
2.2	Machined to drawing dimensions.		
3.0	Quantity: 10 Nos.		
4.0	Specifications:		
4.1	Dimension Drawings: Refer Drg No. RDDG 4 35 1131 2001		
4.2	Material: Tungsten-Copper, Cu-Cr alloy (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). Cu-Cr Alloy Copper : 99 %, Chromium : 1 %. This alloy shall be made using fine alloying practices so as to minimize occlusion of gases. The oxygen content shall not exceed 100 ppm. Vacuum metallurgy for alloying is preferred. The		

Page 1 of 3	PSGSG/ 2020-2021/ 008.doc		Signature
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	copper used for alloying shall be 99.97 % pure. Electrolytic grade is preferred. Electrical conductivity of Cu-Cr Stem shall be greater than 82 %. (IACS)		
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 6.1 6.2	Tests: Dimensional: All dimensions shall comply to drawing measures The component shall be subjected to micro-ohm measurement test, using 100 A DC source and shall measure less than one micro-ohm at the welding interface.		
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.		

Page 2 of 3	PSGSG/ 2020-2021/ 008.doc		Signature
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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		
9.0	REWORK AND REJECTION: Components not meeting our drawing and specification will be rejected and party has to replace within time. It shall be included in guarantee certificate. In the event of the material proving defective in the course of manufacture; such material shall be rejected notwithstanding any previous certification of satisfactory testing and/or inspection. In case of doubts in specifications, the supplier shall contact BHEL for clarifications.		

Page 3 of 3	PSGSG/ 2020-2021/ 008.doc		Signature
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