




PSGSG / 11-12/05	<b>Product Specifications</b>		Drg. No.	
	For		Date	05.07.2014
	<b>High Electrical Conductivity Copper rods</b>		Product	<b>GIS</b>
<b>1.0</b>	Application	: High voltage Switchgear		
<b>2.0</b>	Material	: High conductivity Electrical Grade (ETP grade) copper rods		
<b>3.0</b>	Quantity	: 1) <b>3 No. s of following sample</b> 100±0.5mm DIA x 300±2 mm Long 2) <b>5No. s of following sample</b> 90±0.5mm DIA x 360±2 mm Long		
<b>4.0</b>	<b>Specifications:</b>			
<b>4.1</b>	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.			
<b>4.2</b>	The material shall be good for brazing, soldering and for electrical applications where high Current transfer in involved.			
<b>4.3</b>	Quotation shall be submitted by supplier on <b>price per piece</b> basis only.			
<b>5.0</b>	<b>Dimensional check</b>			
	The material shall comply to specified sizes.			
<b>6.0</b>	<b>Packing :</b>			
	The copper rods shall be packed in dust free boxes.			
	<b>General:</b>			
	The components shall be guaranteed against all manufacturing defects.			
1/1	PSGSG /11-12/05			 <b>Signature</b>

PSGSG/ 11-12/06	<b>Product Specification For Copper chromium material</b>	Date	07.08.2012
		Product	CGSM
1.0	<b>Application:</b> For use as contacts in gas circuit breaker and other high current applications.		
2.0	<b>Specifications :</b>		
2.1	<b>Configuration &amp; Size:</b> Copper-chromium rods of size 1) $\text{Ø}110\pm 0.5 \text{ mm} \times 300\pm 1 \text{ mm}$ Quantity: 5 No.s		
2.2	<b>Material: Cu-Cr alloy</b> Copper : 99% Chromium: <1 % Balance: Non-reactive, High electrical conductivity material like Ag, etc.  This alloy shall be made using fine alloying practices so as to minimize occlusion of gases. The Oxygen content shall not exceed 100 ppm. The copper used for alloying shall be 99.97% pure. Electrolytic grade is preferred.		
2.3	<b>Electrical Conductivity :</b>  The electrical conductivity of the material should be $\geq 82 \%$ (IACS)		
3.0	<b>Tests &amp; Inspection:</b>  1) The supplied material shall be subjected to conductivity measurement. The sample shall exhibit IACS conductivity greater than or equal to 82%. 2) The components shall be physically inspected for cracks and blow holes. No blow holes are permitted. 3) Material shall be inspected for dimensional checkups.		
Page 1/2	PSGSG/ 11-12/06	 <b>Signature</b>	

<p>4.0</p> <p>4.1</p> <p>4.2</p> <p>4.3</p> <p>4.4</p> <p>4.5</p> <p>4.6</p> <p>4.7</p>	<p><b>General:</b></p> <p>The material shall be guaranteed for a period of 1 year against all manufacturing defects.</p> <p>The supplier shall submit the material test certificate at the time of delivery.</p> <p>The rods shall be wrapped in polyethylene and packed individually in dust free boxes.</p> <p>The components shall be free from dirt, grease and loose particles.</p> <p>Quotations shall be submitted on <i>price per piece</i> basis only.</p> <p>Perpendicularity shall be within +/- 0.05</p> <p>In case of any doubts in specifications supplier shall contact BHEL for clarifications.</p>	
<p><b>Page</b> 2/2</p>	<p><b>PSGSG/</b> 11-12/06</p>	 <b>Signature</b>