

Research Designs and Standards Organisation  
(Traction Installation Directorate)

Reasoned document of RDSO's Specification No. ETI/OHE/65(8/87) FOR CONTINUOUS CAST COPPER WIRE ROD, which is now renamed as TI/SPC/OHE/CCC/0871

1. RDSO's Specification No. TI/SPC/OHE/CCC/0871 for CONTINUOUS CAST COPPER WIRE ROD was uploaded on RDSO website for one month dated 06.07.2020 for seeking comments,
2. Comments/Suggestion received from viewers are as below.

Clause No.	Particular	Comments Recieved	RDSO's Remark
Title	TECHNICAL SPECIFICATION FOR CONTINUOUS COPPER WIRE RODS	<b><u>M/s Hindalco Industries Limited</u></b>  TECHNICAL SPECIFICATION FOR CONTINUOUS <b>CAST &amp; ROLLED</b> COPPER WIRE RODS	Not accepted. Process i.e Southwire Process for manufacturing rod is specified in specification which is continuous cast & rolling process. Item name is continuous cast copper (CCC) wire rod. Changing the item name from "continuous cast copper (CCC) wire rod" to "CONTINUOUS CAST & ROLLED COPPER WIRE RODS" will require change of item name mentioned in many documents like vendor directory, Item List on RDSO website etc.
1.0	<u>SCOPE</u>  1.1 This Specification covers the requirement of Continuous Cast Copper (CCC) Wire Rods of size 19.6 To 26 mm diameter, manufactured by South Wire Process.	<b><u>M/s Vedanta Limited</u></b>  To include " SMS- Contirod" manufacturing process as well.  <b><u>M/s Hindalco Industries Limited</u></b>  The preference should be given to the Domestic manufacturers of CCC Rods in line with the Make in India and Atmanirbhar	Not accepted at this stage. Inclusion of Contirod process requires field trials of Contact wire drawn out of CCC rod manufactured by Contirod process. M/s Vedanta vide letter no. TI/OHE/CW/POLICY/18 dated 20.03.2020 was advised to submit the comparison of 19.6 mm rod manufactured by Southwire process and Contirod process. Reply from firm awaited.  Make in India clause added as para 1.3. In compliance of Spl DG letter no. SplDG(VD)/Misc dated 25.06.2020 regarding inclusion of Make in India clause added in the technical specification.

		Bharat.	Para regarding reason for changing specification number from ETI/OHE/65(8/87) to TI/SPC/OHE/CW/0971 is added as para 1.2
2.0	Governing Specifications	<p><b>M/s HCL</b> In addition to existing specification mentioned, IS: 12444:1988 or latest should be added TI/SPC/OHE/CCC/0871 is an specification of CC Rod hence as per my opinion IS 12444 should be given as one of reference standard</p>	May be accepted
	Any deviation from this specification proposed by the manufacturer to improve upon the performance of Contact Wire shall be considered only on its merits provided full particulars with justification and financial implication are furnished by the manufacturer.	<p><b>M/s Hindalco Industries Limited</b>  This clause as new addition is not clear?? <b>Reason:</b> <input type="checkbox"/> This paragraph is an instruction not necessary to be in specification sheet.</p>	Not accepted. Para is added in-line with other specifications.
3.1	Copper used, should be Grade `A` copper conforming to the chemical composition of Cu-Cath-1 of IS 191:2007 or latest.	<p><b>M/s Hindalco Industries Limited</b>  Clause No.3.1- Copper used, should be LME A Grade `A` copper conforming to the chemical composition of Cu-Cath-1 of IS 191:2007 or latest.  Raw material: Copper used, should be Electrolytic Grade Copper cathodes conforming to the requirement of LME Grade `A` copper as listed in the London Metal Exchange. Grade `A` copper conforming to the chemical composition of Cu-Cath-1 of IS 191: 2007 or latest.  Reason:</p>	May be accepted to ensure quality of raw material .

		<input type="checkbox"/> To ensure best raw material is used & to maintain consistency in Quality.	
		<p><b>M/s HCL</b> Copper <b>Cathode</b> used, should be <b>LME</b> Grade 'A' copper conforming to ..... Cu Cath-1 of IS 191:2007 or latest</p> <p>LME Gr-A is bench mark for Copper Cathode quality and globally acceptable.</p>	May be accepted to ensure quality of raw material .
		<p><b>M/s Vedanta Limited</b> Copper used, should be <b>LME</b> Grade 'A' copper conforming to the chemical composition of Cu-Cath-1 of IS 191:2007 or latest. Important to include both LME Grade A and Cu-Cath-1 of IS 191:2007 to ensure check on Input raw material quality</p>	May be accepted to ensure quality of raw material .
6.4	When tested in accordance with IS: 1608-1995 or latest "Mechanical Testing of Metals" for tensile strength and elongation, the material shall have a tensile strength of 20.4 kgf/mm <sup>2</sup> (min.) and a minimum of 46% elongation on a gauge length of 250 mm.	-----	Latest IS incorporated.