

Research Designs and Standards Organisation
(Traction Installation Directorate)

Reasoned document of Final Draft RDSO's Specification No. TI/SPC/OHE/CW(Cu-Ag)/0130 (02/2020)for SILVER BEARING GROOVED COPPER CONTACT WIRE FOR ELECTRIC TRACTION(DRAWN OUT OF CONTINUOUS CAST SILVER BEARING COPPER RODS)

1. RDSO's Final Draft Specification No. TI/SPC/OHE/CW(Cu-Ag)/0130 (02/2020) for SILVER BEARING GROOVED COPPER CONTACT WIRE was uploaded on RDSO website for 15 days for seeking comments,
2. Comments/Suggestion received from viewers are as below.

Clause No.	Particular	Comments Recieved	RDSO's Remark
4.1	<p>The Silver Bearing Copper Contact Wire shall be drawn out of indigenous or imported CCSBC Rods manufactured by any of the following processes:</p> <p style="margin-left: 40px;">(a) Continuous Cast & Rolled (CCR) Process (b) Vertical upward continuous casting process followed by further processing(hot rolling/cold rolling/extrusion)</p> <p>Diameter of the rod so obtained, shall be as given in Table-3.</p> <p>Copper used, should be Electrolytic grade Copper cathodes conforming to the requirement of LME Grade `A` copper as listed in the London Metal Exchange.</p> <p>The chemical composition of the Continuous Cast Sliver Bearing Copper (CCSBC) Rod shall be as given in Table-2.</p> <p>The manufacturer of CCSBC Wire Rod which is used in the manufacture of prototype Contact Wire will be treated as approved vendor for CCSBC Wire Rod once the prototype Contact Wire manufactured by this CCSBC Wire Rod is approved.</p> <p>Procurement of CCSBC wire rod on job work basis is not allowed</p>	<p><u>M/s Hindalco Industries Limited</u></p> <p>The best process is the Continuous Cast & Rolled (CCR) Process for contact wire like the 19.6mm dia rod as the casting and rolling gives the strength and desire properties of the contact wire.</p> <p>The other alternate method as mentioned is the "Vertical upward continuous casting process" by the Rautomead like Machine of proven Graphite crucible furnace technology process. Not the common vertical cast machines as suggested. The rods produced from these machines further can be processed so Further processing so 'cold drawing' should be added.</p>	<p>Not accepted. As per VIgillance letter no. CVO/RDSO/Confdl/2020 dated 23.06.2020, activity/process based M&P need to be specified instead of specific M&P.</p>
8.2.2	---	<p><u>CORE/Allahabad</u></p> <p>Specification may be reviewed to include the checks required to ensure correctness of counter, to avoid cases of supply of short drum lengths of Contact wire on account of</p>	<p>May be accepted.</p>

		<p>faulty counter meter. Specification may be reviewed to include the aspect of actual weighment of Tare weight of drum during RITES inspection.</p>	
8.3.3		<p><u>M/s KEC</u></p> <p>As per the clause 9.4.1 manufacturer test is in adherence to IS:9713-1938 or latest. Request you to kindly let us use the same IS for micro-structure examination too.</p> <p><u>M/s Chandra Metals</u></p> <p>Conflict with clause 9.4.1. Sampling is defined by IS 9713 or latest. Kindly consider sampling as per IS 9713-1938</p> <p><u>M/s JK Cables</u></p> <p>Conflict with clause 9.4.1. Sampling is defined by IS 9713 or latest. Kindly consider sampling as per IS 9713-1938</p> <p><u>M/s Gupta Power</u></p> <p>Conflict with clause 9.4.1. Sampling is defined by IS 9713 or latest. Kindly consider sampling as per IS 9713-1938</p>	May be accepted
8.5.9.6, 8.5.9.7, 8.5.9.8	----	----	New provisions added in-line with other specifications of conductor to ensure quality of raw material.

9.2	Same as type tests except that indicated in Clause 9.1.11. In addition weight of 3 or 1/5 th of offered Contact Wire drums for acceptance tests, whichever is higher, for gross weight. The Inspector shall verify the results of manufacturer's tests.	<u>CORE/Allahabad</u> Specification may be reviewed to include the checks required to ensure correctness of counter, to avoid cases of supply of short drum lengths of Contact wire on account of faulty counter meter.	May be accepted.
10.12.4.6	Microstructure examination	----	Microstructure examination test added in Acceptance Test
11.3.8	Each drum of Contact Wire shall be provided with two colour bands alternatively each of red and yellow paint of approximately 75mm width each, at the top layer of Contact Wire for identification. Top end of the Contact Wire shall also be provided with lead seal by inspection authority by making hole from top lobe to bottom in the Contact Wire, in addition to punch mark provided by the manufacturer for identification of end. On receipt of Contact Wire drums the colour bands, sealing at the end of Contact Wire and punch mark shall be verified by the consignee to ascertain correct receipt of length of Contact Wire.	<u>M/s KEC</u> RDSO approve CCC Rod post all the testings as per the specification. In case of any change of supplier from our side we will again follow the approval process. As micro-structure examination is more time consuming. Kindly allow us to do this test on one sample per lot (that we offer for final inspection) instead of one sample per six drums. <u>M/s Chandra Metals</u> Microstructure test is very time consuming. RDSO approved CCC wire rod after all the testing done as per specification. If we change the CCC wire rod supplier then we again will do approval process. If this test is very important then can we do this test on one	May be accepted

		<p>sample against whole lot which we offered for final inspection.</p>	
		<p><u>M/s JK Cables</u> Microstructure test is very time consuming. RDSO approved CCC wire rod after all the testing done as per specification. If we change the CCC wire rod supplier then we again will do approval process. If this test is very important then can we do this test on one sample against whole lot which we offered for final inspection.</p>	
		<p><u>M/s Gupta Power</u> Microstructure test is very time consuming. RDSO approved CCC wire rod after all the testing done as per specification. If we change the CCC wire rod supplier then we again will do approval process. If this test is very important then can we do this test on one sample against whole lot which we offered for final inspection.</p>	