केंद्रीय रेल विद्युतीकरण संगठन, प्रयागराज
Central Organisation for Railway Electrification
1-Nawab Yusuf Road, Civil Lines, Prayagraj (UP)-211001
www.core.indianrailways.gov.in

No. CORE-HQ0ELEC(MP)/119/2022 **Date:** As signed

All Approved Vendors of Catenary Wire
(As per Mailing List)

Sub: Regarding failure of 65 sq mm Cu-Cd Catenary Wire.
Ref: RDSO's letter No. RDSO-TI0LKO(OHE)/8/2020, dt 02.01.2025.

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In order to control the failures of 65 sq.mm Cu-Cd Catenary Wire, RDSO has issued additional system for the inspection of Cu-Cd Catenary Wire.

This additional inspection shall be incorporated in the specification No. TI/SPC/OHE/CAT (Cu-Cd)/0971 during revision and the same shall be followed during inspection of the Cu-Cd Catenary Wire and should be considered as the part of the aforementioned RDSO Specification.

It is here by advised to follow the same as advised by RDSO and submit a declaration to this office for following the above procedure.

This has the approval of competent authority.

Encl: Referred letter.

Digitally Signed by Kalyan Singh
Date: 08-01-2025 16:28:21
Reason: Approved

(Kalyan Singh)
Dy. Chief Electrical Engineer/MP
CORE/Prayagraj

Copy to:

1. **ED/TI/RDSO:** For kind information please.
2. **M/s CMD/RITES:** For kind information and necessary action please.
3. **M/s Intertek India Private Limited:** For kind information and necessary action please.
4. **M/s Bureau Veritas India Private Limited:** For kind information and necessary action please.
5. **M/s TUV India Private Limited:** For kind information and necessary action please.

Signature Not Verified
Digitally signed by PRANJAL SINGH RANA
Date: 2025.01.09 12:34:53 IST
Reason: IREPS-CRIS
Location: New Delhi

Telegram : 'RAILMANAK', Lucknow
Telex : 0535 - 2424 RDSO -IN
Fax : 91-0522-2465731
Telephone :91-9794863250, Rly. 42801
E-Mail: edti2010@gmail.com

सत्यमेव जयते

भारत सरकार–रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ–226011
Government of India - Ministry of Railways
Research Designs & Standards Organisation
LUCKNOW - 226011

No RDSO-TI0LKO(OHE)/8/2020 Date: As signed

CAO,
Central Organization for Railway Electrification,
Nawab Yusuf Road,
Allahabad-211 001.

Sub: Regarding failure of 65 sq mm Cu-Cd Catenary wire.
Ref: RB's letter no. 2021/EEM/161/8/Punct/Pt-Part(2) dated 09.12.2024 (copy attached).

1. In the recent past Zonal Railways have reported several failures of 65 sq mm Cu-Cd Catenary wire. Most of the failures have occurred in tensile mode during service.

2. A meeting was held in Railway Board on 22.11.2024 regarding failure of 65 sq mm Cu-Cd Catenary wire. As advised by Railway Board, additional system to be adopted for inspection of Cu-Cd Catenary has been advised to Zonal Railways and RITES. The circulated letter is attached herewith.

3. This additional inspection procedure shall be incorporated in specification no. TI/SPC/OHE/CAT (Cu-Cd)/0971 during revision. As an interim measure to advise all stakeholder, it is requested to upload the circulated letter (copy attached) in the UVAM against the item 65 sq mm Cu-Cd Catenary wire.

This is issued with approval of competent authority.

Encl: As above

Digitally Signed by Gaurang Gupta
Date: 02-01-2025 16:25:00
Reason: Approved

(Gaurang Gupta)
Director/(TI-II)
[For Director General (TI)]

Telegram : 'RAILMANAK',Lucknow
Fax : 91-0522-2465731
Telephone -9794863068, Rly 42804
Email : dtiohed.rdso24@gmail.com

सत्यमेव जयते

भारत सरकार–रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ–226011
Government of India - Ministry of Railways
Research Designs & Standards Organisation
LUCKNOW - 226011

No RDSO-TI0LKO(OHE)/8/2020 Date: As signed

Principal Chief Electrical Engineer,
(As per attached mailing list)

Sub: Regarding failure of 65 sq mm Cu-Cd Catenary wire.
Ref: RB's letter no. 2021/EEM/161/8/Punct/Pt-Part(2) dated 09.12.2024 (copy attached).

1. In the recent past Zonal Railways have been repeatedly reporting several failures of 65 sq mm Cu-Cd Catenary wire. Most of the failures have occurred in tensile mode during service.

2. These failures have been analyzed by M & C Directorate of RDSO. It is observed that the reason of failure of catenary wire was low tensile strength, which was due to absence of cadmium content.

3. A meeting was held in Railway Board on 22.11.2024 regarding failure of 65 sq mm Cu-Cd Catenary wire wherein it was proposed; "*Requirement of consignee sample check should be studied and if required same should be mandated to all concerned*".

4. Accordingly, following additional system is to be adopted for inspection of Cu-Cd Catenary:

When the inspection agency is RITES/TPI/Consignee:

a) For acceptance test, three samples of wire from each drum, shall be tested for copper content, Cadmium content and other trace elements, by spectrometer.

b) The inspecting agency should ensure that the Chemical composition test by spectrometer shall meet the ***specified values of Copper+Silver is 98.90% min & Cadmium is 0.70-1.0 % for every sample tested***. Other values should be as per 1(b) of appendix C of the specification no. TI/SPC/OHE/CAT (Cu-Cd)/0971.

c) If the test results do not meet the specified values, the matter should be reported to RDSO for further necessary action.

When the material is received at consignee end after RITES / TPI inspection:

a) For verification of the acceptance test reports, one samples of wire from every 3rd drum in a lot, shall be tested for copper content, Cadmium content and other trace elements, by spectrometer.

b) The consignee should ensure that the Chemical composition test by spectrometer shall meet the ***specified values of Copper + Silver is 98.90% min & Cadmium is 0.70-1.0 % for every sample tested***. Other values should be as per 1(b) of appendix C of the specification no. TI/SPC/OHE/CAT (Cu-Cd)/0971.

c) If the test results do not meet the specified values, the matter should be reported to RDSO for further necessary action.

This is issued with the approval of competent authority.

Digitally Signed by Gaurang Gupta
Date: 01-01-2025 13:29:13
Reason: Approved
(Gaurang Gupta)
Director/(TI-II)
[For Director General (TI)]

Encl: As above

Copy to:

(i) ED/EEM/RB for kind information.
(ii) CMD/RITES for kind information and necessary action to carry inspection as above.

Mailing List

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