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Letter No.: CT/USFD/Phased Array General

Date: 22.10.2024

**Principal Chief Engineers,
Chief Administrative Officers (Cons),
PSUs & All concerned
(As per mailing list enclosed)**

Sub: Revision of Technical Eligibility Criteria both for FB welding joint testing & Rails testing by PAUT weld tester & by PAUT SRT respectively through outsourcing, to enable and ensure required support from concerned OEMs for detailed analysis of the ultrasonic testing data

Ref: i) [This office letter no. CT/USFD/Phased Array weld tester dated 27.06.2023](#)
ii) [This office letter no. CT/USFD/Phased Array SRT dated 12.09.2024](#)

1. Vide this office letters referred at (i) and (ii) above, the Procedure Order and Technical Eligibility Criteria for testing of Flash Butt welding joints by Phased Array Ultrasonic weld tester (PAUT weld tester) and for testing of rails by Phased Array Ultrasonic Single Rail Tester (PAUT SRT) respectively were circulated to Zonal Railways/PSUs for adoption.
2. Further, [Railway Board vide letter no. 2024/Track-I/9\(2\)/USFD/Phased Array dated 15.10.2024](#), approved the proposal for adding provisions in the Technical Eligibility Criteria for PAUT weld tester for FB welding joints testing and PAUT SRT for rails testing (approval enclosed).
3. This provision (vide para 06) is added in both the above Technical Eligibility Criteria of PAUT weld tester and PAUT SRT for ensuring required support from the concerned OEMs to enable all concerned for detailed analysis of ultrasonic testing data.
4. Accordingly, Revised Technical Eligibility Criteria (TEC) is as below-
 - a. Revised TEC for testing of FB welding joints by Phased Array ultrasonic weld tester through outsourcing is attached as Annexure-I
 - b. Revised TEC for testing of rail by PAUT SRT through outsourcing is attached as Annexure-II

Submitted & circulated for information and necessary action, please.

DA: Railway Board approval letter dt 15.10.24

KAMAL KUMAR Digitally signed by
TALREJA KAMAL KUMAR
TALREJA

Executive Director/Track-1

Revised Technical Eligibility Criteria for testing of FB welding joints by Phased Array ultrasonic weld tester through outsourcing

1. Firm shall have RDSO verified PAUT weld tester.
2. Firm shall have RDSO certified USFD operators for weld testing by conventional UT method as described in IRS-T-53. In addition to above, the operator should have competency certificate issued by OEM after completing requisite training for operation and data analysis of Phased Array ultrasonic weld tester.
3. Firm shall have RDSO verified Quality Assurance Plan (QAP) for ultrasonic Testing of FB welds by Phased Array ultrasonic weld tester.
4. The PAUT weld tester proposed to be used by firm on IR network should be in service on some other Railway network for USFD testing of Flash Butt (FB) welds and should have carried out USFD testing of at least 5000 FB welds with satisfactory performance. Firm shall submit a certificate of satisfactory performance of USFD testing of 5000 FB welds in this regard.
5. Original Equipment Manufacturer (OEM) firms shall be eligible to participate in the tender. However, in case the OEM firm is not located in India, any Authorized Indian service provider or representative can participate in the tender.
6. Data analysis cells/centre shall be set up for backend analysis of recorded ultrasonic testing data generated during testing by PAUT Weld testers. OEM/OEM's Authorised Indian Service Provider or Representative shall collaborate with Railway to operationalize these data analysis cells/centre as per the instruction of Railways.
 - a. Concerned team members of Zones to upload & share regularly PAUT testing data of welds with these data analysis cells/centre. For uploading this data, corresponding authorization will be given to concerned team members accordingly. Data to be uploaded and shared in suitable cloud storage or servers.
 - b. The ownership of this data & all related results/reports etc. will remain with Indian Railways. These data of ultrasonic testing (reports, recording) shall be kept & preserved as per guidelines. Suitable safety protocols & protection for stored data should be ensured. Admin rights of this storage system will remain with Railways. OEM/Service provider will not utilize or share this data/reports etc. outside IR, without the approval of Indian Railways.
 - c. Undertaking from concerned OEM/OEM's Authorised Indian Service provider/ Representative will be required to provide required support/facilities for operationalizing these data analysis cells/centre. A certificate shall be given by concerned OEM communicating details of trained manpower, data analysis software features and related capabilities available with them to ensure the smooth & effective functioning of these data analysis cells/centre.
 - d. As a part of eligibility criteria, tender documents to ask for above undertaking & certificate from the OEM/OEM's Authorised Indian Service provider/ Representative duly specifying the details as mentioned above.

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Revised Technical Eligibility Criteria for testing of rail by PAUT SRT through outsourcing

1. Firm shall have RDSO verified PAUT SRT.
2. Firm shall have RDSO certified USFD operators for Rail testing by conventional Ultrasonic testing method as described in IRS-T-53. In addition to above, the operator should have competency certificate issued by OEM after completing requisite training for operation and data analysis of PAUT SRT.
3. Firm shall have RDSO verified Quality Assurance Plan (QAP) for Ultrasonic testing of rail by PAUT SRT.
4. The PAUT SRT proposed to be used by firms on IR network should be in service on at least 02 other/foreign Railways network for USFD testing of Rails and should have carried out USFD testing of at least 1000 Tkm with satisfactory performance.

Firm shall submit a certificate of satisfactory performance regarding USFD testing of 1000 Tkm in each Railway network.

5. Original Equipment Manufacturer (OEM) firms shall be eligible to participate in the tender. However, in case the OEM firm is not located in India, any Authorized Indian service provider or representative can participate in the tender.
6. Data analysis cells/centre shall be set up for backend analysis of recorded ultrasonic testing data generated during testing by PAUT SRTs. OEM/OEM's Authorised Indian Service Provider or Representative shall collaborate with Railway to operationalize these data analysis cells/centre as per the instruction of Railways.
 - a. Concerned team members of Zones to upload & share regularly PAUT testing data of rails/welds with these data analysis cells/centre. For uploading this data, corresponding authorization will be given to concerned team members accordingly. Data to be uploaded and shared in suitable cloud storage or servers.
 - b. The ownership of this data & all related results/reports etc. will remain with Indian Railways. These data of ultrasonic testing (reports, recording) shall be kept & preserved as per guidelines. Suitable safety protocols & protection for stored data should be ensured. Admin rights of this storage system will remain with Railways. OEM/Service provider will not utilize or share this data/reports etc. outside IR, without the approval of Indian Railways.
 - c. Undertaking from concerned OEM/OEM's Authorised Indian Service provider/ Representative will be required to provide required support/facilities for operationalizing these data analysis cells/centre. A certificate shall be given by concerned OEM communicating details of trained manpower, data analysis software features and related capabilities available with them to ensure the smooth & effective functioning of these data analysis cells/centre.
 - d. As a part of eligibility criteria, tender documents to ask for above undertaking & certificate from the OEM/OEM's Authorised Indian Service provider/ Representative duly specifying the details as mentioned above.

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Mailing list

I. Principal Chief Engineer

1. Central Railway, Mumbai CST – 400001
2. Eastern Railway, Fairlie Place, Kolkata – 700001
3. Northern Railway, Baroda House, New Delhi – 110001
4. N.E. Railway, Gorakhpur – 273012
5. Southern Railway, Park Town, Chennai – 600003
6. S.C. Railway, Rail Nilayam, Secunderabad – 500371
7. Western Railway, Churchgate, Mumbai – 400020
8. South Eastern Railway, Garden Reach, Kolkata – 700043
9. N.F. Railway, Maligaon, Guwahati – 781011
10. East Central Railway, Hajipur – 844101
11. East Coast Railway, Bhubaneswar – 364001
12. North Central Railway, HQ Office, Subedarganj, Block – Bhagirathi, Prayagraj – 211015
13. North Western Railway, Jaipur – 755001
14. South East Central Railway, Bilaspur – 495004
15. South Western Railway, Hubli – 580023
16. West Central Railway, Jabalpur – 482001

II. Chief Administrative Officer (Cons)

1. Central Railway, New Administrative Office Building, 6th Floor, D.N. Road, Mumbai CST – 400001
2. CAO (I), Eastern Railway, 4th Floor, New Koilaghat Building, Strand Road, Kolkata – 700001
3. CAO (II), Eastern Railway, 4th Floor, New Koilaghat Building, Strand Road, Kolkata – 70000
4. Northern Railway, Kashmere Gate, Delhi – 110001
5. USBRL Project, Opp. R.R.B. Jammu Tawi – 180013
6. North Eastern Railway, Gorakhpur – 273012
7. Southern Railway, Egmore, Chennai – 600003
8. West Central Railway, Jabalpur – 482001
9. South Western Railway, 18, Millar Road, Bangalore – 560046
10. South Central Railway, Rail Nilayam, Secunderabad – 500371
11. South Eastern Railway, Garden Reach, Kolkata – 700043
12. East Coast Railway, Chandrashekharapur, Bhubaneswar – 751023
13. Western Railway, Churchgate – 400020
14. CAO (North), East Central Railway, Mahendrughat, Patna - 800004
15. CAO (South), East Central Railway, Mahendrughat, Patna - 800004
16. North Western Railway, Near Railway Station, Jaipur – 302001
17. South East Central Railway, Bilaspur – 495004 (Chhattisgarh)
18. North Central Railway, HQ Office, Subedarganj, Block – Bhagirathi, Prayagraj – 211015
19. CAO (I), N.F. Railway, Guwahati – 781001
20. CAO (II), N.F. Railway, Guwahati – 781001
21. CAO (III), N.F. Railway, Guwahati – 781001

III. Public Sector Units (PSUs) & Rail Manufacturing Plants:

1. Chairman and Managing Director, Rail Vikas Nigam Ltd., Plot No. 25, First Floor, August Kranti Bhawan, Bhikaji Cama Place, R.K. Puram, New Delhi-110066
2. Managing Director, DFCCIL, 5th Floor, Pragati Maidan, Metro Station Building Complex, New Delhi- 110001
3. MD, RITES Ltd., RITES BHAWAN. No. 1, Sector-29, Gurgaon-122001 (Haryana)
4. MD, IRCON International Ltd., C-4, District Centre, Saket, New Delhi-110017

5. CMD/ Konkan Railway Corporation Ltd., Belapur Bhawan, Plot No. 6, Sector 11, CBD, Belapur, New Mumbai-400614
6. Chief General Manger (Quality), Bhilai Steel Plant, Bhilai-490001
7. Managing Director, M/s Jindal Steel & Power Limited, Raigarh-496001

IV. PEDs/EDs of Railway Board and RDSO

1. Principal Executive Director/CE (P), Railway Board, Rail Bhawan, New Delhi – 110001
2. Executive Director, Track (P&P), Railway Board, Rail Bhawan, New Delhi – 110001
3. Executive Director, Track (M & MC), Railway Board, Rail Bhawan, New Delhi – 110001
4. Executive Director/Track-II, RDSO, Lucknow
5. Executive Director/M&C, RDSO, Lucknow

V. Chairman-cum-Managing Directors

1. The General Manager (Cons.), N.F. Railway, Maligaon, Guwahati-781 011
2. The Chief Commissioner of Railway Safety, Ministry of Tourism & Civil Aviation, NE Rly Compound, 16-A, Ashok Marg, Lucknow 260 001
3. Metro Railways, Metro Bhawan , 33/1 Chowringhee Road, Kolkata-700071
4. The CMD, Managing Director, KRCL, Belapur Bhawan, Plot No.6, CBD, Belapur, New Bombay-400 614
5. The Director General, Railway Staff College, Vadodara-390 004
6. The Director, IRICEN, Pune- 411 001
7. The Executive Director, IRCAMTECH, Maharajpur Gwalior-474 020

भारतसरकार/GOVERNMENT OF INDIA
रेलमंत्रालय/MINISTRY OF RAILWAYS
(रेलवेबोर्ड)/(RAILWAY BOARD)

सं/No. 2024/Track-I/9(2)/USFD/PhasedArray

दिनांक/Date: 15.10.2024

PED/Infra-I,
RDSO,
Manaknagar,
Lucknow.

विषय/Sub: **Proposal for adding provisions in the Technical Eligibility Criteria of PAUT Weld tester (for FB welding joints) & PAUT SRT to enable and ensure required support from concerned OEMs regarding detailed analysis of the collected data.**

संदर्भ/Ref: RDSO's letter No. CT/USFD/Phased Array General dated 03.10.2024

The proposal of RDSO regarding, adding certain provisions in the Technical Eligibility Criteria of PAUT Weld tester (for FB welding joints) & PAUT SRT, as submitted by them vide letter under reference, has been **approved**.

RDSO may take further necessary action accordingly.

This issues with the approval of AM/CE, Railway Board.


15.10.24

(Alok Kumar)
Executive Director/Track (P&P)
Railway Board
New Delhi 110001
E-mail: alokkumar.g@gov.in