भारत सरकार/GOVERNMENT OF INDIA
रेल मंत्रालय/MINISTRY OF RAILWAYS
(रेलवे बोर्ड)/ (RAILWAY BOARD)

सं/No. 2020/Track-I(P)/R-260 Grade Rails **दिनांक/Date: 28.04.2021**

As per the mailing list

Sub : Regular adoption of R-260 Rails on Indian Railway

Ref :

1. RDSO letter no. CT/Rail Handling dated 07.08.2020 (Copy Enclosed)
2. RDSO letter no. CT/Welding/R-260 dated 05.08.2020 (Copy enclosed)
3. RDSO letter no. CT/Welding/R-260 dated 01.02.2021 (Copy enclosed)

As Indian Railway has taken a decision to improve the quality of rails and with significant indigenous efforts R-260 rails have been developed. Their un-interrupted use is required on the railways. During the course of these development efforts, various decisions were taken regarding activities related with better utilization of these rails. Need is felt to comprehensively cover all instructions at one place. Accordingly following instructions are being issued for clarity and guidance of all concerned in the railways;

1.0 Vide RDSO letter referred **at SN 1 above**, R-260 rails were prescribed for use in Indian Railways. RDSO has also advised guidelines for handling stacking and maintenance of these rails along with a monitoring proforma for monitoring performance of R-260 rails for one year. As these rails are now being rolled out by SAIL Bhilai plant and being supplied to all zonal railways, Railways are advised to strictly adhere to these instructions issued from RDSO.

2.0 For AT welding of R-260 to R-260 rails, RDSO has developed five (05) approved vendors so far. List of all five RDSO approvals in this regard is enclosed as **Annexure-B**. RDSO letters along with welding parameters (as Annexure-I of RDSO letters) are also enclosed. For further developments of vendors etc. railways may refer RDSO website https://rdso.indianrailways.gov.in and consult ED Track Design-II RDSO.

3.0 <u>For AT welding of R-260 rails to 90 UTS rails</u>

3.1 R-260 AT weld portions along with their respective welding techniques, made available as per para 2.0, above are approved for use in the Indian Railways as per RDSO guidelines described in **Annexure-A**. Railways are advised to ensure AT welding of such joints following RDSO guidelines and record performance and data of each such weld. Data and records are to be shared with ED/Track design-II RDSO for taking further necessary action in this regard.

3.2 RDSO is simultaneously also in the process of developing exclusive AT welds and techniques for use of AT welding of R-260 to 90 UTS rails. And, so far RDSO has been able to develop one vendor for such exclusive AT welding (R-260 to 90UTS). Details are as per **Annexure-C**. RDSO letter along with welding parameters (as Annexure-I of RDSO letter) is also enclosed. Development of more vendors is in the pipeline and railways may obtain latest details in this regard from RDSO website https://rdso.indianrailways.gov.in and may consult ED Track Design-II RDSO.

Railways are at liberty to adopt AT weldings by any means, out of methods described vide para 3.1 & 3.2 above, and share details with RDSO.

4.0 With availability of R-260 portions now, RDSO's interim guidelines for AT welding of R-260 rails with TPP's 90 UTS portions issued vide RDSO letter no. CT/Welding/R-260 dated 31.08.2020, stand withdrawn with immediate effects.

5.0 For FB welding of R-260 rails, detailed RDSO guidelines issued vide their letter dated 05.08.2020 (copy enclosed vide **SN 2 referred** above) and subsequent clarification on the subject issued vide RDSO letter referred at **SN 3** above, are to be followed.

6.0 Further, in view of the similarities between R260 grade rail as per IRS T-12 and R260 grade rail as per EN standards, which is already in extensive use on World Railways, Railway Board has already approved use of this rail on IR network without any field trial. It is considered that separate trial of track components i.e., Turnouts, SEJ and Glued Joints manufactured with these rails would not be required. Manufacture of these components would be done using R260 grade rails, following the same drawings and specifications as is being done for 880 grade rails.

7.0 In view of above discussion and discussions with other experts on the subject, it has come out clearly that R-260 Rails are similar to 90 UTS rails but with better chemical, metallurgical and physical strength properties. Hence it has been decided to stop production of 90 UTS rails w.e.f. 01.04.2021 at SAIL/Bhilai and henceforth all R-260 rails being supplied by SAIL are to be used along with available 90 UTS rails with complete interchangeability for the purpose of renewals and maintenance on all Indian railways, in accordance with laid down guidelines, as detailed above.

This issues with the approval of Additional Member/Civil Engg./Railway Board.

Signature Not Verified

Digitally signed by TUSHAR KANT PANDEY
Date: 2021.04.29 19:28:57 IST

Tushar Kant Pandey
ED/Tk (M&MC)

List for Distribution (सं/No. 2020/Track-I(P)/R-260 Grade Rails दिनांक/Date: 28.04.2021)

1. General Managers, All Indian Railways & Production Units
2. General Manager (CON.), N.F. Railway, Guwahati
3. General Manager/CORE, Allahabad

Principal Chief Engineer

1. Central Railway, Mumbai CST- 400 001
2. Eastern Railway, Fairlie Place, Kolkata – 700 001
3. East Central Railway, Hajipur – 844 101
4. East Coast Railway, Bhubaneshwar – 751016
5. Northern Railway, Baroda House, New Delhi – 110 001
6. North Central Railway, Allahabad – 211 001
7. N.E. Railway, Gorakhpur – 273 012
8. N.F Railway, Malegaon, Guwahati – 781 011
9. North Western Railway, Jaipur – 302 001
10. Southern Railway, Park Town, Chennai – 600 003
11. South Central Railway, Rail Nilayam, Secunderabad – 500 371
12. South Eastern Railway, Garden Reach, Kolkata – 700 043
13. South East Central Railway, Bilaspur – 495 004
14. South Western Railway, Hubli – 589 020
15. Western Railway, Churchgate, Mumbai – 400 020
16. West Central Railway, Jabalpur – 482 001
17. Metro Railway, Metro Bhawan, Kolkata – 700 071

The Chief Administrative Officer (Construction)

1. Central Railway, Mumbai CST- 400 001
2. Eastern Railway, Fairlie Place, Kolkata – 700 001
3. East Central Railway, Hajipur – 844 101
4. East Coast Railway, Bhubaneshwar – 751016
5. Northern Railway, Baroda House, New Delhi – 110 001
6. North Central Railway, Allahabad – 211 001
7. N.E. Railway, Gorakhpur – 273 012
8. N.F Railway, Malegaon, Guwahati – 781 011
9. North Western Railway, Jaipur – 302 001
10. Southern Railway, Park Town, Chennai – 600 003
11. South Central Railway, Rail Nilayam, Secunderabad – 500 371
12. South Eastern Railway, Garden Reach, Kolkata – 700 043
13. South East Central Railway, Bilaspur – 495 004
14. South Western Railway, Hubli – 589 020
15. Western Railway, Churchgate, Mumbai – 400 020
16. West Central Railway, Jabalpur – 482 001
17. CAO, COFMOW, Tilak Bridge, New Delhi
18. **All CMD/MDs of Indian Railway PSUs and SPVs**

Copy to

1. Director General, RDSO, Manak Nagar, Lucknow
2. Director General, NAIR, Vadodara
3. Director General, IRICEN, Pune – 411 001
4. Director, IRIEEN, PB No. 233, Nasik Road – 422101
5. Director, IRISET, Taa Naka Road, Lalla Guda, Secunderabad-500017
6. Director, IRIMEE, Jamalpur – 811214
7. Director, IRITM, Sarswati Residential Estate, IRITM Campus, Manak Nagar, Lucknow

Copy to:

Concerned PSO for kind information of

Chairman cum CEO, **M/Infra**, **M/T&RS**, **M/O&BD**, **M/Finance**, **Railway Board**.

Annexure -A

RDSO's INTERIM GUIDELINE FOR AT WELDING OF 60Kg (UIC)/60E1, R-260 GRADE RAILS WITH 60Kg (UIC)/60E1, 90UTS RAILS (REVISED)

Following Interim Guideline is to be adopted for AT welding of 60Kg (UIC)/60E1, R-260 grade rails with 60Kg (UIC)/60E1, 90UTS rails in the field during the interim period till the process of development of regular AT welding technique and vendors for the same is completed:

1.0 **AT welding portions for 60Kg (UIC)/60E1, R-260 grade rails** shall be used for AT welding of 60Kg (UIC)/60E1, R-260 grade rails with 60Kg (UIC)/60E1, 90UTS rails with precautions as mentioned below:

a) AT weld shall be secured with joggled fish plates with clamps and wooden block on the same date of welding.
b) USFD testing of these joints (methodology and frequency) and follow up action shall be as per relevant Paras of 'Manual for Ultrasonic Testing of Rails and Welds, Revised – 2012'.
c) Zonal Railways shall record the 'Welding parameters with USFD details' in the Proforma enclosed with these guidelines for the welds executed in the field and submit the details to RDSO, initial and after passage of 10GMT traffic or 12 months period whichever is earlier, to review and decide further on continuing the provision of Joggle fish plates over these welds.

2.0 Acceptance Tests for joints welded at site shall be as per 'PART D: ACCEPTANCE TEST OF JOINTS WELDED AT SITE' of "Indian Railway Standard Specification for Fusion Welding of Rails by Alumino Thermic Process, Serial No. IRST-19-2020" and Para-6 of "MANUAL FOR FUSION WELDING OF RAILS BY THE ALUMINO-THERMIC PROCESS, Revised 2012".

Annexure-A (contd.)

Details to be shared by Railways to ED Track Design II RDSO.

PROFORMA FOR THERMIT WELD INSPECTION								
Sr NO	Date of welding	Location Details					Rails section & UTS	
		Block Stn.	Cess/Situ	Km/TP	UP/DN	L/R	Rail 1	Rail 2
1	2	3					4	

Portion details				Welding details	
Agency code	Batch No.	Portion No.	Date of Manufacturing	Supervisor code	Welder code
5				6	

Weld No.	Block time		Dimensional tolerances on finished joint			
	From	To	On 1m		On 10cm	
			Lateral	Vertical	Top	Side
7	8		9			

USFD testing after welding		USFD testing on finished joint after passage of 10 GMT traffic over the joints or a period of 12 months whichever is earlier	
Date	Result (Pass/Failed)	Date	Result (Pass/Failed)
10		11	

In service failure details		Remarks	Sign. Of SSE/JE (P.Way)
Failure			
Date	Type		
12		13	14

***Clarifications if any may be obtained from ED Track Design II RDSO**

Annexure -B

List of provisionally approved Vendors by RDSO for manufacturing and supply of Alumino Thermit (AT) Welding Portions along with AT welding technique for 60Kg/60E1 R260 grade rails

Status as on 28.04.2021

SN	Name of Firm	RDSO Letter No.	Date of Issue from RDSO	Issued by
1.	M/s Chakradhar Industries LLP, 1, Bhuvaneshwari Building, Shahji Raje Road, Vile Parle (East), Mumbai	CT/Welding/R-260/CDI	01.03.2021	Ranjeet Kumar Director/Track-5 RDSO
2.	M/s The India Thermit Corporation Ltd., works & office at 84/22, Fazalganj, Kanpur - 208012	CT/Welding//R-260/ITC	10.12.2020	Ranjeet Kumar Director/Track-5 RDSO
3.	M/s Oberoi Thermit Private Limited, Office at D-33, Sector-59, Noida, UP – 201 301 & Works at PLOT No.3, Sector-8B, SIDCUL Haridwar - 249403	CT/Welding/R-260/Oberoi	22.01.2021	Ranjeet Kumar Director/Track-5 RDSO
4.	M/s Railtech Welding and Equipment India Pvt.Ltd., Office and work address-Plot No.12-20 Sector A, Street No 26, Urla Industrial Area – Urla, Raipur (C.G.), Distt.-Raipur-493221	CT/Welding/R-260/Railtech	29.01.2021	Ranjeet Kumar Director/Track-5 RDSO
5.	Thermit Portion Plant, Northern Railway, Charbagh, Lucknow	CT/Welding/TPP	11.12.2020	Ranjeet Kumar Director/Track-5 RDSO

Annexure-C

List of provisionally approved Vendors by RDSO for manufacturing and supply of Alumino Thermit (AT) welding Portions along with AT welding technique for 60Kg/60E1, R260 grade with 60Kg (90UTS) rail,

Status as on 28.04.2021

SN	Name of Firm	RDSO Letter No.	Date of Issue from RDSO	Issued by
1.	M/s Railtech Welding and Equipment India Pvt.Ltd., Raipur, Office and Work address – Plot No.12-20 Sector A, Urla Industrial Area, Urla, Raipur (C.G.) Distt-Raipur - 493221	CT/Welding/Comb R-260 & 90UTS/RailTech	25.03.2021	Ranjeet Kumar Director/Track-5 RDSO