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Letter No.: CT/USFD/ACS 2

Date: 17.11.2025

**Principal Chief Engineer  
Chief Administrative Officer (Cons) & all concerned  
(As per mailing list enclosed)**

**Sub:** Manual for Ultrasonic Testing of Rails and Welds (Revised 2022) - Addendum and Corrigendum slip no. 3 of November, 2025

**Ref:** This office letter no. CT/USFD dated 29.04.2022

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The “Manual for Ultrasonic Testing of Rails and Welds (Revised - 2022)” was circulated to all Zonal Railways vide this office letter under reference. Railway Board vide letter no. 2020/Track-I(P)/USFD Manual dated 17.11.2025 has approved the A&C Slip No. 3 of the “Manual for Ultrasonic Testing of Rails and Welds (Revised - 2022).

The A&C Slip No. 3 of November, 2025 to USFD Manual is being issued in view of PCE Seminar (Session No. 25305) recommendation on item no. 4.5 “Provision of speed restriction to be imposed after detecting DFVN in new weld testing”.

Please find enclosed herewith A&C Slip No. 3 of November, 2025 for information and further necessary action.

Please acknowledge the receipt.

**Enclosure:** As above

Digitally Signed by Vinay  
Tak  
Date: 18-11-2025 17:07:18  
Reason: Approved  
**Executive Director/Track-I**

**‘Manual for Ultrasonic testing of Rails and Welds, (Revised-2022)’  
Addendum and Corrigendum Slip No. 03 of November, 2025**

**1. Para 8.10.1 shall be replaced as under:**

**8.10.1** The defective joints (DFWN) based on the criteria mentioned in preceding paras and para 8.12.3 shall not be allowed to remain in service and shall be removed within a period of one month after initial USFD testing of AT welds. The protection of defective joints (DFWN) shall be ensured by joggled fish plate with two tight clamps immediately along with proper support on wooden block till its removal.

If DFWN category defect falls in DFWO/DFWR category, then following measures shall be taken in addition to those mentioned above:

SSE/JE(P.Way)/USFD shall impose speed restriction of 30 kmph or stricter immediately and communicate to sectional SSE/JE about the flaw location. Speed restriction of 30 Kmph can be relaxed to normal after providing joggled fish plates with two far end tight bolts one on each side with champhering of holes, within 3 days. The DFWN weld shall be replaced within a period of 1 month after initial USFD testing of AT welds.

During Subsequent testing within the guarantee period of contract defective joints (DFWO or DFWR) shall be cropped, re-welded and tested again. The re-welded joints shall be scanned ultrasonically again with the same set of acceptance criteria to ensure freedom from any harmful defects.

**2. Para 8.14 shall be replaced as under:**

**8.14 Action to be taken after detection of defects in AT welds:** Action to be taken for defects in AT welds shall be same as at **para 6.4**. In addition, following shall also be applicable for welds classified as defective (DFWN) in initial and (DFWO/DFWR) in periodic testing of AT welds using hand probing:

<b>Classification</b>	<b>Painting on both faces of weld (In Head)</b>	<b>Action to be taken</b>
Defective weld ‘DFWO/DFWR’ with 0 <sup>0</sup> / 2MHz, 70 <sup>0</sup> / 2MHz, 45 <sup>0</sup> / 2 MHz or 70 <sup>0</sup> 2MHz SL probe, 45 <sup>0</sup> /2 MHz Tandem Rig	In case of DFWO, one circle with red paint. In case of DFWR, two cross with red paint.	(i) In case of DFWO weld, following action will be taken: a) SSE/JE (P.Way)/USFD shall impose speed restriction of 30 kmph or stricter immediately and communicate to sectional SSE/JE about the flaw location, who shall ensure the following : b) Protection of defective weld by joggled fish plates using minimum two tight clamps immediately with a speed restriction of 30 kmph. Speed restriction can be relaxed to normal after protection of DFWO weld by joggled fish plates with 2 far end tight bolts (one on each side) with

		<p>champhering of holes, within 3 days. The joint is to be kept under observation.</p> <p>(ii) In case of DFWR following action will be taken:</p> <p>a) SSE/JE (P.Way) USFD shall impose speed restriction of 30 kmph or stricter immediately and communicate to sectional SSE/JE about the flaw location who shall ensure the following:</p> <p>b) Protection of DFWR weld by joggled fish plates using minimum two tight clamps immediately. SR of 30 Kmph can be relaxed to normal after providing joggled fish plates with two far end tight bolts one on each side with champhering of holes, within 3 days. The DFWR weld shall be replaced within three months of detection. Adequate traffic block should be granted for removal of DFWR welds. In case of non removal within three months, a speed restriction of 75 kmph for loaded goods train and 100 kmph for passenger train should be imposed.</p> <p>(iii) In case of defective weld (DFWN/DFWO/DFWR) on major bridges &amp; bridge approaches (100 m either side) and in tunnels &amp; on tunnel approaches (100 m either side), following action will be taken :</p> <p>a) SE/JE (P.Way)/USFD shall impose speed restriction of 30 Kmph or stricter immediately and to be continued till defective weld is replaced. He should communicate to sectional SE/JE (P.Way) about the flaw location who shall ensure the following :</p> <p>b) Protection of defective weld using clamped joggled fish plate within 24 hrs.</p> <p>c) The defective weld shall be replaced within 3 days of detection.</p>
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**Note:** In case of defective joints (DFWN), two stars with N is to be marked by painting on both faces of weld in head with red paint. DFWN found in “Initial Acceptance Test” shall be removed from track as per para 8.10.1.

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