



पश्चिम मध्य रेल
West Central Railway

General Manager's Office
Engineering Department
Jabalpur-482 001 (M.P.)

No.W-HQ/W-4/Track/Policy/Circular/22

Date: 30.05.2022

CTE PROCEDURE No. 22 (R-1)/2022-23

Sub: Monitoring of USFD testing by AENs.

Ref. W-HQ/W-4/track/W-Prec/110 dated 09.09.21 (copy enclosed).

On JBP div a serious Weld fracture took place on 24.5.22. Initially a jerk was reported by LP of a Goods train and next Goods train already moved in the section at restricted speed of SD with 10 Kmph stopped well before the reported jerk location in time & a WF was noted at the site. On detailed examination of fractured piece, it is noted that this rail/weld already having a USFD flaw , was further aggravated due to (i) Presence of an avoidable surplus hole in running rails (that too at a wrong location & very close to weld collar) (ii) Adequate care in maintenance aspects were not taken ,in time, by Pway officials & USFD officials in field.

Thus following issues require serious attention to avoid re-occurrence of similar incidents.

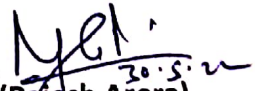
- For Jogging of any welds, only Far end bolting is required. Therefore all welds with Multiple holes in JFP area are required to be replaced on priority.
- All holes in rails are required to be chamfered properly.
- JFPs should not rest on the weld risers.

As per the extant instructions in use, all AENs are required to spend at least one day with USFD/test check the USFD testing in his section every month. But of late, it is observed that USFD testing is left to PWI/USFD only and **AENs/SSEs are not fully involved** in critical USFD testing/ planning.

To streamline this , following instructions are issued for immediate implementation

1. Every month, AEN must accompany PWI/USFD and ensure that atleast 4 Tkm Rail testing & 25 welds testing is done personally in his presence. Accordingly, **AEN shall furnish a 'USFD Certificate' upto 30th** of that month ,in format enclosed, to **SrDEN/co**, who inturn will send it to **HQ by 3rd** of following month.
2. During this USFD inspection, AENs must check all aspects of PWI USFD working inclu sensitivity & calibration, deficiencies of Multiple holes, Holes in wrong locations, chamfering of holes, JFP resting on weld risers etc.
3. AENs must send the details of rail/weld testing done in his presence , in the **daily evening progress report to CTE** along with date, location, and USFD results , photographs.
4. To check the **record / register** maintained by **PWI /USFD** of the deficiencies (Multiple holes, Holes in wrong locations, Non Chamfering of holes, JFP resting over weld riser) while doing weld testing & opening JFPs.

DA: as above


(Rajesh Arora)
Chief Track Engineer

Copy to:

1. PCE/WCR - for kind information please.
2. Sr. DEN Co JBP/BPL & KOTA- for urgent necessary action.
3. All AENs, by whatsapp for n action.

Certificate of USFD testing by AENs

Month:

AEN:

Date:

1. Rail testing :

Certified that rail testing for Tkm (from.... toin block section.....) have been done under my personal supervision on date Following USFD defects were noticed during USFD rail testing.

- 1.
- 2.
- 3.

2. Weld testing:

Certified that a total ofwelds (.... New welds testing &.... Subsequent testing) testing done in my jurisdiction during this month. Further weld testing (.... New welds testing &.... Subsequent testing) has been done under my personal supervision on date Location of welds tested under my supervision is as below:.....

Following USFD defects were noticed during USFD weld testing.

- 1.
- 2.
- 3.

3. Additional Critical deficiencies

While doing weld testing , JFP is opened so following deficiencies along with location needs to be highlighted in the certificate:

- a. Multiple holes
- b. Holes in wrong locations (Holes in wrong locations/ very close to weld collar)
- c. Champhering of holes
- d. Joggled plate resting over weld riser.

4. PWI USFD Record/register

Register of USFD team..... showing various deficiencies of Multiple holes, Holes at wrong locations, Non Chamfering of holes, JFP resting over weld riser etc (for welds tested by PWI USFD teams 1.6.22 onwards) has been recorded properly in register & test checked by me.

(Signature)

AEN/.....

राजेश अरोरा, I.R.S.E.
मुख्य रेलपथ इंजीनियर
Rajesh Arora, I.R.S.E.
Chief Track Engineer



पश्चिम मध्य रेल

West Central Railway

महानिदेशक कार्यालय
मुख्य निदेशिका, जयपुर
General Manager's Office
Engg. Department, Jaipur

No.: W-HQ/V-4/Track/V-Prec./110

Date: 07/09/2021

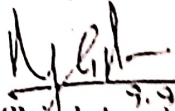
Sr. DEN (Co.)
JBP / BPL / KOTA

Sub: - Winter Preparedness - Visual examination of FP and JFP joints

Recently, a weld fracture on 04.09.2021 occurred on Sihora-Gosalpur block section of JBP division. It was very serious fracture resulting into multiple fractures in joggle fish plated length. This fracture occurred due to loose fish bolts and multiple (excess) holes in fish plated area of AT weld. Similar AT weld fracture occurred on 08.09.2021 in KNW-ET of BPL division.

Oiling & Greasing of all FP & JFP joints is in progress/ will start shortly, therefore, to avoid reoccurrence of similar fractures, all Divisions are directed to follow strictly following precaution during oiling & greasing / visual examination of JFP & FP joints.

1. All joggled/ fish plated joints are required to be lubricated once in a year before onset of winter. Oiling & greasing /Inspection of joints to be done under the competent supervisor (JE/Pway) of para 619(5) IRPWM June '2020.
2. Visual examination Register is required to be maintained showing Name, Designation of the supervisor ,Date of examination for each & every FP & JFP joint. This register is to be test checked 5% by ADEN's and ½ to 1 % by the sectional DEN/ Sr.DEN.
3. If multiple holes exist in rail or any hole is made other than the required location (laterally or longitudinally), the same should be cut and removed from the track.
4. Holes should be checked very carefully for the presence of any crack after cleaning of grease or oil from rail surface.
5. Hole should be chamfered (mandatory) and should be free from any sharp edges which are high stress concentration points leading to fractures..
6. There should not be any Riser of any AT weld. If found during visual examination, the same should be grinded and removed on the same day.
7. Tightening of bolt & Proper fixing of FP/JFP in the fishing plane of the rail, should be ensured after examination. In none of the case, flange of wheel should touch the top of plate while passing.
8. Properly designed fish plate/ Joggle fish plate & standard fittings to be used.
9. Sectional DEN/Sr.DEN should inspect the site frequently where such inspection of fish plated joint are being carried out.


(Rajesh Arora)
7.9.21
CTE/WCR

C/- (i) PCE for information.

(ii) DRM/JBP, BPL & Kota for information.

(iii) All HODs of Engg for checking this aspects during their inspections (By whatsapp).