



General Managers' Office
Engineering Branch
Jabalpur

West Central Railway

No. W-HQ/W-4/Track-II/Policy/Circulars/11

Date : 10.09.2020 (28.11.2019)

CTE PROCEDURE ORDER NO. 11(R)/2019-20

CAO(C)/WCR/JBP

ED/CPM - IRCON/Katni

ED/CPM - RVNL/BPL & Kota I&II

Sub : USFD testing of welds in new line/doubling/third line projects by Construction/RVNL/IRCON.

Ref : (i) CRS/CC's letter No. C-12(219)/2019/1015 dtd. 25.11.2019 (Copy enclosed)
(ii) Rly Bd's letter No. Track/21/2009/0110 dtd. 18.11.2019 (Copy enclosed)
(iii) This office letter No. W-HQ/W-4/Track/AT welding/9-VI dtd. 25.11.2019 (Copy enclosed)
(iv) RDSO letter No. CT/JW/MFBWP dtd. 07.07.2015 (Copy enclosed)

- 1.0 CRS/CC while scrutinizing the opening documents of BINA- Kota project, submitted by RVNL, has raised following important points pertaining to the welding and its USFD testing:

- (a) QAP and welding procedure approval from RDSO.
- (b) Proper procedure for welding is to be followed at all stages and proper records to be maintained.
- (c) 100% check on USFD testing by Open line on all welds for new line, doubling and third line projects.

On this subject certain instructions of Railway Board were reiterated vide letter under ref.(iii) above.

- 2.0 RVNL is using 13m rails in different projects of BPL & Kota unit, which are being welded by mobile flash butt welding plant. Recently, Railway Board, vide letter under ref.(ii) above, has circulated policy guidelines for adoption on Construction Projects, as per which, only long rail panels of 260m are to be used in the field, and FB Welding by mobile plants is permitted only for In-situ welding of 260m rail panels into LWR/CWR. On turn-outs also, panels should be cut to get the rails of desired length and AT welds are not to be provided.

- 3.0 Covering all the above observations, following comprehensive guidelines are issued on the subject, which shall be applicable to all the executive agencies including the project under reference in CRS letter dtd. 25.11.19.

1. FB Plant to be used should have valid, approved QAP, and welding procedure approved by RDSO be uploaded on TMS.
2. The field procedure should be approved by CTE.
3. The Welders Competency Certificate should be got issued by CTE or by nominated officer of PSUs as per reference (iv) above.

4. The procedure of welding of rails as given in Manual for 'Flash Butt Welding of Rails' should be followed and all records should be maintained by executing agency and shared with openline authorities from time to time (not at the end of the work).
5. All welds shall be FB welds only. Prior permission of PCE shall be taken for carrying out any AT weld, if unavoidable, duly citing the reasons.
- ~~6. The finished weld tolerances should be got test checked 100% from open line authorities, block section wise. In case deviation is noticed in initial 40 welds, all the weld measurements shall be recorded again by RVNL before proceeding further for joint dimensional check.~~
6. USFD testing of welds shall be done by an agency other than the welding firm and the firm should be on RDSO approval list.
7. AT Welds, shall be test checked 100% by open line ultrasonically.
- ~~9. FB welds shall be test checked 10% by open line ultrasonically. In case of any deviation from testing done by RVNL, all the test results will be considered as doubtful, and RVNL will get them retested and offer again for test check by open line.~~
8. In view of the consistent persistence by CRS that USFD of welds is to be done 100% under direct supervision of open line (CTE) and a certificate by CTE as per enclosed Annexure 'A' to be submitted for obtaining CRS Sanction for opening new lines, it is decided that as and when Mobile Flash Butt Welding Machine (MFBW) of any agency (RVNL/IRCON/Construction) comes, it will work as per the direction of Open Line as under:

(i) 1st - 200 nos. FB Welds

Step 1: FB Weld is executed, grinding/finishing of joints completed.

Step 2: Finished Tolerances are recorded in register jointly signed by Open Line, agency (RVNL/IRCON/Construction) and PMC.

Step 3: USFD of FB Welds to be done by 3rd Party under direct supervision of SSE/USFD from the Division.

(ii) Next - 200 nos. FB Welds

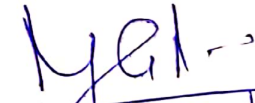
Repeat Step 1, 2 and 3 only after completion of all Steps for 1st 200 nos. FB Welds.

Note:

1. Step 2 & 3 should be done as and when sufficient progress has been done by the agency (RVNL/IRCON/Construction). Working of MFBW Machine should be so organized by sectional Sr. DEN/ DEN (in consultation with Sr. DEN/Co of the Division) such that at any point in time, the difference between the no. of tolerance checked & USFD tested and tolerance unchecked & USFD untested FB welds should not exceed 100 nos.
2. When 50% of the estimated work of FB Welds (for a section proposed for opening) has been done, a certificate as per Annexure A to be submitted to HQ jointly signed by Open Line, agency (RVNL/IRCON/Construction) and PMC.

This is issued with the approval of PCE.

DA: As above,


(Rajesh Arora) 10.9.20
Chief Track Engineer

Copy:-

1. PCE : for information please.
2. DRM/JBP, BPL & KOTA : for information.
3. CE/C-I, CE/C-II & CPM/C/Kota : for information and n/a.
4. SrDEN/Co/JBP, BPL & KOTA : for information and n/a.

Annexure 'A'

(FORMAT FOR USFD TESTING CERTIFICATE)

No.-----

Date:

USFD TESTING CERTIFICATE

It is certified that USFD of all flash butt and SKV welds in the section from ----- to -----(____km.), has been carried out under the direct supervision of Open Line. There are no defective welds in the section, and all defective welds have been replaced. There is no weld left in the section which has not been tested by USFD.

(Name & signature)

Sectional S+DEN
DEN.

(Name & signature)

S+DEN/co

(Name & Signature)

Chief Track Engineer