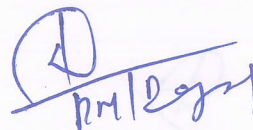


PART-I
SEPCIAL CONDITIONS (TECHNICAL)

1. For this work USFD machines SRT/DRT with 9 channel/probes per rail shall only be used and RDSO approved QAPs should also be submitted accordingly.
2. Ultrasonic Flaw Detection (USFD) testing of Rails and Welds in the running tracks for alternative cycles of USFD testing by Need based Concept (NBC) system shall be done by contractor with their Digital USFD equipment with B-Scan facility. Testing and reporting is to be done as per the "Indian Railway Manual for Ultrasonic Testing of Rails and Weld (Revised 2022) with latest correction slip issued by RDSO. In case of any conflict, the Special Conditions shall prevail.
3. Indian Railway Manual for Ultrasonic Testing of Rails and Weld (Revised 2022) with latest correction slip issued by RDSO at the time of opening of the tender shall be the reference standard for classification of defects in rail/weld. Wherever other standard(s) is /are referred in the 'Indian Railway Manual for Ultrasonic Testing of Rails and Weld (Revised 2022) with latest correction slip issued by RDSO and/ or standard, the revision of that standard current at the time of calling tender shall be used. In case additional correction slips are issued to the Manual, during the pendency of the tender/contract, the test procedure/criteria shall have to be suitably updated.
4. **Quality Assurance Programme (QAP) :-**
 - i. The contractor shall have a valid Quality Assurance Plan (QAP) with B-Scan machines for maintaining operator records, continuous monitoring of the performance of their operators, identification of operators not performing up to the mark with assessment criteria/medical (vision) criteria and their withdrawal from testing, training of operators for continuous improvement in their skills etc. duly verified by RDSO.
 - ii. The details of B-Scan machines & operators are included in valid QAP shall be deployed by the contractor for Ultrasonic Flaw Detection (USFD) testing of Rails and Welds. In case the contractor wants to induct additional B-Scan machines of already approved specification/category, same shall be done after approval of controlling HOD of this contract, such changes shall be advised to RDSO for record.
 - iii. Performance review of USFD operators & supervisors shall be done by DFCCIL at regular interval during the currency of the contract for better reliability in implementation of QAP, based on assessed performance by DFCCIL and other relevant inputs, the performance of all operators shall be reviewed by RDSO at the time of validation of competency certificate.
 - iv. USFD Testing of Rails/Welds by SRT/DRT/Handheld Testers – The SRT/DRT/Handheld Testing equipments with B-Scan facility are approved/certified by RDSO for USFD testing, USFD machine operators are tested & certified by RDSO and QAP for such USFD testing submitted by the Firm is approved by RDSO.
5. The contractor shall depute adequate number of USFD team along with machines based on the work load in consultation to PM/Dy.CPM of concerned section. The USFD machine should be maintained properly by getting it inspected periodically as prescribed by RDSO at the firm's cost, necessary certificate should be furnished to the DFCCIL. The equipment shall always be kept in good working condition. The correctness of machine working shall be to the satisfaction of the Engineer-in-charge.
6. The equipment offered by contractor and RDSO approved standard equipment will be calibrated to the same level of sensitivity on simulated flaws in the rail as prescribed in


APM/03/21


PM/03/21

the 'Manual for Ultrasonic Testing of Rail and Welds - Revised, 2022'. The equipment shall also be tested for coverage of the rail section (As per provisions of clause 5.2.1(b) & 5.2.2(b) of Indian Railway Standard Specification for Ultrasonic Testing of Rails/Welds, Revised-2020 (Document No. T53).

7. The calibration test pieces meant for sensitivity setting of testing equipment should be certified by M&C Etc. Of RDSO before the same is taken to field for sensitivity setting purpose. The certificate of authenticity shall be issued to each calibration test piece and certificate number with RDSO stamp be engraved on the test piece.

8. **Test check :-**

i. Test check shall be done by Engineer-in-charge of the work as per Indian Railway Manual for Ultrasonic Testing of Rails and Weld (Revised 2022) with latest correction slip issued by RDSO.

ii. Test check of 5% by DFCCIL should be carried out within 25% time period of frequency of USFD testing in that section or ten days whichever is earlier.

iii. In test check provisions if any new flaw is detected which was left out by the contractor during testing, the whole length of track will have to be tested again by the contractor without getting any extra payment for the same.

9. **Penalty clause:-**

i. Maximum delay permitted in testing of a section after it has become due for USFD testing is 25% of frequency of testing of that section or ten days whichever is earlier. For further delay penalty of Rs.1000/- per KM per day will be levied on the contractor.

ii. The length of track as indicated in the advance joint programme issued by the concerned PM/Dy.CPM has to be tested continuously and testing should be started on the due date of testing. In case any track length remain untested at the said location that should be completed within three days from the last testing done and no way it should remain untested and became overdue of testing, any lapses in this part a penalty of Rs.1000/- per RKM per day up to the next due date will be levied on the contractor.

iii. Test check on the stretches will be done as per the latest guidelines issued by the DFCCIL for inspection and maintenance of the track. In this length, 95% of the flaws detected should get confirmed and no new flaw or wrong flaw should be found during test check. The decision of the Engineer-in-charge shall be the final in this regard. In case, less than 95% of the flaws detected by the contractor are confirmed during the verification testing, a penalty of Rs.5000 per non-detection/wrong detection may be levied. In addition to this, if any new flaw is detected which was left by the contractor during testing, the whole block section will have to be tested again by the contractor without getting any extra payment for the same. Appeal if any will be decided by the CGM or GM/Co and his decision is final. In case the test check does not take place as per provision para 9.(iii) above, then there should not be any imposition of penalty in case the delay is on account of Railway.

iv. If any Rail/Weld failure occurs due to an undetected flaw within the next stipulated frequency of testing of that particular section from the date of USFD testing, then a penalty of Rs. 30,000/- for failure of 1st Rail / Weld flaw, Rs. 50,000/- for failure of 2nd rail / weld flaw and for failure of third flaw, agreement will be terminated and the entire Security Deposit will be forfeited. RDSO shall act as a third party to investigate all such failures whether the defect was detectable at the time of USFD testing or not. The decision of RDSO shall be final and binding on both the parties. NOTE to Para 9.(iv): The term "Particular Section" under para 9.(iv) shall be considered as the section falling under the jurisdiction of a particular Executive Incharge for the sake of counting 1st , 2nd & 3rd Rail/Weld failure.

v. In case any train accident occurs because of rail/weld fracture occurred due to an internal detectable flaw by USFD, a penalty equivalent to 10% of the

contract value will be deducted from the contractor's bill. In addition, the firm will be disqualified for this type of work in future including for the work in hand, the successful tenderer shall deposit 3% of the contract value as a performance guarantee which will be encashed if adequate amount is not pending with the railway for the realization of penalty. M&C Directorate RDSO shall act as a third party to investigate whether the defect was detectable at the time of USFD testing or not. The decision of RDSO shall be final and binding on both the parties. In case of occurrence of second such incident within a year, the railway may terminate the contract and the contractor will be liable to refund all the money paid to him under this contract.

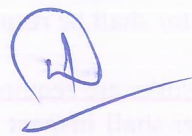

- vi. The daily test reports should be made with the test results in the format given by the DFCCIL duly signed by the Contractor's Engineer and submitted to the Engineer-in-charge or his representative on next day of testing for necessary action. Daily test report should contain all the items as listed in the Indian Railway Manual for Ultrasonic Testing of Rails and Weld (Revised 2022) with latest correction slip issued by RDSO. However the flaws classified as 'IMR, IMRW and DFWO/DFWR' should be reported on the same day. Non-compliance of this instruction will carry a penalty of Rs. 20,000/- per occasion.
10. The work should be carried out as per the program to be jointly made by the division concerned of the DFCCIL and the contractor duly signed by both the parties. The joint program should be made at least three months in advance. However, some urgent locations not appearing in the joint program may be tested as per the need.
 11. Maintenance Period shall be defined as: From the date of USFD testing of rails & welds done by the contractor to the next due date of USFD testing as decided by DFCCIL.
 12. DFCCIL will depute one personnel along with the contractor's USFD team who will take immediate action like imposing speed restrictions in case 'IMR/IMRW/DFWO/DFWR' flaw is reported.
 13. DFCCIL personnel deputed along with the contractor's USFD team will jointly sign daily progress report of USFD testing with operator of the contractor.
 14. The testing shall be carried out between sunrise to sunset. No night testing will be permitted. As far as possible USFD testing should be done in morning hours and not in high temperature.
 15. The list of the technicians, operators and other assistants proposed to be deployed for testing shall be given to the Engineer-in-charge. They should have issued with Photo Identity Card which they should keep with them while working in DFCCIL territory.
 16. All losses, force-majeure with Ultrasonic flaw detector will be borne by the contractor.
 17. Ultrasonic flaw detector and accessories shall be kept in safe custody of the contractor and DFCCIL shall not be responsible for any loss or damage of such equipment.
 18. All incidental costs during testing will be borne by the contractor bidder.
 19. DFCCIL will not be responsible for any train block for any train block for operation of USFD machine. The contractor shall have to work within available block as per train movements. For this purpose, DFCCIL nominated representative shall coordinate promptly for granting/cancellation/extension of block. However, nothing extra on this account shall be paid to bidder under any circumstances.

Contractor has to execute the work and to provide persons/ supervisor in various categories

as mentioned in schedule of quantity to carry out the works. Brief description of work which is to be carried out under schedule of quantity are as under but not limited to.

1. The Jurisdiction of working for this contract will be from Shambhu to Sahnewal (Excluding) Locations for work will be decided by Engineer (DFCCIL-DPM/APM/JPM/Sr. Exec./Executive).
2. The Labour/Staff deployed should have proper identity card issued by Contractor with valid photo ID proof (As per Govt.).
3. The Labour/Staff deployed may require to be changed if working not found satisfactory by the Engineer.
4. Deleted.
5. All Labour, T&P will be transported by Contractor up to site by his own arrangement. No extra payment will be made for the transportation.

TECHNICAL SPECIFICATION



PART - II
TECHNICAL SPECIFICATIONS

1.1	The work is to be executed as per the direction of Engineer in charge. Item to be operated shall be as per the tender schedule & site condition. Decision of Engineering-in-charge or his representative shall be final and binding on the contractor. Tenderers are requested to visit the site of work before quoting the rates.
1.2	All construction materials to be used in the work shall be as per relevant IS specification wherever applicable.
1.3	Contractor shall take all care to avoid any damage to electric overhead or underground cable, telephone wires, water pipeline, sewerage system etc. Any damage to the railway/DFCCIL property on account of contractor's negligence shall be made good at contractor's cost.
1.4	In case any ambiguity between special conditions and general standard condition, special conditions shall prevail.
1.5	Contractor shall be responsible for the safety of his labour, machinery deployed on the work.
1.6	Contractor will be responsible for the safety of DFCC and railway property.
1.7	Contractor has to make all the safety arrangements and provide boards and banners of "work in progress" etc. and safety strips of sufficient length to make aware the Passengers and other users. No extra payment for the same shall be made.
1.8	Work to be done in a very efficient manner and up to the entire satisfaction of Engineer in charge. Any defect pointed out by Engineer in charge shall immediately be rectified by the contractor without any extra cost.

2. Further Drawing and Instructions:

- (i) Chief General Manager, DFCCIL shall have full power to make and issue further drawings or instructions or direction from time to time as may appear necessary and proper to the contractor for efficient construction, completion and maintenance of the works. The contractor shall be bound by the same as fully as be if they had been mentioned or referred to in the contract, and the contractor shall not be entitled to any extra payment in respect of any work or materials shown or directed to be done supplied by such further drawings or instructions required for completion of unless the Chief General Manager, DFCCIL have given an extra order for the same in writing. The contractor shall be responsible for scrutiny of the drawings.
- (ii) If the works are required to be done in Railway Yards and Tracks are to be crossed, the tenderer shall inspect the site and make himself thoroughly acquainted with site condition and quote rate considering these aspects.



(iii) The work shall have to be done in such a manner that the normal working of the Railway within the railway yard does not get disturbed. No material/temporary structures should be kept adjacent to the running track which may infringe rail traffic. The contractor shall take necessary precaution to prevent/cause damage to the Railway property & staff during the execution of the work.

3. Contractor to Study Drawing & Specification etc. and His Liability:

The contractor shall be responsible for close scrutiny of the approved drawings supplied by the DFCCIL, For any discrepancies, error or omission in the drawings or other particulars indicated therein, the contractor shall approach the DFCCIL immediately for rectification of indicated therein, the contractor shall approach the DFCCIL immediately for rectification of such discrepancies, errors and omission. If any dimension/figure/features etc. on approved drawings or plans differ from those drawings or plans issued to the contractors at the time of calling the tender, the dimensions as figured upon the approved drawings or plans shall be taken as correct.

4 Contractor to Submit his Time Table:

The contractor shall submit a monthly progress of work done during the month by the 4th day of the following month. He will also give the programme of coming month by 25th of each month. The programme will be subject to alteration at the discretion of the DFCCIL officials.

5 Any Doubted Points to be referred to the Chief General Manager, DFCCIL:

Should there be any doubt or obscurity as to anything to be done or not to be done by the contractor or as to these instructions or as to any matter or thing, the contractor must set forth such doubt or obscurity in writing and submit the same to Chief General Manager, DFCCIL. Only such reply as the said Chief General Manager, DFCCIL may be in writing given shall be taken as the authoritative interpretation of the point in doubt or obscurity.

6 Contractor'(s) Liability:

Notwithstanding the specifications and conditions stated in the contract, the contractor shall keep the Engineer/ Employer authority fully indemnified and free from all liabilities and risks consequential to any lapse on his part in respect of material quality, standard of workmanship, accuracy of fabrication and the like. He shall provide all labour and material required for execution of the work as per all standards and specifications.

7 Site Facilities by the Contractor:

Contractor shall provide office / residential / site facilities / Toilets etc. at the approach site / other locations at his own cost for ensuring smooth and efficient communication and work execution. Cost of these facilities deemed to be included in the quoted rates and nothing extra shall be paid for this item. Contractor shall (at his own cost) depute / nominate safety officers(s) for supervising safety aspects of all works/process including enabling arrangements for execution and inspection of the work. Safety systems/arrangements should be made for each activity of



fabrication/erection and its inspection and same should be certified by nominated safety officer.

8 SAFE WORKING METHODS:

- 8.1 All of the works executed under this contract involve works on or alongside the Railway /DFCCIL track on which the railway/DFCCIL traffic is kept operative during or immediately after the completion of one or more phases of the contract work. In view of this position maintaining safe working conditions at the work site at all times for the safe passage of the train traffic is a primary over-riding condition required to be fulfilled by the contractor at all times.
- 8.2 For this purpose, it is understood and agreed to by the contractor that the work executed by him under this contract shall at all times fulfill all the safety conditions in force on the railway from time to time to operate the train traffic.

9. PROTECTION OF THE WORK SITE

- 9.1 On railway track where the train traffic will be operational during the execution of the contract work the protection of the works site as considered appropriate and adequate shall be arranged by the Engineer's Representative at the Railway's cost.
- 9.2 Contractor shall be responsible for providing appropriate and adequate system for warning the contractor's workmen about the train traffic on or in the vicinity of the site of work
- 9.3 The contractor shall remain fully responsible for ensuring safety & in case of any accident, shall bear cost of all damages to the equipment & men and also damages to railway & its passengers.