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**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)**

No.2015/Track-III/TK/2

Dated: 26/11/2020

Chief Engineers/Track Machine,
All Zonal Railways.

&

CWM/CPOH,
PRYJ, RYP, VTA, KPA.

Sub : Inspection of wheel & Axle of Track Machines.

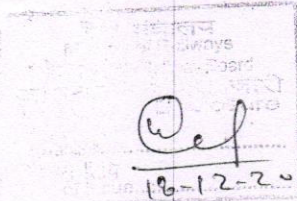
In a recent incident on ECR, one axle of WST machine was found broken while going for working in traffic block which resulted in long delay in clearing section and block could be cleared with the help of ART.

Para 802(2) of IRTMM-Second edition (enclosed) stipulates about visual, physical examination and Ultrasonic testing of wheels and axles of track machines. In this regard it is reiterated to follow the para 802(2) of IRTMM meticulously so that any such incidence can be avoided in future.

DA: as above

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26/11/2020
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Director Track (MC)
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POH. Railways should prepare a 2-years plan for POH & IOH of track machines (firm for one year and tentative for next year), so that procurement of spares, a long lead item, can be done in time.

(b) Guidelines for Maintenance Schedules for RGM

- (i) Maintenance of RGM shall be done by a separate maintenance team attached with each RGM. This team will be in addition to the operating team.
- (ii) Day to day maintenance (schedule-I) of RGM should be done by separate maintenance group before and after traffic block, as it involves considerable work load & time. Operating staff of the machine shall do daily pre-block check and duration of such check should not be more than one hour.
- (iii) Schedule II to IV should be carried out by maintenance staff along with regular operating staff.
- (iv) During IOH/POH of RGM (schedule VI & VII), the operating staff as well as maintenance staff should be actively involved and carry out jobs along with IOH/POH staff.
- (v) Items to be checked and attended under various schedules shall normally be as per RDSO's instructions. In case of any doubt, it is to be referred to RDSO for clarification & till then the maintenance can be done as per manufacturer's instructions on the subject or as considered suitable with approval of CE/TM of the holding Railway.

(2) Inspection of Wheel and Axle of On-Track Machine - Track Machine Wheels are solid wheels and follow the wheel profile as per RDSO drawing no. SKETCH-91146. Visual inspection, Physical inspection and Ultrasonic inspection of the wheels and axles of on-track machines are required to be done during initial procurement. The ultrasonic testing of new wheels shall be done according to the RDSO report no. IRS R-34-2003. Wheels and axles shall also be subjected to visual and physical examination. Ultrasonic testing for axles only, should be done during service at prescribed frequency laid down by RDSO.

(a) Visual and Physical Examination - Visual and physical inspection of wheels of on-track machines shall be done during service as per "Procedure for visual & physical inspection of wheels and axles of on-track machines" issued by Track Machine and Monitoring Directorate, RDSO (REPORT NO. TM-170, July-2012). Inspection shall be done on inspection pit line at a frequency of once in a year or once after every 1000 engine running hours whichever is earlier. However periodic visual inspection for any apparent wheel defect

shall be carried out with 50 hours schedule, which is done at track machine siding/stabling line.

(b) Ultrasonic Testing of Wheel and Axle of On-Track Machines

- (i) Ultrasonic flaw detection (USFD) testing of Axles and Wheels of On-Track Machines shall be done as per "Code of procedures for Ultrasonic testing of axles and wheels of large track machines" issued for different on-track machines by Research Designs and Standards Organization (RDSO).
- (ii) The wheels shall be tested ultrasonically at the time of initial procurement only.
- (iii) The frequency of ultrasonic examination of axles of on-track machines shall be between 40,000 to 45,000 kms of running or three years, whichever is earlier.
- (iv) Testing shall be done by supervisors possessing regular/refresher course certificate from RDSO.
- (v) Criteria for the supervisors to be selected and trained for USFD testing of axles shall be one of the following:
 - Graduate in Science with Physics from a University or Institution recognized by Central/State Govt./UGC/or International Institute/University.
 - 3 years regular Diploma in Mechanical/Civil/Electronics/Electrical/Metallurgical/Chemical Engineering from a University or Institution recognized by Central/State Govt./Technical education board or International Institute/University.
 - M.Sc in Chemistry provided that Physics was one of the subjects at ISC/Intermediate/10+2 levels.
 - B.E./B.Tech. in Mechanical/Civil/Electronics/Electrical/Chemical/Metallurgical/I.T/Computer Science from a University or Institution recognized by Central/State Govt./Technical education board or International Institute/University.
- (vi) The validity of initial course certificate shall be 3 years and refresher course certificate shall be 5 years.
- (vii) Research Designs and Standards Organization regularly conducts training of supervisors for ultrasonic examination of axles and wheels. Railways shall nominate their eligible staff for the required training.

803 Types of Workshops - For carrying out the repairs as well as periodical maintenance of track machines, five types of repairs and maintenance facilities/workshops shall be developed as below: -