


Minutes of the Meeting held in connection with Analysis of Field Trails Results of WAP7 locomotive in MTJ-PWL section from 29.12.23 to 01.01.24 with M/s HBL at CoE/IRISET on 18.01.2024

<u>Members Present (Shri/Smt.)</u>	
1. L. K. Mansukhani, OSD/COE 2. T. Nagaraj, Director/Elec/COE	3. Srinivas Zinka, DGM/HBL

During the meeting the following points have been discussed

Sl. No	Description	Action By
1.	As per the gradient programmed in the SSP packet, it is noticed from the Locomotive log that for some distance the average gradient is not tallying. For example, as per SSP packet the DOWN gradient of F30 is starting from absolute location: 1419230 but in the log at that location the average gradient is zero and the down gradient DC of -0.06 is starting from location 1419410. It is requested to clarify the reason for not considering the down-gradient from location 1419230.	HBL
2.	Similarly, from location 1421062 to 1422482, the calculated gradient DC is -0.08m/s^2 but as per the SSP it is continuously 1 in 833(R1) for 250m, 1 in 999 (R1) for 1098m (actually as per engineering data it is 1 in 9999(9999 typed as 999)), -1 in 857 for 60m, level for 588m and 1 in 1470 for 353m. Based on the SSP, the average DC gradient of -0.08 very steep and not tallying with the calculation. HBL is requested clarify the reason for such discrepancy in gradient calculation.	HBL
3.	Due to such error mentioned above, the brake intervention for SPAD prevention at S1-541 signal has taken place at a distance of 3235 meters at a speed of 136kmph and brakes released at a speed of 52kmph when MA is 1449m. This also indicates that the gradient calculation is wrong. However, it is noticed that brake releasing should have taken place early as the FSBD distance for 52kmph as per programmed parameters is much lower than 1449m and this will help in carrying coasting at higher speed and saves the time loss. In this case, locomotive has travelled 1200m in coasting with a speed reduction from 52kmph to 35kmph. HBL is requested to look into the reason for delay in releasing of brakes.	HBL
4.	There is an anomaly in Permitted Speed shown on DMI by HBL. Most of the times, it is observed in the SPAD prevention trails that the permitted speed is shown as green but still brake application is happening as explained in point no. 3. HBL is requested to clarify the reason for the same.	HBL



Sl. No	Description	Action By
5.	<p>In the recent trails, it is noticed that whenever MA is less than 30m, permitted speed is set to zero and brake application is taking place. This issue has already advised by CoE vide this office Lr.No.IRASET/CoE/Kavach/Misc dt. 20.09.2023</p> 	HBL
6.	<p>During discussions, HBL mentioned that the algorithm shared by RDSO to CoE is old implementation and during 2023, HBL has made changes in their braking algorithm. CoE has requested HBL to share the actual braking algorithm implemented in the locomotives so as to ensure proper evaluation of field trial results.</p>	HBL
7.	<p>CoE has advised HBL to implement Traction Cut off scheme, dropping of BP during LE mode as per the pressure levels specified in RDSO drawing no. RDSO S&T DTE: SDO/S&T/Kavach/010 so as to ensure the field trials carried out with all required functions.</p>	HBL
8.	<p>Existing logic with which trials are being conducted as on date are based on the transfer of all gradient segments as it is to onboard Kavach and onboard Kavach carries necessary averaging/processing etc. However, in futuristic model (version 4.0 data packet structure) indicates partial averaging of gradients in stationary Kavach and onboard Kavach irrespective of train length.</p>	HBL

IRASET/CoE/Kavach/Misc

18.01.2024

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