(भारत सरकार) GOVERNMENT OF INDIA
(रेल मंत्रालय) MINISTRY OF RAILWAYS
(रेलवे बोर्ड) RAILWAY BOARD

No. 2022/Sig/17-SigEquip/DAC **New Delhi, As Signed**

Minutes of Meeting held for review of performance of M/s Frauscher make axle counters held on 29-07-2025

The meeting was attended by the following officials:

From Railway Board/ RDSO	From Zonal Railways	From Frauscher (OEM)
Smt Vijaylaxmi Kaushik, AM/Sig	Sh Rajeev Gangele, CSE/SCR	Sh Abhikrai Chaudhari- Director/Services
Sh Saurabh Bandopadhyaya, PED/S&T/Dev	Sh Debashish Bhattacharjee, CSE/SER	Sh Subhash Priyadarshi- Regional Manager
Sh Shyam Verma, ED/Sig Dev	Sh Ajay Kumar Sharma, CSE/CR	Sh Amit Babuta- Sr. Manager/ Customer Services
Sh Rameshwer Meena, ED/Sig	Sh Gyan Prakash Shiv Narayan, CCE/WCR	
Sh Triambak Tiwari, Dir/Sig/ RDSO-II		
Sh Prabhakar Sharan, Dir/Sig		

The meeting began with a keynote address by the Additional Member (Signal), emphasizing the need to improve the performance of axle counters. To achieve this goal, it is imperative that Original Equipment Manufacturers (OEMs) and Zonal Railways collaborate effectively, ensuring high-quality installations, implementing robust maintenance practices, and conducting thorough analysis and resolution of field-level issues.

Zonal Railways were instructed to adhere to the Technical Advisory Notes (TAN) issued by RDSO, which cover axle counters, earthing, bonding, lightning protection, and surge protection. Full compliance with these guidelines is crucial to maintaining installation standards and

enabling efficient monitoring of axle counter performance.

The following points were discussed in detail with Zonal railways and OEM:

SN	Items	Action by
1	According to the FRPCPY data presented by RDSO, the failure rate of DACs is on higher Side. A detailed analysis of the specific cases reported by Zonal Railways is necessary. M/s Frauscher is advised to formulate an action plan aimed at improving DAC systems, installation practices, maintenance procedures, and related aspects. SWR has reported 25 failures during April to June'25. Auditing of the installations should be taken up and corrective action taken to improve availability and reliability of the system.	RDSO, M/s Frauscher
2	M/s Frauscher has not provided a solution for the TRC failures reported by S.Rly. The firm is instructed to gather detailed information regarding the contact-type TRC, conduct a thorough analysis, the global practices and propose a solution to mitigate failures associated with it.	RDSO, M/s Frauscher
3	A problem has been reported from NCR regarding the loosening of Tx/Rx coils and breakage of rail claw bolts. Some of the claws have been sent to the Frauscher/Mysore factory for analysis. The findings from this analysis are to be shared with RDSO along with the mitigation plan for similar type of installation. Other Zonal Railways should also ensure that such failure is reported to OEM and RDSO for mitigation.	RDSO, M/s Frauscher, All Zonal Rlys
4	To address the issue of excessive torque applied during the axle sensor clamp fixation, M/s Frauscher agreed to affix a sticker/ imprint on the sensor itself, clearly displaying the standard torque value so that maintenance may be carried out smoothly.	RDSO, M/s Frauscher,
5	Zonal Railways shall ensure the availability of Complete tool kit of DAC at each station with prescribed torque wrenches for the installation and removal of axle	RDSO, M/s Frauscher,

	sensor clamps. RDSO will publish a reference table detailing the specified torque requirements corresponding to each OEM and model. **Availability of DAC Toolkit at each Station/BS should be made a part of Quality Audit before commissioning any new installation.**	All Zonal Rlys
6	Zonal railways informed that the field-level staff of OEMs are not adequately skilled technically or sensitized to the importance of strictly adhering to PCCL issued by RDSO. OEM must address this issue by enhancing the training and sensitization of their personnel. Only trained & certified staff of OEM shall be deputed for installation & testing/maintenance. Zonal Railways should ensure that properly certified OEM's Staff are permitted to work at Site. **Any deviation from PCCL observed at site should be viewed seriously and OEM should be made responsible for the same.**	M/s Frauscher, All Zonal Rlys
7	All officials at a particular location must be included in the training provided by the firm, before/after commissioning. To ensure comprehensive coverage, additional training sessions may be scheduled by the firm. Furthermore, the names of the officials who have undergone training should be recorded in the PCCL.	M/s Frauscher, All Zonal Rlys
8	M/s Frauscher has been advised to submit an analysis of system failures at locations where AMC is in effect. This will aid in developing an action plan to further enhance system reliability. Additionally, the study of system logs during AMC visits should be utilized for preventive maintenance. The firm is expected to report any preventive measures taken by AMC engineers. Furthermore, any failures that were resolved through resetting should also be analyzed by the AMC staff.	M/s Frauscher, RDSO
9	Sensor defects have been identified as one of the main cause of failures in M/s Frauscher MSDACs. It appears that adequate corrective actions have not been implemented thus far. The firm is advised to develop a comprehensive action plan to address and prevent these failures.	RDSO, M/s Frauscher, All Zonal Rlys

10	As informed by firm and RDSO, M/s Frauscher has resolved the clamp loosening issue of ACS 2000 in CR by replacing the M-10 checknut with an M-12 checknut and using Nordlock washers J-05. Efficacy of the same may be seen and feedback taken from CR. M/s Frauscher is requested to submit a status report to RDSO along with an action plan for executing these changes across all Zonal Railways.	RDSO, M/s Frauscher, All Zonal Rlys
11	The OEM is requested to suggest formats for failure reporting to ensure that meaningful data is provided for comprehensive failure analysis. Additionally, a mechanism for failure reporting, including the format and an escalation matrix, should be submitted to RDSO for circulation to the zonal railways.	RDSO, M/s Frauscher, All Zonal Rlys
12	M/s Frauscher has informed that they conduct a 3-day training at the Frauscher Academy. Zonal Railways may send officials to attend this training, and the STTC of Zonal Railways may also organize similar training sessions.	M/s Frauscher, All Zonal Rlys
13	Cases of axle counter system not getting reset after opening and refixing of track devices, to facilitate engineering machine working, have been reported. M/s Frauscher is advised to create a video demonstrating maintenance activities, such as the sensor uninstallation and re-fixing process, parameter readings and adjustments, etc which would be highly beneficial for field staff. The firm is requested to submit links to these videos for the information of the zonal railways.	RDSO, M/s Frauscher, All Zonal Rlys
13	As DACs are being proliferated on large scale in ABS/IBS/BPACs/etc, NMS (Network Monitoring System) for DACs should be developed to facilitate remote monitoring of event logs. Soft reset/Auto reset Count should be provided in event log. RDSO should Co-ordinate with all OEMs to develop NMS for DACs. Also, cyber security aspect must be duly taken care in this regard along with limiting the interaction of NMS to accessing event log only without any feature to	RDSO, M/s Frauscher

	alter/modify any configuration remotely.	
14	The cases of frequent resetting reported by Zonal railways should be technically analyzed to identify the root cause and submit technical corrective measures to address the issue, along with action plan as well as supporting documents. OEMs should develop Failure reporting and Analysis system for tracking equipment's performance.	RDSO, M/s Frauscher
15	In order to overcome Issues arising due to quality of installation, it is advised that the PCCL should be filled by Quality Control Engineer of OEM after independent quality control inspection and not by the executing Supervisor/engineer. Zonal Railways to implement such a Quality Control mechanism.	M/s Frauscher, All Zonal Rlys
16	Implementation of TSAA for DAC systems to ensure quality of installations.	M/s Frauscher, All Zonal Rlys

Digitally signed by PRABHAKAR SHARAN
Date: 28-08-2025 15:57:54
(प्रभाकर शरण) /(Prabhakar Sharan)
निदेशक(सिगनल) / Director(Sig)

Copy forwarded for information & necessary action to:

1. PCSTEs/All Indian Railways,
2. PED/S&T/RDSO, Manak Nagar, Lucknow – 226 011
3. M/s Frauscher Sensor Technology India Pvt. Ltd., Banglore.