

2021/M(C)/141/2 Pt 2

(E-File no. 3377119)
New Delhi, Date: 13.12.2022

Sub. : Minutes of Meeting regarding issues in maintenance of Bio-Vacuum Hybrid Toilets on 25.11.2022.

Ref.: Railway Board letter no. 2021/M(C)/141/2Pt.2 dated 22.11.2022.

1. A meeting was organized regarding issues in maintenance of Bio-Vacuum Hybrid Toilets (BVHT) at Railway Board in the chair of ED/ME (EnHM & Proj.) on 25.11.2022. Following participants were present in the meeting:

Railway side	OEM side
1. Sh. Shailendra Singh, ED/ME (EnHM & Proj)	1. Sh. Sandeep Goel, M/s Amit Engineers
2. Sh. Suman Kumar Tanti, Dir.ME/Chg.	2. Sh. Aman Singhla, M/s Oasis Fabrications
3. Sh. Kaustubh Mani, CRSE/Chg./NR	3. Sh. S. N. Bansal, M/s Knorr-Bremse India
4. Sh. Amit Kumar Gupta, Sr. DME/Co/DLI	
5. Sh. Aishvarya Sachan, Sr. DME/TS/SSB.	
6. Anurag Malik Joint Director/SS Carriage/RDSO	

2. CRSE/NCR, CRSE/WR, CRSE/SR and Dy. CME/NER were also present in the meeting through video conferences.
3. The issues discussed in the meeting are as under:
 - i. NR presented that the reported defects in M/s Amit make BVHTs are higher than M/s Oasis & M/s EVAC. However, it has also been mentioned that performance of M/s Amit make systems has improved recently.
 - ii. NR also mentioned that choking cases are very high in M/s Amit make BVHTs. Segregation of choking cases should be done on the basis of reason of choking, whether technical or due to improper passenger use. Thereafter, Zonal Railways should analyze all such issues along with OEMs to reduce the choking cases.
 - iii. NR also mentioned that inlet pipe from toilet pans to BVHT system of different diameters are being used by the OEMs. Effect of diameter of pipe should be analyzed for cases of choking by Northern Railways along with all the OEMs. M/s Amit Engineers mentioned that as per their analysis choking is not related to pipe size.
 - iv. Problem of water pop-up from toilet pan in M/s Oasis make was also raised. NR is further advised to examine the issue and to get it addressed involving OEMs.

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- v. NR has also reported that the cases of loose / open / broken wiring connection defects in M/s Amit make BVHTs are also very high. M/s Amit the OEM submitted that no such issue can arise in their system. M/s Amit suspected improper wiring during POH schedule of the coach. In this regard it is advised to make a Joint report every time for such defects with clear cut responsibility assigned.
- vi. All OEMs raised the issues of excessive hardness of water being used for Toilets. They mentioned that high hardness of water is resulting into formation of scales in valves and other components causing damage to various rubber components and thus resulting in poor performance of the system. In this regard OEMs were advised to improve design of component and furnish solution considering present water supply.
- vii. OEMs were also advised to prepare revised schedule attention along with NR and submit the same considering high hardness of water and thus increased requirement of cleaning of valves. Up gradation of components should also be explored in view of high hardness and other failures.
- viii. NR further mentioned that most of the BVHT systems are under warranty, therefore replacement of parts in case of damage / breakage should be genuine parts of same make. It will avoid any dispute regarding warranty coverage. In this regard OEMs were requested to publish the rate list of major component to facilitate procurement such component damaged on Railway account.
- ix. All OEMs informed that fresh performance validation of BVHT systems have been successfully completed by ICF. In this regard OEMs were requested to submit detailed plan to modify / upgrade the existing BVHTs as per modification incorporated by ICF while issuing purchase orders of Bio Vacuum Toilets for Vande-Bharat Train sets.
- x. Up-gradation of the existing BVHTs as per the modification incorporated by ICF as mentioned above may be considered after its validation by ICF.
- xi. OEMs were also advised to carry out Modification of software / system in existing coaches to make it fail safe for any logic resulting into back flow.
- xii. All The OEMs mentioned that the feature of manual mode of working during electric supply failure should be removed as electric supply failure is very rare. This will improve the functionality of BVHTs. RDSO is advised to analyze and issue instructions accordingly.
- xiii. OEMs raised the issue of maintenance to be done by railways in their as per the provisions of specification. Railways are advised to do the work of cleaning of filters etc diligently. If they do not have the manpower and technical expertise, the activity may be outsourced.
- xiv. Railways and OEMs were impressed upon to take all necessary action to keep the bio vacuum toilets functional without any problem to passengers and all necessary action need to be taken through joint efforts.

(सुमन कुमार ताती)

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C/- EDME/(EnHM & Proj)/RB - for kind information and necessary action please.

- PCMEs/ NR, NER, NCR, WR , SR and ICF - for kind information and necessary action please.

- ED/Carriage/RDSO - for kind information and necessary action please.