

MECHANICAL (C&W) DEPARTMENT SEALDAH DIVISION

SEALDAH BIO-TOILET EFFLUENT TESTING LABORATORY



Bio Toilet is a green initiative of Indian Railways. Sealdah division has successfully achieved the target of conversion of old toilet system (commode chute, CDTs) to Bio-Toilet system for all coaches in the division.

Bio-toilet effluent testing laboratory has been set up in coaching depot, Sealdah on 13/08/2014 to test the condition of effluent to ascertain the health of bio-digester inside bio-tank. At present pH test of effluents of coaches is being conducted here. Test results are analyzed thereafter to find out whether it is within prescribed limit or not.

Bio digester tank Fitment

Fitment of Bio digester tank for ICF and LHB coaches of Sealdah Division has been completed.

OCVs of Sealdah division (ART Coaches of SDAH & RHA) have also been converted to Bio Coaches.

Modification

Modification of P-Trap to S-Trap in coaches of Sealdah division has now been completed. It has become very much effective in reducing foul smell in lavatories.



Venturi type ventilation system (fitted earlier) is also working in many coaches.

Presence of dustbin inside lavatories reduces pan choking of bio toilet system.

Pressurized flushing system has also been introduced in LHB coaches by various production units. Around 27% of LHB coaches of holding in Sealdah division are already fitted with this system. Several types of pressurized flushing systems are there, such as PFS,EPFS.

Bio vacuum toilet system is also present in some coaches. It was introduced few years ago.

Both pressurized flushing system and bio vacuum toilet system reduces consumption of water during flush.

Maintenance

AMOC work has been awarded to M/S Banka Biolo Ltd. for maintenance of Bio toilet in SDAH division.

Evacuation Machines have been installed in both the coaching depots – SDAH & KOAA since March'2019 to facilitate the evacuation of non-biodegradable materials accumulated in the 1st chamber during IOH activity and for coaches undergoing maintenance at pit line whenever required.



Laboratory

Bio-Toilet Effluent testing laboratory has been set up at Sealdah (C&W Depot) for in-house testing of the discharged effluent as well as the effectiveness of Bio-toilet system. Out of 3 Nos. stipulated tests, 1 test is done in in-house laboratory and other 2 tests are done from outside NABL accredited lab as per requirement by M/s Banka Biolo Ltd.

- pH test of the Effluent. – at in-house lab at Sealdah.
- Chemical Oxygen Demand (COD) Test of effluent. } Tests by NABL approved Lab.
Fecal Coliform Counts (FCC) Test of effluent. }

Awareness Programme

Awareness sticker is provided inside the Bio-Toilet carrying information regarding Do's and Don'ts for user.



जौव शौचालय उपयोग के लिए निर्देश
Instructions for Use of Bio-Toilet
জৈব শৌচালয় ব্যবহারের নির্দেশাবলী



शौचालय को अवरोध होने से बचाने के लिए कोई भी ठोस वस्तु उसमें न फेंकें ।
Please do not throw any articles inside the Toilet Pan to avoid blockage.
দয়া করে ব্লকেজ এড়ানোর জন্য শৌচালয় নালার মধ্যে কোন বস্তু ফেলবেন না।

कृपया शौचालय के अन्दर रखे हुए कूड़ेदान का उपयोग करें ।
Please use dustbin provided inside Toilet.
দয়া করে শৌচালয়ের মধ্যে রাখা ডাস্টবিন ব্যবহার করুন।

शौचालय इस्तेमाल के बाद फ्लश बटन दबाएँ कुछ सेकंड के लिए पकड़ कर रखें ।
Please Push Flush button before & after use of Toilet & hold for few seconds.
শৌচালয় ব্যবহারের পর ফ্লাশ বোতাম চাপুন এবং কয়েক সেকেন্ড ধরে রাখুন।

कृपया इस शौचालय में एसिड और एंटीसेप्टिक नहीं डालें । ऐसा करने से शौचालय में उपस्थित जीवाणु जैव-पाचक मारा जायेगा और प्रणाली काम नहीं कर पायेगी ।
Please do not use Acid and antiseptic in this toilet. By doing so, bacteria present in the Bio-digester Tank will be killed and system would not function any more.
দয়া করে এই শৌচালয়ে অ্যাসিড এবং এ্যান্টিসেপটিক ব্যবহার করবেন না। ব্যবহার করলে ট্যাঙ্কে উপস্থিত জৈব ডাইজেস্টকারী ব্যাকটেরিয়া মারা যাবে এবং এই প্রক্রিয়া কোনও কাজ করবে না।

सबारी एवं माल-दिक्का टिकी / पूर्व ईकले Carriage & Wagon Depot/Eastern Railway

A vinyl display board regarding different aspects of Bio-Toilet is provided in NCC yard Sealdah for awareness of servicing railway/contractual staff.

Introduction of evacuation machine at Sealdah New Sick line



New trolley-mounted mobile evacuation machine for Sealdah New Coaching Sickline bio-toilets has a 2.2 KW motor and a PVC tank with dual chamber. The machine first sucks out everything from the bio-tank of the toilet, including the solid waste. While the non-bio degradable items from the inoculums is retained the first chamber of the machine, remaining part of the inoculums is passed on to the second chamber through a filter. This is turn is pumped back into the bio-toilet. Not only is the evacuation of the bio-tank fully mechanized, but also there is no need to fill fresh inoculums in the toilet separately. Evacuated of 1st chamber of bio-tank have been done at both SDAH & KOAA Coaching Sickline.

Holding of Bio-Toilet Coaches:

Type	Total Holding	Total Bio Tank fitted Coach	Remarks
ICF Coach	823	823	
LHB Coach	626	626	