

GOVERNMENT OF INDIA - MINISTRY OF RAILWAYS
RESEARCH DESIGNS & STANDARDS ORGANISATION
MANAKNAGAR, LUCKNOW-226011.

No. TM/HM/11

Dated: 4-9-98

The General Manager(Engg/Works)

1. Central Railway, Mumbai-CST-400 001.
2. Eastern Railway, Fairlie Place, Calcutta-700 001.
3. Northern Railway, Baroda House, New Delhi-110 001.
4. North Eastern Railway, Gorakhpur-273 012.
5. Northeast Frontier Railway, Maligaon, Guwahati- 781 011.
6. South Eastern Railway, Garden Reach, Calcutta-700 043.
7. Southern Railway, Park Town, Chennai-600 003.
8. South Central Railway, Rail Nilayam, Secunderabad-500 371.
9. Western Railway, Churchgate, Mumbai-400 020.

Sub: Final maximum permissible speed for Ballast Cleaning
Machine RM-76-UHR

Ref: This office letter no. CT/TM/SC/RM76-UHR dt. 9-9-91

1.0 Vide the letter under reference, M/s Plasser India's Ballast Cleaning Machine RM 76-UHR as per diagram no. EDO/T-2169 with max. axle load of 19.0t has been permitted to run at provisional maximum speed of 40 Kmph when running on its own power and at 30 Kmph max. when running in train formation as a dead vehicle.

As per provision of Policy Circular No.6 governing procedure for issue of speed certificate, CCRS was requested vide letter no. TM/HM/11/7 dated 30/31-3-98 (copy enclosed) to accord approval for dispensation with detailed oscillation trials for issue of final maximum permissible speed certificate. Vide CCRS' letter No. M15013/1/97-RS dated 16-4-98 (copy enclosed), this dispensation has been granted.

In view of the above, the machine may now be permitted to run on regular basis up to a maximum speed of 40 kmph when running on it's own power and 30 kmph when running in train formation subject to the conditions in the following paragraphs:

1.1 TRACK

1.1.1 The track shall be to a minimum standard of 90R rails on sleepers to M+4 density and depth of ballast cushion below sleepers of 200 mm, which may consist of at least 75 mm clean and the rest in caked up condition, on compacted and stable formation.

1.1.2 For track of lower standard than that mentioned above, the Chief Engineer concerned shall decide the lower maximum permissible speed. In this connection, Railway Board's letter No.65/WDO/SR/26 dt.19/20.10.66 may be seen. When the Chief Engineer considers that the road bed is not compacted or there is improper drainage, he may suitably restrict the maximum permissible speed depending on the local conditions.

1.1.3 The maximum permissible speed on curves to be decided on the basis of the existing provisions of the Indian Railways Permanent Way Manual-1986.

1.1.4 Maximum speed on points and crossings to be restricted to 10 kmph as per para 1227 of the Indian Railways Permanent Way Manual -1986.

1.2 BRIDGES

1.2.1 The clearance in regard to bridges refers to standard design of girders, slabs, pipe culverts, piers and abutments etc. issued by RDSO for BGML, RBG and MBG-87 standard loading.

1.2.2 All other designs of superstructures and sub-structures are to be examined under the directions of the Chief Engineer concerned and certified safe by him in terms of current IRS Bridge Rules, Steel Bridge Code, Bridge Sub-structures and Foundation Code etc. read with up-to-date correction slips.

1.3 SIGNALLING

The speed of vehicle/machine while running through a station will be decided by Zonal Railways depending upon type of route release circuit adopted, length of FVT track circuit provided ahead of last stop signal and standard of interlocking existing at a station.

1.4 GENERAL

1.4.1 The design of the machine infringes clauses 2 (ii), 17, 19 (b), 20 (b), 21 (b) and 22 of Chapter IV(A) of BG Schedule of Dimensions-1973, vide details as per Annexure-I. Necessary condonation is required to be obtained from Railway Board by the concerned Railway before placing the machine on track.

1.4.2 All the permanent and temporary speed restrictions in force and those imposed from time to time due to track, bridges, curves, signalling and interlocking etc. shall also be observed. 1.3.4 The speed of vehicle/machine while running through a station will be decided by Zonal Railways depending upon type of route release circuit adopted, length of FVT track circuit provided ahead of last stop signal and standard of interlocking existing at a station.

1.4.3 When the machine is being moved either on its own power or hauled in a train, it shall be ensured that all the protruding parts are withdrawn and suitably locked.

1.4.4 The design of the machine infringes clause 22 of Chapter IV(A) of BG Schedule of Dimensions-1973, as the maximum distance apart between any two adjacent axles is higher than 11890 mm. Care should be taken to ensure that the points are not inadvertently operated below the wheels of this machine.

DA: One drawing
No. EDO/T-2169
& Annexure I

P. Bhattacharya
(P. BHATTACHARYA)
Executive Director Standards (Motive Power)

Copy to:-

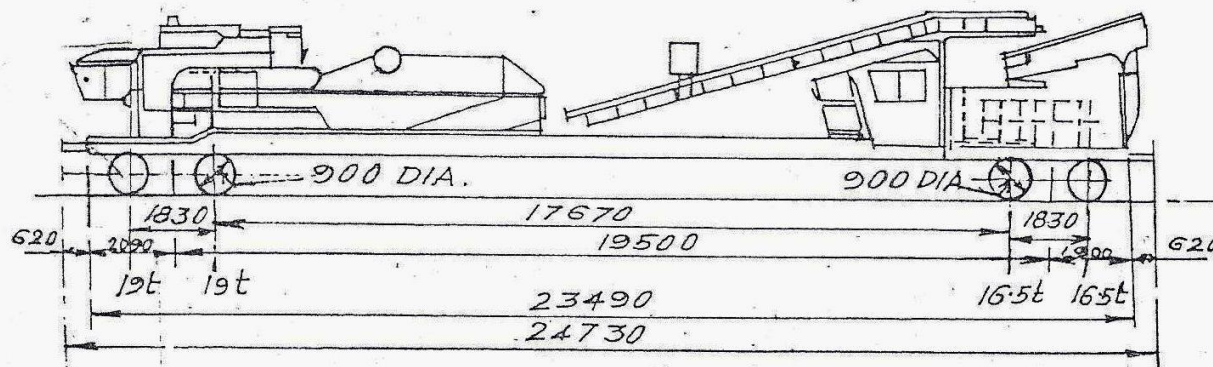
The Secretary (Engg.), Railway Board, Rail Bhawan, New Delhi – 110,001.

DA: One drawing
No. EDO/T-2169
& Annexure I

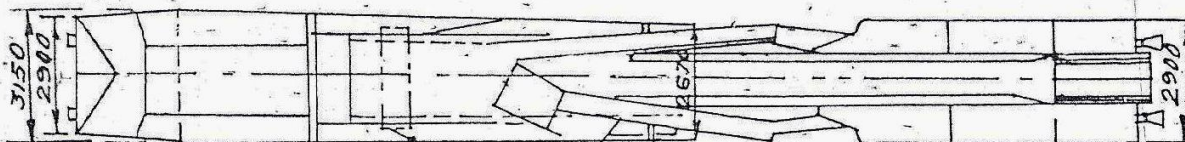
P. Bhattacharya
(P. BHATTACHARYA)
Executive Director Standards (Motive Power)

RM76-UHR BALLAST CLEANING MACHINE.DETAILS OF INFRINGEMENTS TO SCHEDULE OF DIMENSIONS-1973.

S.No.	Item of Chapter IV(A)	Description	Dimension as per schedule	Actual dimension in the machine	Remarks
1.	2(ii)	Minimum dia on wheel tread	914mm	900 mm	The wheel diam. in most of the track maintenance machines is seen to infringe item 2 (ii) and Rly Board have sanctioned such infringements in such cases. The infringement can be condoned in this case also.
2.	17	Max. distance apart bogie centres.	14785 mm	19500 mm	Due to increased bogie centres distance, central offset can increase. However width at the centre being only 2670 mm, the max. distance from centre line of track to the edge of stock on 10° curve works out as 1607 mm. End offset is also 1615 mm. These are even within half width of 3230 mm wide stock i.e. within 1625 mm. The infringements against item 2 to 5 can be therefore condoned.
3.	19(b)	Maximum length of body or roof.	21340 mm	23490 mm	
4.	20(b)	Maxi. length over head stocks.	21030 mm	23490 mm	
5.	21(b)	Max. length over side buffers.	22300 mm	24730 mm	
6.	22	Max. distance apart adjacent axles.	11890 mm	17670 mm	A suitable clause has been included in the speed certificate under General Clause. The infringement can be therefore condoned (Clause 1.4.4).

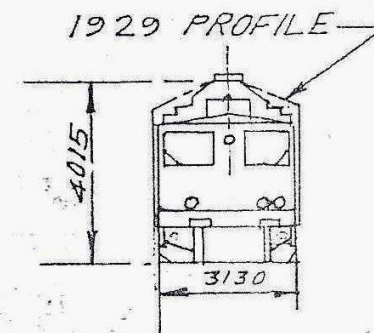


ELEVATION



PLAN

BALLAST CLEANING MACHINE RM 76-UHR



SIDE ELEVATION

AXLE LOAD } 19t & 16.5t
AS SHOWN }
WHEEL DIA 900 mm

2. DIAGRAM BASED ON DRG. N^o 64000426.
1. ALL DIMENSIONS ARE IN MILLIMETRES.

N O T E

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EDO/T-2169

BY

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