

2018/Proj./BMRCL/RS/29/04

New Delhi, dated 18.05.2022

Managing Director,
Bangalore Metro Rail Corporation Limited,
3rd Floor, BMTC Complex, K.H. Road,
Shanthinagar, Bangalore - 560 027

Sub: Sanction to use M/s BEML make Rolling Stock up to a maximum speed of 80 kmph on East-West (Purple Line) & North-South (Green Line) corridors of Bangalore Metro Rail Corporation Limited (BMRCL).

- Ref: (i) CRS, Lucknow's letter No. R/14011/07/2021-22- त. वि. dated 04.05.2022
(ii) CMRS, Southern Circle's letter No. Q.15013/2/2021-22 BMRCL/1605-08 dated 04.03.2022
(iii) RDSO's Interim Speed Certificate No. UTHS/24/BMRCL/Mech. dated 25.11.2021
(iv) BMRCL's letter No. BMRCL/002/RS/2021/11077 dated 03.01.2022

In reference to the letter cited above, provisional sanction of Ministry of Railways is hereby communicated for sanction to use M/s BEML make Rolling Stock up to a maximum speed of 80 [EIGHTY] Kmph in fully inflated mode and 25 [TWENTY FIVE] Kmph in deflated mode of secondary air spring with detraining of passengers at the next station over East-West (Purple Line) & North-South (Green Line) corridors of Bangalore Metro Rail Corporation Limited (BMRCL).

Each self-propelled bi-directional train set consist of 6 coaches in the formation of DMC-TC-MC-MC-TC-DMC. The mode of traction is 750V DC Third Rail. Layout Drawing No. of proposed Coaches of Bangalore Metro, having maximum axle load of 17.0t are as under:

SN.	Type of Coach	General Arrangement to M/s. BEML's Drawing No.
Unit -I	Driving Motor Coach (DMC)	926-00021
	Trailer Coach (TC1)	926-00022
	Trailer Coach (TC2)	926-00024
	Motor Coach (MC)	926-00023

The sanction is further subject to the following conditions/stipulations:

1. The maximum operating speed of Rolling Stock shall be 80 (EIGHTY) Kmph in fully inflated mode and 25 [TWENTY FIVE] Kmph in deflated mode.
2. Compliance of mandatory conditions and other stipulations contained in RDSO's Interim Speed Certificate No. UTHS/24/BMRCL/Mech. dated 25.11.2021 to be ensured.
3. Observance of conditions stipulated in BMRCL's Joint Safety Certificate along with its concomitant Track Certificate and Bridge Certificate.
4. Observance of all permanent and temporary speed restriction in force or those that may be imposed time to time on account of Track, Bridge, Signalling and Interlocking etc.
5. Before initiating the operation of new Metro Coaches, BMRCL shall certify the trackfitness and safety and fitness of the Rolling Stock.
6. All Train Operators and Station Controllers shall be given sufficient training and shall be in possession of Competency Certificates issued by Designated Officer.
7. As per Para 10.1 of RDSO's Interim Speed Certificate (ISC) No. UTHS/24/BMRCL/Mech. dated 25.11.2021, repeat Oscillation Trials with worn out wheels & rails are to be conducted within five years of issue of ISC. Copy of the Oscillation trials Report & Final Speed Certificate whenever issued may be submitted to the Commission.
8. It shall be ensured by BMRCL to get all their Maintenance Manuals approved by a committee complying the instructions issued by Ministry of Housing and Urban Affairs letter no. K.14011/106/2011-MRTS/Coord. dated 27.12.2012.

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9. BMRCL shall ensure compliance of Track Structure, Type of Traction System, Type of Signalling System as approved by Ministry of Railways and stipulations of EIG sanction of Rolling Stock.
10. During Rolling Stock maintenance, it shall be ensured that Metro Coaches do not infringe the minimum dimensions mentioned in Clause-5 (50mm for bogie mounted equipment) & Clause-6 (102mm for body mounted equipment) of chapter-III of approved SoD for SG network of BMRCL.
11. As per Para-4 of 'PREAMBLE' of SoD approved by Railway Board, the Kinematic Envelope (s) indicated in the SoD shall not be violated under any circumstances.
12. BMRCL shall ensure proper maintenance of Rolling Stock, Propulsion Equipment, Control Systems, Signalling and Interlocking, Track, Traction System and Structures as per schedules prescribed in the Maintenance Manual.
13. Before initiating train operations, BMRCL shall certify trade fitness and safety of the Rolling Stock depending upon the actual condition of the bogie suspension system, brake system, wheel, axle and other safety related components.
14. Brakes of the Rolling Stock shall be in good working order during the commercial operations and during other self-powered movements.
15. In case of air spring of one bogie getting deflated, the train shall be moved to the next station with restricted speed of 25 kmph, passenger shall be detrained and subsequently train shall be moved to the nearest depot.
16. BMRCL shall take all precautions regarding electrical clearances and other parameters, as required for ensuring safety of personnel, and for protection of power supply system at the time of train operations.
17. BMRCL shall ensure non-availability of traction (Provision of traction cut-off) if more than 50% of the bogies in train formation are in isolated condition. It shall also be ensured that indication/alarm in this regard is also available to driver.
18. Radio communication shall be provided for the train operator to the OCC/Station throughout the section to enable the driver to contact OCC and station control room in case of emergency.
19. Adequate training shall be imparted to the maintenance staff responsible for maintaining the Rolling Stock, signalling and interlocking, OHE and track etc.
20. BMRCL shall ensure that a procedure for safe movement of Rolling Stock in Depots and other such areas is also in place.
21. BMRCL should explore possibility of providing aerosol-based fire suppression system in electrical panels, as being provided in LHB Coaches, in future rakes. Further, optical fiber based Linear Heat Detection (LHD) may also be explored for detection of heating zones especially in cable trays and electrical panels.

18/05/2022
(D.K Mishra)
Director/MTP
Railway Board
☎011-47845480

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New Delhi, dated 18.05.2022

Copy forward for information to:

1. **Chief Commissioner of Railway Safety**, N.E Railway, DRM office Campus 16, Ashok Marg, Lucknow -226001
2. **Commissioner of Metro Railway Safety**, Southern Circle, 7, Seshadri Road, Gandhi Nagar, Bangalore – 560009
3. **Director General**, RDSO, Manak Nagar, Lucknow- 226011
4. **OSD/UT & Ex-Officio Joint Secretary**, Ministry of Housing & Urban Affairs (MoHUA), Nirman Bhawan, New Delhi-110001.