

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)**

2021/Proj./KANPUR/RS/29/05

New Delhi, dated 22.12.2021

Managing Director,
Uttar Pradesh Metro Rail Corporation Limited,
(UPMRCL), Administrative Building,
Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal,
Vipin Khand, Gomti Nagar,
Lucknow -226010 (UP)

Sub: Sanction of 'Standard Gauge Rolling Stock', Manufactured & Supplied by 'M/s Bombardier Transportation India (Now Acquired by Alstom)', having Air suspension arrangement at secondary stage, for operation up to the maximum operating speed of 80 km/h over priority corridor DN Line Chainage (-) 366.468 to Chainage 4906.044 & UP Line Chainage 4983.980 to Chainage 7410.852 of Rail network of Kanpur Metro project of Uttar Pradesh Metro Rail Corporation Limited (UPMRCL).

Ref: (i) Ministry of Civil Aviation (CRS)'s letter संख्या- R/14011/03/2021-22 त. वि. dated 15.12.2021

(ii) CMRS, New Delhi's letter No. R/13/2019/CMRS/UPMRCL/473 dated 06.12.2021

(iii) RDSO Speed certificate No: ISC No: UTHS/UPMRC/KMRC/P01/012021 dated 03.12.2021

In reference to the above cited letter, sanction of the 'Ministry of Railways' is hereby communicated for operation of the 'Standard Gauge Rolling Stock', Manufactured & Supplied by 'M/s Bombardier Transportation India (Now Acquired by Alstom)' having Air suspension arrangement at secondary stage, up to a maximum operating speed of 80 km/h over priority corridor DN Line Chainage (-) 366.468 to Chainage 4906.044 & UP Line Chainage 4983.980 to Chainage 7410.852 of Rail network of Kanpur Metro project of Uttar Pradesh Metro Rail Corporation Limited (UPMRCL).

One train is consisting of 3 coaches, in the formation of DMC-TC-DMC. The trains are to be operated in ATP mode up to the maximum speed of 80 km/h in fully inflated mode of secondary air spring and 60Km/h in deflated mode of secondary air spring.

Unique Transportation Code & Layout Drawing No. of proposed coaches of Kanpur Metro Rail Project, having maximum axle load of 16.0t are as under:

SN.	Type of coach	Coach Unique Identification No.	General Arrangement to M/s Bombardier's Drawing No.
1	Driving Motor Coach (DMA)	01D1K1	100448355_C001/002
2	Trailer Coach (TC)	01T3K1	100448355_C002/002
3	Driving Motor Coach (DMB)	01D2K1	100448355_C001/002

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

1. Observance of all Conditions laid down in RDSO's Interim Speed Certificate (ref. iii above), and the UPMRCL's Joint Safety Certificate and the concomitant Track and Bridge certificates.
2. Observance of all permanent and temporary speed restrictions already in force and/or those that may be imposed from time to time on various accounts during operations.

Contd...2/-

3. Before initiating train operations, UPMRCL/Metro Railway Administration (MRA) shall certify the Track fitness and the Safety of the Above mentioned Rolling Stock as per the actual condition of the Bogie Suspension System, Brake System, Wheel, Axle, Doors and other safety related components.
4. Signalling System as approved by Railway Board, along with its interface with proposed Rolling Stock shall be verified and certified by ISA as well as the Executing Authorities and their remarks in this regard shall be submitted to the Commission of Railway Safety with the opening documents and a copy to Railway Board and RDSO.
5. EIG sanction shall be obtained for all the future Rolling Stocks to be introduced in the system.
6. UPMRCL/MRA shall ensure that all the cables used in the Rolling Stock are compliant to EN45545-2:2013 HL3 standard. Fire survival cables (EN50200) shall be used in Passenger Alarm System, PA lines, Emergency Brake Loop and Critical Control Systems. All other cables shall be fire retardant with improved fire performance and high resistance to temperature.
7. UPMRCL/MRA 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, including the Climate Chamber Test of the coaches.
8. UPMRCL/MRA shall keep all the Maintenance Manuals in place duly approved by 'the committee of officials', as per the instructions contained in the Ministry of Housing and Urban Affairs (MoHUA) letter No. K-14011/106/2011-MRTS/Coord. Dated 27.12.2012.
9. UPMRCL/MRA shall ensure the following before the start of the revenue operations:
 - (i) Availability of rotating spares such as motor coach and trailer coach bogies, wheel sets, various modules of converter/inverter, CCD, etc. as recommended by OEM (M/s Bombardier and now Alstom).
 - (ii) Following systems/features to be commissioned:
 - a) Installation & Testing of PIDS/PAS, PECU, CCTV, Digital Route Map
 - b) Installation & Testing of saloon lights
 - c) Commissioning of HVAC
 - d) Complete functionality of TCMs
 - e) Balance work of gangway, roof, smoke detector etc.
10. During Rolling Stock maintenance, it shall be ensured that the height of equipment having minimum ground clearance on Metro Coaches does not infringe minimum dimensions mentioned in Clauses 3.1 (Sr. no. 6 & 7) of Chapter -II of approved SoD for SG network of UPMRCL.
11. As per para-5 of PREAMBLE' of SoD approved by Railway Board, the Kinematic Envelop(s) indicated in the SoD shall not be violated under any circumstances.
12. UPMRCL/MRA shall ensure proper maintenance of assets viz. Rolling Stock, Signalling and Telecom, Track, Traction System and Civil Structures as per maintenance schedules prescribed in the maintenance manuals. Adequate training shall be imparted to the maintenance staff responsible for maintaining the above assets.
13. Brakes of 'All the Rolling Stock' of 'All the Trains' shall be in 'fully functional mode' during the commercial operations and during other self-powered movements anywhere.
14. UPMRCL/MRA shall ensure 'Provision of Traction Power 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 shall also be available to the Train Operator.

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15. All Train Operators and Station/Section Controllers shall be given sufficient training and shall be in possession of a valid competency certificates, issued by designated officer.

16. UPMRCL/MRA shall ensure that a procedure for safe movement of Rolling Stock in depots and other such areas is also in place.

17. As per Clause 10.1 of the RDSO, Lucknow, Interim Speed Certificate No. UTHS/UPMRC/KMRC/P01/012021 dated 03.12.2021, for issue of final speed certificate, repeat oscillation trials with worn out wheels and rails are required to be conducted. Copy of the report of repeat oscillation trials with worn out wheels and rails shall be made available to the Commission of Railway Safety.

18. Radio communication shall be provided for the Train Operators to the OCC/Station throughout the section to enable them to contact OCC and the Station Control Room in case of any Emergency.

19. Para 8.3.7.2 and 8.4.4 of Interim Speed Certificate (ISC) issued by RDSO on 03.12.2021 contain various tests for which test reports/details are yet to be submitted to RDSO. All these reports shall be submitted to RDSO before commencement of commercial operation. Any deviation from standards or non-conformity shall be advised to Commission of Railway Safety along with details of its mitigation measures.

20. UPMRCL/MRA 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.

22/12/2021
(D.K Mishra)
Director/MTP
Railway Board
☎011-47845480

2021/Proj./KANPUR/RS/29/05

New Delhi, dated 22.12.2021

Copy forwarded 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 (CMRS)**, Dhaula Kuan Metro Station, New Delhi-110010
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.