

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

2025/Proj./BMRCL/RS/Reach-5/29/15

New Delhi, dated 01.05.2025

Managing Director,

Bangalore Metro Rail Corporation Limited,
(BMRCL) 3rd Floor, BMTC Complex, K.H. Road,
Shanthinagar, Bangalore-560 027

Sub: Sanction for Operation of new 6 – Car train set manufactured by M/s CRRC Nanjing Puzhen Co. Ltd, China on Reach-5 Section (Yellow Line) of Bangalore Metro up to a maximum operating speed of 80 kmph.

Ref: (i) BMRCL's letter No. BMRCL/002/RS/2024/Vol-6/15804 dated 23.01.2025
(ii) CCRS, New Delhi's letter संख्या-Q/12011/24/2024-25 त. वि. दिनांक 18.03.2025
(iii) CMRS, Southern Circle, Bengaluru's letter no. Q.13011/1/2018 BMRCL/1177-1187 dated 07.03.2025
(iv) RDSO's Interim Speed Certificate No. UTHS/BMRCL/NAMMA/P03/112021 dated 21.01.2025

In reference to the letters cited above, provisional sanction of Ministry of Railways is hereby communicated for operation of new 6 – Car train set manufactured by M/s CRRC Nanjing Puzhen Co. Ltd, China on Reach-5 Section (Yellow Line) of Bangalore Metro up to a maximum operating speed of 80 kmph.

The sanction is further subject to the following conditions/stipulations before commencement of revenue operation:

- a) The maximum speed of Rolling Stock shall be 80 kmph in fully inflated mode and 25 kmph in deflated mode of secondary air spring.
- b) Compliance of mandatory conditions and other stipulations laid down in RDSO's Interim Speed Certificate No. UTHS/BMRCL/NAMMA/P03/112021 dated 21.01.2025 to be ensured.
- c) Observance of conditions stipulated in BMRCL's Joint Safety Certificate along with its concomitant Track Certificate and Bridge Certificate.
- d) Observance of all permanent and temporary speed restrictions in force and those that may be imposed from time to time on account of track, bridges, Curves, traction system, signaling & interlocking etc.
- e) Compliance of all the conditions stipulated by Railway Board while giving technical clearance for:
 - (i) Traction & Power Supply and SCADA system vide Railway Board's Letter No. 2024/Proj./BMRCL/Ph-II/D1-D2/30/85 dated 22.07.2024 & its Amendment dated 04.11.2024.
 - (ii) Signaling & Train Control and Telecommunication systems vide Railway Board's letter No. 2024/Proj./BMRCL/CBTC/PH-II/30/92 dated 06.01.2025.



Contd...2/-

- (iii) Approval for Fastening system - 336 vide Railway board's letter No.98/Proj/DLI/30/1 (Vol.III) dated 24.01.2013.
- (iv) Approval for Schedule of Dimensions for Bangalore Metro (SG) vide Railway Board's letter No. 2010/Proj./Bangalore/30/4 Voll. III, dated 11.03.2016, Condonation to SoD No. 2010/Proj./Bangalore/30/4 Voll.III, dated 20.02.2017, ACS 01 to SOD No. 2010/Proj./Bangalore/30/4 Vol. III, dated 12.02.2018 & ACS 02 to SOD No. 2010/Proj./Bangalore/30/4 Vol. III, dated 06.02.2020.
- (v) Approval of Design Basis Report for BMRCL vide Railway Board's letter No. 2014/Proj./Bangalore/Misc. dated 23.09.2013.
- (vi) Approval for Track structure vide Railway Board's letter No. 2010/Proj/Bangalore/1/5-a dated 25/26.11.2013.
- f) Compliance of conditions stipulated in EIG Sanction of Rolling Stock vide letter no. BMRCL/079/EIG/2024/1514 dated 29.04.2024.
- g) Rolling Stock inspection has been carried out excluding Signaling & Train Control and Telecommunication systems. Before opening of the section for public carriage and start of revenue operations, integrated testing of Rolling Stock with S&T systems commissioned based on technical approval of RB shall be ensured.
- h) Before initiating train operations, BMRCL shall certify the track fitness and safety & fitness of the Rolling Stock depending upon the actual condition of bogie suspension system, brake system, wheel, axle, and other safety related components.
- i) BMRCL shall ensure proper maintenance of Rolling Stock, Propulsion Equipment, Control Systems, Signaling and Interlocking, Track, Track System and Structures as per schedules prescribed in the Maintenance Manual.
- j) Brakes of the Rolling Stock shall be in good working order during the commercial operation and during other self-powered movements.
- k) During Rolling Stock maintenance, it shall be ensured that metro coaches do not infringe the minimum dimensions mentioned in Clause -5 (50 mm for bogie mounted equipment) and Clause - 6 (102 mm for body mounted equipment) of Chapter - III of approved SoD for SG network of BMRCL.
- l) As per Para - 4 of 'PREAMBLE' of approved SoD, the Kinematic Envelope(s) indicated in the SoD shall not be violated under any Circumstances.
- m) All Train Operators and Station Controllers shall be given sufficient training and shall be in possession of Competency Certificates issued by Designated Officer.
- n) Adequate training shall be imparted to the maintenance staff responsible for maintaining the Rolling Stock, signaling and interlocking, Third Rail System and track etc.

Contd...3/-

- o) 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 operation.
- p) BMRCL shall ensure non-availability of traction (provision of traction cut-off) if more than 50% of the bogies in train formation is in isolated condition. It shall also be ensured that indication/alarm in this regard is also available to Train Operator.
- q) Radio Communication shall be provided for the Train Operator to the OCC/Station throughout the section to enable the Train Operator to contact OCC/BCC and station control room in case of emergency.
- r) BMRCL should explore possibility of providing aerosol-based fire suppression system in electrical panels, as being provided in LHB Coaches in future rakes.
- s) BMRCL should explore possibility of providing anti-drag feature as part of automatic obstacle detection in passenger saloon doors which shall be capable to detect door obstruction up to 1 mm, as being provided in Pune Metro Rolling Stock in future rakes.
- t) BMRCL shall ensure that a procedure for safe movement of Rolling Stock in Depots and other such areas is also in place.
- u) Submission of SIL2 certificate of Train Control Management System (TCMS) issued by authorized agency accredited by internationally recognized accreditation body before start of revenue operations.
- v) Compliance of Safety Related Application Conditions (SRAC) and Safety Restrictions imposed by Independent Safety Assessors (ISA) and OEMs in the Conformity Certificates issued related to safety critical sub- systems of Rolling Stock.
- w) Certificate of Conformity issued by ISA regarding fire protection design and configuration of the rolling stock is excluding onboard signaling system. Certificate shall be submitted by Competent Authority conforming fire protection of the rolling stock is in compliance with EN 45545 standard including onboard signaling system.
- x) Few of the bypass/ cut - out switches provided in the control panel in the back wall of Train Operator's cabin are related with operation of trains in degraded mode of Grade of Automation GoA4, which are not relevant for proposed GoA2 mode of operation. All such bypass/ Cut Out Switches shall be permanently sealed or disabled in GOA2 mode of operation.
- y) BMRCL shall ensure that the limits of Noise and Vibration parameters of the Metro System are within the permissible limits as per legal and statutory requirement of India.
- z) BMRCL shall get all their Maintenance Manuals and Standard Operating Procedures related to Rolling Stock approved as per extant instructions.



RDSO has issued interim speed certificate valid for 5 years. As per Para 10.1 of RDSO's Interim Speed Certificate No. UTHS/BMRCL/NAMMA/P03/112021 dated 21.01.2025, repeat oscillation trials are to be conducted within five years of issue of ISC to assess/validate riding quality with worn out wheels and rails for issue of final speed certificate since the trials have been conducted on the new track with new wheel profile. The issue of final speed certificate shall be pursued and the copy of the Oscillation trials report & Final Speed Certificate whenever issued may be submitted to CMRS.


01.05.25

(F. A. Ahmad)

Director/Gati Shakti (Civil)-IV

Railway Board

☎ 011-47845480

Email: dirgsc4@gmail.com

2025/Proj./BMRCL/RS/Reach-5/29/15

New Delhi, dated 01.05.2025

Copy forward for information to:

1. **Chief Commissioner of Railway Safety (CCRS)**, 3rd Floor, Traffic Account Building, State Entry Road, New Delhi-110055
2. **Commissioner of Metro Railway Safety (CMRS)**, Southern Circle, 2nd Floor, Rail Sanraksha Bhawan, Behind Railway Divisional Office, Bengaluru - 560023
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