



Introduction of India's First Ever Broad Gauge Air-conditioned AC EMU (Suburban Train) of 12-car rake fitted with Indigenous 3-phase Propulsion system On Mumbai Suburban Section of W. Railway on 25th December 2017

Railways' New Year Bonanza For The Nation Especially for Mumbaikars.

Introductory run is scheduled from Borivali station in Mumbai.

2 Coaches earmarked as Ladies Coaches, Certain seats are earmarked for Senior Citizens and Divyangs

RPF to be deployed in each coach to ensure safety.

Discount in the fare to be given during the introductory period of initial 06 months.

Posted On: 24 DEC 2017 5:32PM by PIB Delhi

The long awaited dream of Nation especially of Mumbaikars for '**Cool Travelling**' in '**Air Conditioned local train**' is going to be a pleasant reality, as First Ever Broad Gauge Air-conditioned AC EMU suburban train consisting of 12-car (12 coaches) fitted with Indigenous 3-phase Propulsion system of Ms BHEL on Mumbai Suburban Section of Western Railway is to be introduced on Monday, 25th December, 2017. As a New Year bonanza for the Nation and for Mumbaikars, this first Air Conditioned local train will depart on its historical introductory from Borivali station at 10.30 hrs and will reach Churchgate station on Monday, 25th December, 2017. After the introduction the AC local train will be operated on the experimental basis between Churchgate & Borivali stations for a week i.e. from 25th December to 31st December, 2017. Afterwards w.e.f. 1st January, 2018, this AC local train will be operated on regular basis as per the scheduled time table between Churchgate & Virar stations. Accordingly, w.e.f. 1st January, 2018, total 12 services (6 services in UP & 6 services in DOWN direction) of AC suburban train will be operated on weekdays only i.e. from Monday to Friday. It is decided that on Saturdays & Sundays, the rake of AC local train will not be operated for maintenance purpose.

As per the regular scheduled time table w.e.f. 1st January, 2018, the services of AC local train will replace existing 12 Non AC services, so the total average number of suburban services on WR's suburban section will remain 1355, even after introduction of AC local train. Out of these 12 services of AC local train, 8 will run as fast local trains between Churchgate & Virar, stopping only at major stations i.e. Mumbai Central, Dadar, Bandra, Andheri, Borivali, Bhayander & Vasai Road in both directions. Similarly 3 fast services will run between Churchgate & Borivali stopping at Mumbai Central, Dadar, Bandra & Andheri stations in both directions. The remaining one service will run as slow service from Mahalaxmi to Borivali, which will stop at all intermediate stations. It has been decided that the AC EMU rake will be placed at Borivali station to start the introductory run at 10.30 hrs on 25th December, 2017.

In this AC local train, coaches reserved for Ladies & Seats earmarked for Senior Citizens/Divyangs are different from Standard Configuration. 1st and 12th coach from Churchgate end are earmarked as Ladies coaches and 7 seats in 2nd and 11th coach from Churchgate end are earmarked for Senior citizens while 10 seats in 4th and 7th coach from Churchgate end are earmarked for Divyangs. It is also decided that suitable number of RPF constables will be deployed in each coach of this train to ensure proper security. Similarly, technicians will also be deputed in the train for trouble shooting purpose. Suitable announcements will also be ensured for opening of the door as per the platform position of upcoming station.

Fare Structure for AC local train :-

The fare structure of AC EMU service shall be as under :- 1) Base fare of the single journey of AC EMU shall be 1.3 times of the base fare of existing fare of single journey ticket for first

class. However as an introductory offer for a period of initial six months, the base fare of single journey of AC EMU shall be charged 1.2 times of the base fare of existing fare of single journey ticket of first class. The difference between 1.3 times and 1.2 times will be shown in the ticket as discount during the introductory period.

2) **Season tickets** :- Weekly, Fortnightly and monthly season tickets shall be charged equivalent to 5, 7.5 and 10 single journey of AC EMU respectively. No other type of season tickets shall be issued for the time being.

3) AC EMU ticket holder shall also be allowed to travel by first class compartments of local trains.

The details of fare charges of AC local train are displayed as under :-

Comparison of 1st Class and AC Local Fare in Rs. (Base fare * 1.2 times for 1st 6 months)

From	To	Single Ticket Fare		Weekly Season Ticket		Fortnightly Season Ticket		Monthly Season Ticket	
		1st Class	Ac Local	1st Class	Ac Local	1st Class	Ac Local	1st Class	Ac Local
CCG	MMCT	50	60	NA	285	NA	430	345	570
CCG	DDR	70	85	NA	445	NA	630	490	820
CCG	BA	70	85	NA	445	NA	630	490	820
CCG	ADH	105	125	NA	655	NA	945	670	1240
CCG	BVI	140	165	NA	855	NA	1245	755	1640
CCG	BYR	150	175	NA	905	NA	1325	910	1745
CCG	BSR	165	195	NA	1035	NA	1505	1105	1975
CCG	VR	170	205	NA	1070	NA	1555	1185	2040

Historical Background :

First Electric EMU train on Western Railway line was started on 5th January, 1928 between Colaba to Borivali. BB&CI built the first Carshed at Bombay Central on 5th January, 1928 for maintenance of EMU rake. Another shed at Kandivali was established in the year 1984-85. With the increase in rake holding over the years a new shed was commissioned at Virar in April, 2013 to undertake maintenance of new technology EMU rakes. Over the last 90 years, the suburban rail service has grown rapidly. Today Western Railway runs 1355 suburban services carrying about 35 lakhs passengers per day with 89 Rakes. Initial rakes were of 4 coach configuration, which were later upgraded to 9 Car Rake in 1958. 12 Car Rakes were introduced in 1990. Today all the Rakes have been converted to 12 Car Rakes. First 15 Car Rake, which is longest suburban train, was introduced by Western Railway on 21.11.2009. As of now 54 services of 15 car are being run. By continuing the above saga, the **First ever “Broad Gauge Air-conditioned AC EMU of 12-car rake fitted with Indigenous 3-phase Propulsion system of M/s. BHEL”** on Indian Railway has been received in May-2017 on Western Railway for fulfilling the long standing demand of Mumbai suburban commuters. EMU Rolling Stock organisation of BCT Division has completed all the Static and Dynamic trials of the rake in co-ordination with RDSO on priority. To make the daily commute more comfortable, this rake is being introduced on 25th December, 2017 to the Mumbai Suburban passengers on Western Railway adding a new milestone in the Mumbai Suburban History.

Salient Features of Air Conditioned EMU:

- i. Manufactured by Integral Coach Factory, Chennai of Indian Railways.
- ii. First Air conditioned EMU equipped with IGBT based 3 phase propulsion system.
- iii. Fully air conditioned rake with a capacity of 30 Ton per coach.
- iv. Automatic Door closure system.
- v. LED based lighting for better illumination and energy conservation.
- vi. Equipped with Emergency Talk-back system. Passengers can seek assistance from guard of the

train in distress condition.

- vii. Passenger carrying capacity – Seats 1028 Nos. and Total 5964 passengers.
- viii. LED based coach identification system for Alarm chain pulling & Door malfunctioning.
- ix. GPS based passenger information system with Audio-visual indication of stations.
- x. PA system for Guard-Driver/ Passenger communication.
- xi. Stainless steel coaches with straight side walls.
- xii. Air suspension system for better Passenger comfort.
- xiii. Maximum speed – 100 Km/hour.
- xiv. Air Conditioned Driving Cab.
- xv. Aerodynamic nose cone driving cab.
- xvi. Equipped with Air tight vestibules connecting 6 coaches.
- xvii. Wide and large double sealed glass window for panoramic view.
- xviii. Comfortable modular polycarbonate seats for passengers.
- xix. Aluminum extruded modular luggage racks with polycarbonate transparent glass of bottom.

Automatic Door Closing System:

The door system is formed by two door leaves and drive unit mechanism located in the upper portal area. The door leaves were sliding on upper and lower rail guide, the movement of which is controlled by electrical signal received through TCMS from guard/ drivers cab. The door leaves were sliding inside pockets provided at the door opening. Following passenger safety features were provided in the automatic door closing system:

Ø Train will not start or take traction if any of the doors of the train is open.

Ø Automatic door will not open till the train comes to a complete halt.

Ø Door can open both from inside and from outside of the coach with the help of emergency exit device. This device can also be used if the door fails to open automatically when required. However, this emergency exit device will not operate when the train is in motion.

Ø The location of emergency door opening device (operating rotary handle near door) and the method of its operation is displayed inside the coach for guidance to the passenger.

Ø To avoid injury to passengers during closing operation of the door, doors will re-open thrice if any obstruction detection takes place. After first detection of obstruction there will be audio alarm to caution the passengers about door closing.

Passenger Carrying Capacity Coach Type-wise:

The rake comprised of three types of coaches to accommodate passengers; coach wise passenger capacity is as below:

Coach Type	Seating Capacity	Standing capacity	Total
Driving Motor Coach	65	258	323
Trailer Coach	96	488	584
Non-Driving Motor Coach	65	258	323

The total capacity of the rake is 5964 passengers with 1028 seating capacity and 4936 standing capacity.

Safety features:

The Head-light and speed indicator cum recorder have been fitted on the Driving Cab. Auxiliary Warning System, Dead man's handle, Wheel slip protection are available. In addition, following items are provided:

Event recorder: Event Recorder is provided in each driving motor coach's Train Control and Management System (TCMS). Faults and events generated in various systems in each Basic unit were stored in respective event recorder (TCMS) of Motor coach.

Passenger alarm indication light in all coaches: Each coach is provided with an indication light on both sides of the coach. These lights are integrated with alarm chain pulling system.

Emergency evacuation of passenger Guidance:

To evacuate the passengers in case of emergencies, emergency ladders are provided with signage inside the coach.

Fire Fighting System:

Each Air Condition coach is equipped with 2 Nos of Fire Extinguisher with instruction to operate and proper arrow marking sticker.

Crew/Guard and Passenger Communication System:

GPS based passenger information system is provided in the rake.

- (a) Passenger Announcement- There is facility of Passenger announcement from motorman & guard cab to Passenger area.
- (b) Inter Communication- There is duplex Inter Communication available between Driver and Guard.
- (c) Coach Display in each coach- There are two single sided display and two double sided display in each coach. Also there are nine speakers provided in each coach for audio announcement by which motorman can communicate with passenger coach.
- (d) LED based Head code display in English and Hindi with handicap and ladies coach position is provided in front of the both driving motor coaches.
- (e) ETB: Emergency Talk Back unit is provided in the passenger areas (four in each coach) to communicate with motorman/guard during any emergency.

Summary of AC Local Train Timings w.e.f. 1st January, 2018

Down Direction

From	Departure	To	Arrival	Status
Mahalaxmi	06.58	Borivali	07.50	Slow train
Churchgate	08.54	Virar	10.13	Fast train
Churchgate	11.50	Virar	13.05	Fast train
Churchgate	14.55	Virar	16.12	Fast train
Churchgate	17.49	Borivali	18.41	Fast train
Churchgate	19.49	Virar	21.15	Fast train

UP Direction

From	Departure	To	Arrival	Status
Borivali	07.54	Churchgate	08.50	Fast train
Virar	10.22	Churchgate	11.46	Fast train
Virar	13.18	Churchgate	14.44	Fast train
Virar	16.22	Churchgate	17.42	Fast train
Borivali	18.55	Churchgate	19.44	Fast train

Virar	21.24	Churchgate	22.48	Fast train
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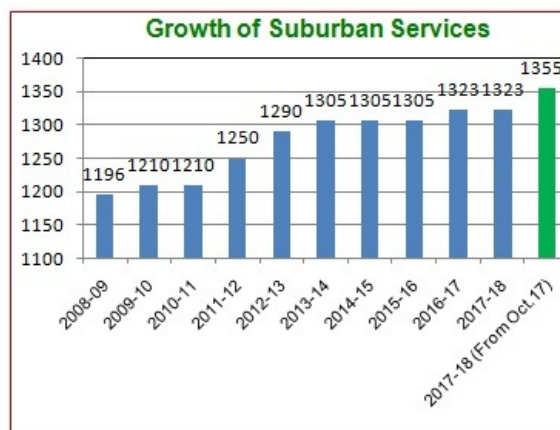
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Milestones

1	EMU maintenance shed established at BCT	1928
2	First Electric train run from MX to ADH	05-01-1928
3	First 12 car rake service started on DDR-VR section	28-10-1986
4	First Ladies special suburban train introduced	05-05-1992
5	Train Management System on first coach started	01-09-1999
6	1 st MRVC Ph-I fitted with Siemens Electrics 12 car rake commissioned	12-11-2007
7	1 st MRVC Ph-I fitted with Siemens Electrics 15 car rake commissioned	21-11-2009
8	DRD service started	16.04.2013
9	First MRVC ph-II rake fitted with M/s.Bombardier Electrics commissioned	18-03-2015
10	Commissioning of Electronic Surveillance system in Ladies coaches	29-05-2015
11	Air conditioned EMU rake fitted with M/s. BHEL Electrics received	13-05-2017
12	Air conditioned EMU rake commissioned	25-12-2017

The growth of suburban services during last 10 years is enumerated as under:



AKS/ENS

(Release ID: 1514002) Visitor Counter : 2182

