

# RAIL CANVAZ

A TrainTrackers' Initiative

January 2025



25

Years OF KOLKATA METRO



2024 has been a year of celebrating milestones. The year gone by not only marked the completion of 40 glorious years of the country's first Metro Rail but also saw the Circular Rail of Kolkata completing 40 years of its dedicated service to the nation. In another remarkable landmark, the last year also witnessed completion of 162 Years of rail connectivity from Sealdah to Kushtia (now in Bangladesh) under Eastern Railway. While the Kolkata Metro itself being one of the zones of Indian Railways celebrated this remarkable feat in a pompous and grand way, Eastern Railway (ER) was also not to be left behind as it hosted the twin celebrations of Kolkata Circular Rail and the Sealdah-Kushtia (Ranaghat) Connectivity in two separate events. An account on the pair of commemorative events organized by ER for marking its twin milestones feature in this issue gives an insight of the celebrations that took place. On the Kolkata Metro front, **Justice Soumitra Pal** and **Anamitra Bose** canvasses on the historical and technological aspects of Kolkata's Lifeline since its formative years along with its week-long celebrations to observe the momentous occasion in their separate essays. Our Cover Story on Kolkata Metro comes full circle as **Rudranil Roychowdhury** pens a critical review on what plagues nation's first metro and what needs to be done to revive it lost reputation in 'Kolkata Metro-A journey from Zenith to Zero'.

Moving on, we have three very special articles in this New Year issue – one from **Anamitra Ghatak** about 'The Saga of WAM-2' Class Locomotives emphasizing on their history, efficacy, efficiency thereby brushing up our memory of those elegant machines and the other from **Mick Pope** on 'A Day at Dabhoi' with some amazing commentary on the Narrow-Gauge steams from yesteryears. The third most illustrious exposition comes from **Harsh Vardhan** about 'Taj Express – A Legend in Steam' which not only briefs on the legacy of the train being one of the earlier premier superfast intercity trains of the country but also talks us through the decline in stature of the train over the years.

Back to the present, **Somanko Tiru** drafts twin reports, one of which is about naming a WAG9 genre locomotive of South Eastern Railway – a first in SER while the other is on celebrating 15 years of the Howrah-Yeswantpur Duronto Express by a group of railfans. Next up, **Anamitra Bose** returns with his series on various metro systems of the nation with primary focus on Pune, Kanpur and Agra metros in this issue while **Arnab Acharya** takes us on a time travel to Jaisalmer's iconic 'Sonar Kella' and the national carrier's long association with it followed by **Kunal Gupta** reminiscing his childhood memories of rail travels in "My Childhood Train Journeys".

Talking of memories, 2024 was a memorable year for the Vande Bharat (VB) genre of trains as the country saw as many as 9 numbers of new VBs getting introduced thereby offering more options of connectivity across various routes along with launch of 20-Car Rake of VB on the Varanasi-New Delhi route. We have bouquet of photos and reports on these inaugurations from various rail aficionados across the nation. But one cannot help but find this spate of newly introduced VBs having some connection or other with the then impending Universal Adult Franchise in the states where their paths cross. Our national carrier has always been a key tool in our Dance of Democracy since the days of yore and VBs have not been any exception either as populist stratagem and tactical gambit continue to get precedence over rational and cogent measures. While VBs surely opens up new opportunities of quicker transfers but such upgrades at the expense of slowing down the existing Shatabdis, Jan-Shatabdis and Intercity Expresses is totally uncalled for. The eminent signs of a gradual decline in the craze for VBs in combination with a growing discontent amongst the populace about detention of other categories of trains to make way for VBs blatantly exposes the promotion of a class-divide by the national carrier unlike its earlier times.



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Prioritizing focus on VBs over safety in rail travel has indeed taken much of the sheen away from this 'Amrit Kaal'. Technologies are at one's disposal to achieve accident-free rail travel but the vision is all but somewhat blurred. Funding no longer remains an issue but intent is. The much touted 'Kavach Signalling System' has progressed at snail's pace as the promotional notoriety takes over with mere mention of Kavach on some locomotives together with providing media bites on trials for its next version – Kavach 4.0, only to leave the already sanctioned routes of Delhi-Howrah and Delhi-Mumbai 'Kavach-free', till date. Though it is baffling to anticipate the actual stand of IR on Kavach, ironically IR has also not shown any keen interest in adopting the ever-reliable ETCS Level-II for its pivotal routes despite it being put to use in RRTS already. IR is perhaps now busy fostering an approach about disseminating a rosy future without addressing the present pitfalls which include unpunctual services, soiled toilets with shoddy maintenance, unauthorized travel among others.

However, looking at the positives that the New Year 2025 has in store includes commissioning of the New Pamban Sea Bridge which is seemingly the first vertical lift sea bridge of the nation and introduction of rail traffic over the Chenab Rail Bridge which is iconic in its own right for being World's Highest Rail Bridge along with being World's Highest Arch Bridge. Thus, in 2025, Indian Railways is set to scale greater heights and achieve newer milestones with a major push in infrastructural development. This year also marks the centenary of Railway Electrification in the country which has immense historical significance. With the mission of cent percent electrification of railway network catching up a frantic pace, multiple celebrations are expected in the run-up to the marquee event. Apart from this, 2025 will also mark 70 years of South Eastern Railway on 1<sup>st</sup> August. On the global front, 2025 is also about 200 years of World Railways on 27<sup>th</sup> September. Thus, the year to date is going to be a year of significant milestones as well which may witness the introduction of Sleeper-version of Vande Bharat trains. The results will be there for display but from a commoner's point of view, a 'Safer Rail Travel' is all set to pose as IR's greatest challenge in the coming days. If IR can manage to get this monkey off its back to a greater extent, sooner rather than later, it definitely will draw more attention and garner appreciation from all corners. We hope this new year brings more joy than agony to all the rail travellers across the country.

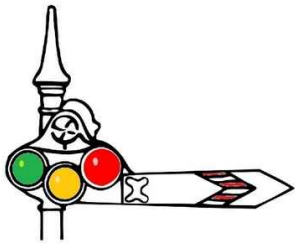
*Somsubhra Das*

Our Readers and Rail Users can ventilate their views and submit articles and writeups with relevant photographs for publication in the e-Magazine, if found apt at [railcanvaz@gmail.com](mailto:railcanvaz@gmail.com).



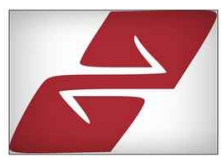
# RAIL CANVAZ

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inside stories

## Cover Features



**Kolkata Metro: A Pathfinder**  
Triumph of Skill and Innovation  
Soumitra Pal

17



**Metro Railway, Kolkata**  
A Journey from Zenith to Zero  
Rudranil Roy Chowdhury

24



**Kolkata Metro**  
Celebrating Four Decades of Trust & Service  
Anamitra Bose

33

## Exclusives



**Taj Express - A Legend in Steam**  
Harsh Vardhan

06

## Features



**Remembering 'Sonar Kella'**  
Arnab Acharya

13



**A Day at Dabhoi**  
Mick Pope

38



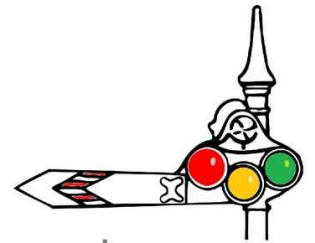
**The Saga of WAM-2**  
A Paragon of True Versatility  
Anamitra Ghatak

46



# RAIL CANVAZ

A TrainTrackers' Initiative



# insider stories

## Technical Insight

India – The Nation with Growing Metro Systems

Anamitra Bose



56

## Feature

My Childhood Train Journeys

Part-1

Kunal Gupta



51

Subarnarekha

Centenary Celebration of Electric Traction

Somanko Tiru



62

Train-18 Saga of Tatanagar

Story of Tatanagar's Vande Bharat Inaugurations

Somanko Tiru



66

Celebrating Milestones

With Grandeur & Style - The Sealdah Division Way

Somsubhra Das



75

## Photo Story

BGP-HWH Vande Bharat's Maiden Voyage

Somsubhra Das

70

VB Chronicles Speed Meets Legacy

Somanko Tiru

72

Celebrating 15yrs of YPR Duronto

Somanko Tiru

79

## Miscellaneous

Railway Sketches

44

Photo Junction

81

News Station

85



*Its Time to Act Now*



*Save Kolkata Trams*

Write to WB Govt. to revive this most eco-friendly mode of public transport

JOIN THE MOVEMENT WITH CTUA  
Calcutta Tram Users' Association







# TAJ EXPRESS

## A Legend in Steam

Harsh Vardhan

Harsh Vardhan is an eminent rail aficionado. Steam traction has been his subject of choice and forte. With Indian Railway's nonchalant attitude towards the steam traction – be it for maintaining them or preserving them, he joined forces with Ashwani Lohani and founded the Indian Steam Railway Society. English travellers and railfans, Brian and Marion Manktelow played pivotal roles in shaping his passion. The first order of business was to save WP 7015 & 7161 that had been dumped unceremoniously at Haridwar steam shed to rot at end of steam operations in the area in 1994. Since then, he has travelled around the world in search of steam and has authored several articles on travel, steam, heritage and history.

In the early 1960s, when many of the trunk routes of Indian Railways were still bidirectional single lines with semaphore and token signaling, the speed of even the most prestigious trains rarely exceeded 75-80 kmph. On most routes, the tracks were laid from sectioned rails on wooden or steel sleepers with hardly any ballast to speak of. A crossing on single line sections or even overtaking through loop lines took considerable time requiring slack time to build up in schedules.

Previously, Deccan Queen between Bombay and Pune was perhaps the first train to break the 100 kmph speed barrier with a top speed of 105 kmph on fully electrified double line route since the 1930s. However, the intervening war years put a brake on the further electrification plans. To cope with the losses during the war and to deal with the increased postwar traffic, a newly designed and more powerful steam fleet built overseas and at home was inducted in Indian Railways between 1947-59. Of these, the WP 4-6-2 express & WG 2-8-2 mixed traffic locomotive classes were the most numerous and best known examples. Although these were quite capable locomotives, the focus at the time was to cope with the increased traffic and rebuild the network for a newly independent nation rather than speed. With the arrival of early AC electric and diesel locomotives in the 1960s, Indian Railways once again started to look at ways to improve the average speed of its trains.

Central Railway, successor to the Great Indian Peninsular Railway (GIPR) took the lead in this direction. It was no coincidence since the GIPR had successfully launched and run many fast and prestigious train services in its heydays – the Imperial Indian Mail, Deccan Queen and the Bombay – Pune race trains to name a few. In the early 1960s, travelling between Delhi

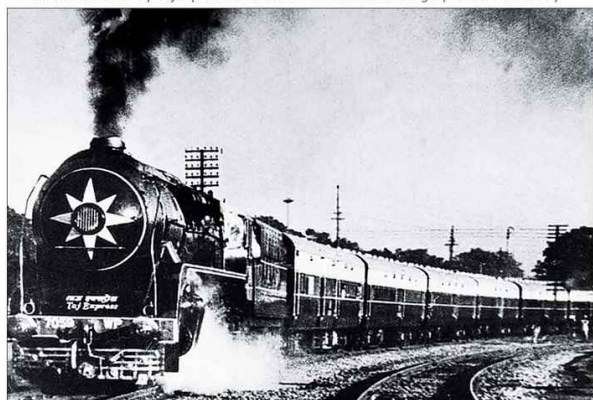


and Agra for sightseeing was minimum a two-day affair with most tourists preferring to use a taxicab, despite the poor roads, in order to maximize the time at Agra and be able to visit Fatehpur Sikri, located 37 Km away, in the same visit. Most day trains used to take between 3.5 to 4 hours between New Delhi and Agra Cantt. and that was not the only problem as most of these being long distance trains, it was nearly impossible to reserve seats in them at a short notice. The Central Railway officials had the job cut out for them!

On October 1, 1964, Central Railway inaugurated the 79 DOWN, 80 UP Taj Express between New Delhi & Agra Cantt., with only one intermediate stop at Mathura Junction. The train was to be hauled by a WP class 4-6-2 steam locomotive from its Jhansi shed based at Agra Cantt. shed on a weekly basis. Jhansi steam shed had built its reputation of rearing some of the best maintained locomotives in the country with many Black Beauty competition awards under its belt. Central Railway also believed in providing unique liveries for its famed trains and they chose a cream colour stripe on the top third and blue running on the bottom two-thirds on the coaches from top of the windows to bottom. The locomotives assigned to the train would have the same matching livery on the locomotive cab and tender. The train consisted of 10-11 coaches allowing the locomotive to accelerate quickly without slipping its wheels. There was one guard cum luggage van at either end of the rake which also had limited unreserved third class seating. An air-conditioned chair car, two first class non air-conditioned chair cars and four to five coaches with third class reserved seating accommodation completed the consist. In the early years, the train also had a dining car attached which was the fifth coach from the locomotive while heading towards Agra. The train was fully vestibuled except for the unreserved coaches at either end. All reserved passengers could make use of the dining car. In addition, the first class air-conditioned chair car passengers had been provided with folding trays in front so they could also eat at their seats, if they preferred; this was also a first of its kind arrangement.

Central Railway also collaborated with Tourism Authorities to

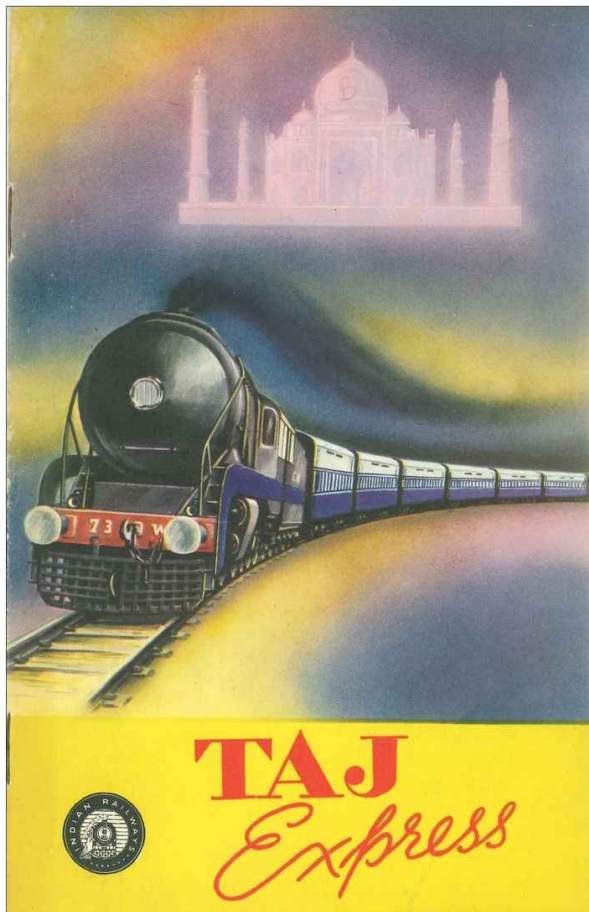
WP 7059 hauls the 80 Up Taj Express round a curve in this undated image. (Author's collection)



WP 7713 works hard to haul a fully loaded Taj Express at full speed in June 1982 (Courtesy: John Shields)

have them operate conducted tour buses as per the arrival and departure time of the Taj Express at Agra ensuring tourists a visit to all the important tourist spots and return the same day, if they desired.

Taj Express departed New Delhi station at 0700 hrs. every morning on its 195 km journey to Agra Cantt. in just over three hours, which included a five-minute stop at Mathura





# TAJ EXPRESS

## Introduction

**I**NAUGURATION of the Taj Express between Delhi and Agra from October 1, 1964, introduces a new concept in modern travel on Indian Railways. The need for fast, comfortable, medium distance trains enabling one day excursions between centres of tourist interest has been felt for some time. The world famous symphony in marble — the Taj — and other archaeological gems in and around Agra draw an endless stream of visitors from all over the world. For want of convenient trains, one day excursions from Delhi to Agra have not been altogether comfortable hitherto. The Taj Express is an endeavour by the Indian Railways to provide international and local tourists an opportunity to plan a one day trip from the metropolis to Agra in comfort. Leaving New Delhi at 7.00 hours in the morning, the tourist can be back home at 21.40 hours the same evening after a full day's sight seeing in and around Agra. Connecting this train, facilities for conducted tours to places of interest in comfortable buses have also been made available in conjunction with the Uttar Pradesh State Transport.

## Facilities on the Train

There are One Air-conditioned, Two First Class, Four Third Class coaches and Two Third Class-cum-luggage vans. In the Air-conditioned and First Class coaches adjustable chairs are provided. The Third Class coaches are also specially designed. The whole train is vested throughout.

### Cool drinking water

In each coach, stainless steel containers have been provided for storing cool drinking water for supply to passengers. Small paper cups are available for drinking water.

### Car attendant

An Attendant is provided in each coach to look after the convenience of passengers.

### Dining Car

There is also a well-equipped Dining Car on the train which serves both Indian as well as Western Style dishes to all classes of passengers. In Air-conditioned and First Class coaches detachable tables have been provided so that passengers can have their requirements while sitting in their seats.

## Facilities for Sight-seeing at Agra Cantt.

De luxe buses have been provided by the U. P. Government Roadways for taking the tourists around historical places in and around Agra Cantt. The charges for sight seeing to Sikandra, Itmad-Ud-Daulah, Taj and Fort are Rs. 16/- per head (inclusive

## Timings

The Taj Express covers the distance between New Delhi and Agra Cantt (195 KMs by rail) in 3 Hrs. and 10 Mts. It has been provided a brief halt at Mathura Junction. Detailed timings are as follows:

### New Delhi to Agra Cantt.

New Delhi	Dep.	07-00
Mathura Jn.	Arr.	09-00
	Dep.	09-05
Agra Cantt.	Arr.	10-10

### Agra Cantt. to New Delhi

Agra Cantt.	Dep.	18-30
Mathura Jn.	Arr.	19-19
	Dep.	19-24
New Delhi.	Arr.	21-40

## Rail Fares

Single journey fares for different classes are as shown below:

	Per Adult	Per Child
Air-conditioned First Class.	Rs. 25.50	Rs. 12.75
First Class.	Rs. 15.25	Rs. 07.75
Third Class.	Rs. 05.10	Rs. 02.55

For the facility of tourists specially designed Return journey-cum-reservation tickets from New Delhi

to Agra Cantt. only have been introduced for different classes with fares as shown below:

	Two single fares (Per adult)	Reservation + Fee (both ways)	Total = (per adult)
Air-conditioned First Class	Rs. 51.00+	Re. 1/-	= Rs. 52.00
First Class.	Rs. 30.50+	Re. 1/-	= Rs. 31.50
Third Class.	Rs. 10.20+	50 Paise	= Rs. 10.70

The return tickets will be available for return journey on the same day only.

## Procedure for Reservation

All accommodation available except Third Class accommodation in the Third Class-cum-luggage vans will be reserved. Usual rules regarding advance reservation will apply.

Reservation of Air-conditioned and First Class at New Delhi will be done in the Northern Railway's Reservation Office, State Entry Road, Connaught Circus. For Third Class, the reservation will be done at New Delhi Railway station.

The seat numbers are indicated on the reverse of the tickets. The same seat will be available for return journey in case of passengers holding return journey tickets.

For single journey, reservation facility will also be available at Agra Cantt.

of Lunch tea, entrance fee to the monuments and the Guide fee). An alternative itinerary which includes a trip to Fatehpur Sikri, Taj and Fort costs only Rs. 18/- per head inclusive of Lunch, tea, entrance fee to the monuments and the Guide fee.

Two specially designed buses for a cheap conducted tour without refreshments, but inclusive of Guide and entrance fee to the monuments, have been provided by the U. P. Government Roadways, the charges being Rs. 5/- per head for the local sight seeing and Rs. 6/- per head for a visit to Fatehpur Sikri, Taj and Fort.

Tickets for buses can be had at special counters either in the Northern Railway's Reservation Office, State Entry Road, Connaught Circus, New Delhi (in case of Air-conditioned and First Class passengers) or at Agra Cantt. station itself.

## Retiring Rooms at Agra Cantt.

For the convenience of those who desire to stay back at Agra Cantt. well furnished Air-conditioned Retiring Rooms, as well as non-air-conditioned rooms are available. Charges for the Retiring Rooms are as shown below.

### I. Air-conditioned Retiring Rooms (Two rooms with two beds in each)

- i) Rs. 10.00 per bed for a period of 24 hours or part thereof.
- ii) Rs. 20.00 for two beds for a period of 24 hours or part thereof.

- iii) Rs. 5.00 for each additional adult and Rs. 3.00 for each additional child between the age of 3 and 12 years for a period of 24 hours or part thereof when the whole room is occupied by a party.

### II. Non-air-conditioned Retiring Rooms (Three rooms with two beds in each)

- i) Rs. 5.00 per bed for a period of 24 hours or part thereof.
- ii) Rs. 10.00 for two beds for a period of 24 hours or part thereof.
- iii) Rs. 2.50 for each additional adult and Rs. 1.50 for each additional child between the age of 3 and 12 years for a period of 24 hours or part thereof when the whole room is occupied by the party.

## Cloak Room & Locker Facilities for Passengers at Agra Cantt.

Adequate cloak room facilities are provided at Agra Cantt. A locker which a passenger can lock and retain the key is also provided for keeping valuable articles. The charges for the locker are 50 Paise per locker per 24 hours or part of 24 hours subject to a minimum of Re. 1/-.



Junction for locomotive watering and maintenance. To achieve that, the train would need to maintain an average speed of 65 kmph. In its earlier years, the timetable slot provided to the train was clear of any encumbrances barring any slowdowns for caution orders. However, by 1978, the Taj Express sometimes had to be consigned to the loop lines at an intermediate station for the humiliation of an overtake by one of the prestigious but late running combination of Andhra Pradesh/Karnataka-Kerala/Tamilnadu express set of trains. To add insult to injury, no extra time was provided for this in the schedule.

By the time Taj Express was introduced, the WP locomotives had already been in service for more than 16 years and had proven themselves well. However, the 157 km distance between New Delhi and Mathura was on the upper side of what these locomotives were accustomed to for a non-stop run in absence of any special facilities. The Central Railway kept two specially prepared WP Class Pacifics to work the daily return service of Taj Express and maintained a supply of special low ash, high calorific value coal at its Agra depot for these locomotives.

The account below is in the words of late Shri S.K. Kashyap, who had the privilege of being the Grade I fireman on Taj Express, and amplifies the tribulations and triumphs of his job.

"It is a fine autumn day and my watch shows 0658. The deafening roar of steam from the safety valve of WP 7656 rudely cuts across our conversation. Somewhere down the platform, a whistle blows and the driver of our train yells, 'Starter signal Right!' With a short acknowledgement on the whistle, he gently pulls open the regulator. The exhausted vapour from the cylinders engulfs the platform and the locomotive eases its eleven-coach train away from Platform No. 2 of New Delhi winding over the points and crossings and up across the Minto Bridge. Looking back from the cab and ensuring the last coach had crossed the points and on the mainline, the driver increases speed. Passing Tilak Bridge with the regulator now fully open, the driver gradually reduces the cut off to 25% until at Hazrat Nizamuddin, when we are doing 95 kmph. We pass Tughlakabad at 0727 but just before the Junction cabin, we spot a yellow arrow shaped caution indicator. I immediately turn the injector on to feed water into the boiler and stoke a few shovels of coal into the firebox, before the driver turns off the regulator. The caution indicator was an advance warning that a speed restriction lay ahead with the figure 20 speed mentioned on OPT-80 caution order given to us at New Delhi. Driver closes the regulator and with his hand on the brake valve, he begins to gradually destroy the vacuum in the brake cylinder. Applying the brakes and slowing down, the train passes the restriction gently at the prescribed speed. Soon, we come upon the 'TP' (Termination of restriction) sign and we begin accelerating as soon as the train has cleared. The throttle now fully open, the WP awakens and we reach 105 kmph with our 450 ton train swaying gently on the tracks behind



WP 7066 is seen with a matching livery rake near Agra in 1982, the final year of it being powered by steam (Courtesy: John Shields)

us. This is the maximum permissible speed for any steam hauled train in India!"

"While approaching a station the driver calls out 'All Right' and I put in a few quick shovels of coal in the firebox and by the time the driver calls out 'Home Right', I closed the fire box so that our train would thunder across the station without any smoke. It must have been a wonderful sight for anyone at Hodal station with the train running through at full speed. Up until now, I had been working hard firing mostly into the back of the firebox and keeping one injector on to feed water continuously into the boiler all the time while the regulator was open. Amidst all this, I also found time to keep the dust down by spraying water on the coal in the tender and made an effort with the hand brush keeping the footplate clean and free of coal. While doing all this, I was always on hand to spot signals that were more easily seen from my side of the cab. Though the Driver's job is important no doubt, the loco crewmen believe that firing remains the toughest footplate job and locomotive firing is a form of dance. I used to enjoy my work as a fireman and our camaraderie on the footplate. At the end of a hard-earned day, I could lie on a bed of stones and pass out in no time."

"Through Kosi Kalan & Chata, we storm past at 100 kmph

The fireman of WP 7713 is installing the headlamp for the evening run of 79 Down Taj Express from Agra Cantt. to Delhi in December 1980. To prevent theft, the lamps were kept in custody of the driver to be installed only when needed! (Courtesy: Harsh Vardhan)







*Taj Express headed by WP 7656 in full regalia is consigned to the loop line on June 8, 1981 for an overtake by diesel hauled 122 Up Tamiraparani Express to Madras that ran non-stop till Jbana) at that time, a distance of 314 Km (Courtesy: Pete Hackney)*



*WP 7713 rounds the curve with its eleven-car, matching livery rake in tow to bring the 80 Up Taj Express into Agra Central station in January 1981 (Courtesy: John Whiteley)*





WP 7733 has been turned out really nicely for heading the 80 Up Taj Express from Platform No. 1 of New Delhi at the break of dawn on December 1981 (Courtesy: Harsh Vardhan)

only a minute behind. At this point we are on full regulator, reverser lever is set at 20% cut off and the pressure in the boiler is just below the safety valve blowing off pressure of 13.5 bar. With an easy straight road ahead of us with no serious gradient, we move faster and faster, touching 110 kmph, before the regulator was shut down for passing through Vrindaban Road. Here we are 30 seconds early from the schedule time. But then, another yellow arrow shaped caution indicator warned us about an approaching speed restriction. This time, the restriction was 50 kmph. After crossing this kilometer long restriction, we set about recovering the three minutes that were lost. Once again, the team triumphed, for running a locomotive is teamwork and with a clear track and perfect understanding between Driver and Fireman, 7656 WP began to win back the lost time, seconds at first and then minutes, so that the Taj Express pulled into Mathura Junction a bare 60 seconds behind its schedule time."

"At Mathura, I climb atop the tender to fill it up as much as possible during the short stop. Our driver is extremely skilled to stop just beneath the water column so no further time is wasted in uncoupling the locomotive for watering. While the tender is getting filled, I take a peek at the ash pan to empty it while the driver is busy applying lubricant oil to the motion parts. We also find time to pose for a photograph with some tourists and before long, it is time to get going again."

"The final 53.8 km from Mathura Junction to Agra Cantt. have to be covered in 50 minutes, but this is an easy proposition as there are no temporary speed restrictions and we have a clear track with all upper quadrant semaphore signals now in our favour. Soon, speed is again 100 kmph and the exhaust from the chimney was cutting the autumn air with a rapid and crisp beat as 7656 rode superbly. Baad, Farah, Kitham, Billochpura and Raja ki Mandi, all too familiar names flashed by and incredibly soon, the regulator closes and the brakes are being gently applied so that we come slowly round the curve into Agra Cantt. station. My watch says 1009, just a comfortable 60 seconds early! We



80 Up Taj Express awaits departure signal to clear at Mathura Junction in December 1981. The locomotive is WP 7713 which was built by Chittaranjan Locomotive Works in India in 1965 (Courtesy: John Lacey)

had used some 5500 Gallons of water and 4.5 tons of coal and a whole lot of chutzpah to make it all happen!"

For next 16 years, the Taj Express ruled as one of the top short distance day trains of Indian Railways. For steam, WP class locomotives and Indian Railways aficionados from around the world, this was the epitome of Indian steam railway. Even for the British railway enthusiasts, usually intent on discovering the remaining jewels from Raj, a trip to Agra was not just to see the Taj Mahal but their check list also included witnessing the Taj Express behind the 'Americanised design WP locomotive!

Eminent Australian railway enthusiast, the late John Lacey rode the Taj Express in both directions in December 1980 and shared these notes. "The Taj Express was a really impressive train connecting Delhi and Agra and surprisingly still running on steam power in the early 1980s. The train made only one stop enroute, at Mathura, where water was taken and the locomotive was checked and oiled. The train had reserved seats in Air-conditioned First Class, First Class, a Restaurant Car and wooden seats in Second class. The train was amongst a small group which were permitted to run at 110 kmph, which was 10 kmph faster than other trains at the time. I spotted the driver at Mathura Junction while he was doing his checks and tried to engage him. The locomotive was WP 7713, which was built in India in 1965.

Taj Express headed by WP 7158 is seen skipping Hazrat Nizamuddin station in this undated image (Photographer unknown, Author's collection)





The eye-catching decorations and condition of the locomotive reflected the pride that railways and the staff took in their locomotives and trains in those days. The start from New Delhi was 9 minutes late, and this deficit, plus a further 7 minutes were gained by Mathura. The 141 Km occupied 106 minutes, with 96 Km covered in 58 minutes. There were many speed restrictions beyond Mathura for electrification work. On the return leg, WP 7713 arrived at Agra Cantonment station from the loco siding ready to back on to the coaches of the Taj Express. The train from Agra to New Delhi ran in the evening and allowed a full day's sightseeing in the city of the Taj Mahal for those who wanted to make only a day journey." John was so impressed by this ride on Taj Express, the only time under steam power, that he used the locomotive's running number 'WP7713' as his moniker in the internet age!

Soon however, the tide began to turn when steam locomotives were rendered surplus from electrification of major suburban routes and all prestigious trains were getting dieselized one by one. In October 1982, the Taj Express was also provided a WDM2 diesel locomotive link thus ending a glorious chapter of this famed steam hauled train. This was not just the end of steam haulage for this train, special to many, it was also the start of the decline of this once well-

known and popular train service. Before long, more stops were added and the train was extended first to Gwalior in 1985 and then to Jhansi in 2006. The diesel haulage for this train also lasted a few years and eventually gave way to electric traction by 1986. The final nail in the coffin of Taj Express was the introduction of Bhopal Shatabdi in July 1988 when this train was relegated to tier-two status.

Although the Taj Express runs to this day, it is only a faint image of its former glory days.

*All photographs provided by the author & are copyright protected.*

*Taj Express - CR Promotional Booklet photos from personal collection of the author.*

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*80 Up Taj Express approaches Raja Ki Mandi station on November 6, 1978. While the locomotive in charge, WP 7733 has been turned out nicely, the same cannot be said for the rake of the prestigious train that normally carried a uniform rake in 'Taj livery' matching with the locomotive. Assuming that the regular rake was out for maintenance on this occasion, Central Railway cobbled this makeshift rake. Mark climbed a signal to take this image but was only half way up when it arrived at speed. Members of Laurie Marshall's first Great Indian Train Journey were onboard. (Courtesy: Mark Carter)*





जैसलमेर  
JAISALMER  
RAIL LEVEL ABOVE M.S.L. 736 FT. 224 M.

# Remembering 'Sonar Kella'

Arnab Acharya



Arnab Acharya

An IT manager by profession with over two decades of experience, he is based in Bangalore currently. Have been an ardent rail-fan for aeons, Tram-fan, Calcuttan at heart, fan of RD Burman, adda-fan and many more such eccentricities. Having grown up near the crossing of the NJP-Bengdubi BG track and the erstwhile Siliguri Jn-Katihar MG track and some inheritance from his father, he could not help but become a rail-fan, albeit a naïve one to start with. He is also a member of IRFCA and CTUA.

1974 was the year of Operation Smiling Buddha or conduct of first nuclear test by India in Pokhran. The second major event in India though was also based on Rajasthan but in the completely different arena of cinematography – the release of the evergreen and famous movie 'Sonar Kella' by the multi-talented maestro Satyajit Ray. As most of you know, the movie was based on his own detective thriller of the same name involving Feluda, Topshe and introducing Lalmohan Babu alias Jatayu. Those of us who have watched this timeless classic know its charm. Here, I set foot on the path the film took, after half a century and see for myself what lay in store.

Firstly, it was always a proud moment whenever the film Sonar Kella was brought up in Jaisalmer, every local citizen recognized the film. In fact, why not, when the film has been hugely instrumental in getting the tourists over! The Jaisalmer railway station seems to lie some three hundred odd metres from the main thoroughfare. Once you walk down the station road, you find that the ticket counters are halfway and the new station building coming up is at three hundred metres. By another hundred metres, you arrive at platform no.1, but, first, the ticket counters. The current building seems pretty new, maybe five years or so at most. I could not find remnants of any older building though. There is a board in Hindi outside this building, some of it hiding behind passenger seats, which showed seven pairs of trains that ply from Jaisalmer. With a huge influx of tourists, both domestic and foreign, and the state's dependence on them, one would have expected a board in English at least! Harking back to 1974, one cannot help but compare the two metre gauge Jodhpur-Jaisalmer passenger services with the growing number of express





Photo Courtesy: Arnab Acharya

services now, all broad gauge, with only one passenger service numbered as 04825/26. When I went to buy a platform ticket, I was told the counter does not open before 10 am!

Once you walk towards the new building, you are able to see the path taking a slight left turn, slowly revealing the station. Once you reach platform no.1, on your right, you can see the present station with pillars topped by the typical Rajasthani chhatri structure; the building is painted in light yellow with a bright brick red border. This gives the station a local and unique vibe, both at the same time. On the left, all the tracks go beyond greenery and terminate as this is the last railway station in this part of the country. The best view, of course, is the view of the Sonar Kella, slightly towards the left but in front of you a few kilometres away, shining bright. The beauty of it towering well above the trains is a treat for the eyes!

Walking down the platform no.1 all the way to your right, the present station is there for you to savour in all its quiet beauty though being just a one-storeyed structure. Even then, do not mistake it to be a quaint wayside station! It is

Photo courtesy: Subhadyouti Bose.



Photo courtesy: Subhadyouti Bose.

larger but dwarfed by the three-storeyed building coming up right behind. Lots of labourers were working as you could fathom from the noise coming from there. All the tracks come together to merge and leave, as a single track. Around this spot stood a three-coached, maroonish red coloured Accident Relief Train 'DMU'. There are no signs of electrification in Jaisalmer, when I had visited; but, more on that in due course.

Now, if you turn towards the fort, and try to imagine Feluda's train entering Jaisalmer and the trio gazing at Sonar Kella in the distance; you would see the same sight. Just ignore the modern trains and platforms below the fort, though! The station has three and a half platforms now and three more tracks with the furthest one half a kilometre away where four AC and one luggage coaches were parked along with a small flat wagon and a large caboose. The track before that is almost four hundred metres away with mostly bare spaces in between that may likely be used for future extensions. Imagine trains running to Katra, Dibrugarh, Trivandrum, Patna, Pondicherry, Hyderabad, Bangalore. Quite absurdly, the weekly Howrah-Jaisalmer Express got rerouted to

Photo courtesy: Subhadyouti Bose.







Photo Courtesy: Arnab Acharya

Bikaner - after an initial rerouting to Barmer, if I recall right which maybe due to insufficient patronage or due to other reasons. I was able to spot the parked Utkrisht rakes of the Runicha and Leelan Express, both with Bhagat-Ki-Kothi WDM2s attached. The rake of Leelan was parked on platform no. 3 while that of Runicha lay on the unmarked track beyond. It is noteworthy is that Leelan comes in at 0500 hrs. at Jaisalmer and leaves as the Jaisalmer-Lalgarh Express at 1100 hrs. Similarly, the Lalgarh-Jaisalmer Express arrives here at 1340 hrs. and leaves as Leelan at 0030 hrs. Runicha also has rake-sharing, with Himachal Express. There is a single overbridge now, located near the sole station entrance. The entire Jodhpur-Jaisalmer section still remains single-track and is getting gradually electrified.

Next, I tried to find the spot where the three-camelled-train, taken by the Feluda trio, tried to meet and stop the Jaisalmer-bound passenger. This turned out to be quite impossible with so much of greenery that had encapsulated parts of the desert. I did manage to locate the likely spots but, sorry, could not conclusively say which was specific spot. In Ray's 'Ekei Bole Shooting', the only hints are: 'the spot was seventy miles east of Jaisalmer and twenty miles

Photo Courtesy: Arnab Acharya



Image Source: Internet

from Pokhran and the camels were sourced from a village named Khachi seven miles east!' This was where the famous train and camels' shot was taken across two days and four retakes. I could not help but feel a tinge of sadness and regret at my inability to locate the spot but it was also unfair of me to expect my fellow Rajasthani citizens to suffer the extreme heat and the problems that came with it, for only just that I could enjoy my trip as a tourist! Also, there were electric poles all along the track on this stretch though the track remains to be wired. On a lighter note, trying for tea with camel milk did not work as the milk was a restricted commodity!

Next on the list was Ramdevra. This was the station where the film takes us during the day time when the imposter 'Dr. Hazra' drops his associate Mandar Bose, enacted by the inimitable Kamu Mukherjee as Feluda, Topshe and Jatayu wait for the night passenger to Jaisalmer during night. In fact, the same train used during the famous train and camels' shot was used for the shooting here at night! Our cab driver had a tough time locating the station which included a couple of wrong turns. I cannot blame him, as few passengers have such weird asks that I had as a railfan. The

Photo Courtesy: Arnab Acharya







Photo Courtesy: Arnab Acharya

tourists take one of the three tolled metalled roads between Jodhpur and Jaisalmer and they do not care about Ramdevra. On the other hand, the pilgrims that come to visit Ramdevra invariably take the trains, which are usually very crowded till Ramdevra.

However, after driving through the shop-filled-road through the pilgrim town and reaching the station, there were few signs of recall! The road tilted slightly left and the station building stands right in front of you. This is the spot where the impersonator 'Dr. Hazra' drops Mandar Bose. Apart from that, all else has changed. Next were few surprises; one, we were able to buy platform tickets from an ATM-like kiosk, via UPI. Two, the railway staff who was working the kiosk blurted out that people usually do not buy platform tickets here! I would not interpret that as a sign of ticketless travel though as only traveling passengers buy tickets. Thirdly, there was a ramp for wheelchair-bound passengers, which was very rare in desolate stations of Indian Railways, even in this day and age! There was a board mentioning trains from Jodhpur towards Marwar and Ahmedabad.

As we entered, we could see the electrical wiring in progress with the single-coached rake slowly working its way towards Jodhpur. Needless to say, Ramdevra was close to being fully electrified. Even the Station Master confirmed the same, the deadline for Ramdevra being 31<sup>st</sup> March 2024. Again, another surprise - the Station Master was oblivious of Sonar Kella, though he remained respectful about it. In fact, when I told him in some detail how the station used to be in 1974, he was quite taken aback! I hastened to add that it was all from my memory of the film. Maybe, you will not blame me for trying to find the old gas lights with glasses on all sides and 'Ramdevra' written in Devanagari script in red. Also gone are the old seats. The platforms are higher with the gauge conversion having completed. The station building extended towards Jodhpur for quite some distance as well and contained chhatris on the top of its pillars. Here, I should also mention Ujir and his brother that run one of the two tea shops. Surprisingly, the tea was good too; unlike other station teas that I have had so far. In fact, Ujir took it upon himself to take me to the Station Master and even show me

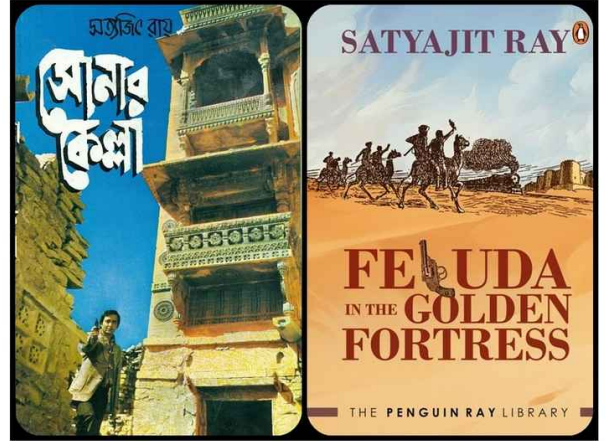


Image Source: Internet

around.

It was almost half past noon and platform no.1 was filled with sufficient passengers that were waiting for the 14703 Jaisalmer-Lalgarh Express, expected around 1310 hrs. The platforms are long enough to hold eighteen coached trains. The station was also very clean with 2 overbridges at both ends. There is a soft upgradation of the station in progress. The station stretches equally on both sides of the entrance and has two platforms and one through track. However, on both sides, the tracks slightly curve. I recall, probably in Jolarpettai, similar curves were straightened out, allowing through passing trains to maintain their high speeds, thus reducing journey time. Maybe that will take some time to happen here as this was secondary territory. Why? Resonating with the present viewpoint of definition of development in railways which includes hundred percent electrification and LHBfication, there were no sings here. All services originating/terminating from Jaisalmer had Utkrisht rakes instead of LHB ones, though LHB rakes were running from Jodhpur and electrification was yet to be fully completed over the entire stretch.

I could not but help feel a bit of sadness at finally covering all that I wanted to, from the evergreen Sonar Kella. Undeniably, there was also a sense of elation at having achieved my dream of following the maestro in his footsteps from the film.

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Photo Courtesy: Arnab Acharya





# Kolkata Metro : A Pathfinder Triumph of Skill and Innovation

Soumitra Paul



Mr. Soumitra Pal is a retired Judge of the Calcutta High Court and a former Chairman of the West Bengal State Administrative Tribunal (SAT). A passionate rail enthusiast, he is also a meticulous writer and researcher, specializing in the history of railways. With a wealth of experience and captivating stories to share, his notable works include *Genesis of a Railway Terminus: Hourah, 1844-1854*.

Rail services in Eastern India started on 15<sup>th</sup> August, 1854 with the first train chugging off the Howrah Station to Hooghly, a distance of 24 miles, on a 5'6" gauge designed by Lord Dalhousie. The success of the railways led to its rapid spread. Soon, in 1855 it was extended upto Burdwan under the East Indian Railway (EIR). In 1862, on the other bank of the Hooghly, the first train ran from Calcutta (now Sealdah station) to Ranaghat under the East Bengal Railways (EBR). In 50 years' time, railways had spread far and wide bringing within its fold many mofussil towns around Calcutta. As quantum of passenger traffic grew, the steam drawn passenger trains became unable to cope with the demand, thereby paving way for introduction of the first EMU services in 1957 between Howrah and Seoraphulli which was later extended to Burdwan. In 1960s, EMU service was started to Krishnanagar in Sealdah division & Kharagpur in SER, boosting inter-town traffic that smoothened the passenger traffic to Calcutta which had already turned into an overpopulated city facing traffic bottlenecks. In February 1969, the Metropolitan transport team of the Planning Commission suggested a full-time organization to survey the transport situation in Calcutta and in other metropolitan cities to make recommendations thereby resulting in the setting up of an organization – Metropolitan Transport Project (Railways) or MTP(R), in Calcutta in



**Calcutta City Rapid Transit Line from Dum Dum to Tollyganj—Alignment and Station Locations**



**Salient Features of Rapid Transit Line from Dum Dum to Tollyganj**

Route length—16.43 km  
 Number of Stations: Surface 7, Underground 16, Total: 23  
 Distance between stations: Maximum—2.24 km between Belgachia and Dum Dum Jn, Minimum—0.58 km between Chandni Chowk and Central, Average—1.02 km

Year	Services planned	Peak hour frequency	Trains per day	No. of passengers per day
1979	150	24	31	1.12 million
1980	170	28	36	1.53 million
1990	186	31	42	1.79 million

Number of coaches per train: One  
 Number of classes: —One  
 Carrying capacity: —Standing 258, —Sitting 62  
 Fare: —Total: 500

Speed: Maximum—80 kmph, Average—33  
 Voltage: 750V DC, Method of current collection—Third rail

Station	Coordinates
Dum Dum	22°52'N 88°25'E
Belgachia	22°52'N 88°25'E
Tollyganj	22°52'N 88°25'E

Underground Station: Two-Storey, 4.6 metres below road level (412.8) and walk the distance. The main arteries leading from Howrah and Sealdah stations to the B.B.D. Bagh-Burrabazar areas present, on week days—especially during peak periods—a striking spectacle of pedestrians in continuous streams, scurrying towards their destinations. The sight is not uncommon in many other thoroughfares in Calcutta.

December 1972  
 Produced by Metropolitan Transport Project (Railways), Calcutta and printed at The Indian Press, Calcutta

## RAPID TRANSIT SYSTEM FOR CALCUTTA

## RAPID TRANSIT SYSTEM FOR CALCUTTA

*Brochure printed for Calcutta citizens by MTP authority*

**Rapid Transit System For Calcutta**

**GROWTH OF A CITY**  
 Calcutta, the chance-directed, chance-created city of Job Charnock, which in 1690 was only a cluster of three small villages, has grown in strategic, political, and commercial importance into a sprawling metropolis, with links, through a wide network of roads and railways, with all parts of the country, served by a major inland port, and the Howrah and Sealdah stations—on either side of the river Hooghly—it has become the hub of a busy industrial complex, with a heavy concentration of population, which in the last five decades has risen from 2.25 to 7.3 millions. To add to this, job opportunities attract to it a vast number of commuters during the daytime, who disperse again into the suburbs by night. Long-distance passengers from other States further inflame the seeming mass of humanity within the city precincts.

**FORMS OF MASS TRANSPORT**  
 The first form of mass transport appeared within the city of Calcutta in the shape of horse-drawn trams. In 1902, electric trams, as seen on the streets today, were put into service. According to one report, Calcutta had its first automobile in 1881. The Tramway Company and the Walked Company ran public bus services in the city for a while. Individual private bus owners began to operate in 1922. With the formation of the Bengal Bus Syndicate, the running of private buses was placed on a sound footing. On 31st July 1948, with a small fleet of 25 buses, the West Bengal State Transport Corporation started its services in the city, which in the course of two decades, has spread over most of the intra-city routes. Mini-buses are the latest addition to the city's transport fleet.

**SITUATION TODAY**  
 All these are not, however, adequate to meet the needs. Lengthy queues, long waits at stops, acute discomfort, perilous footboard travel, irritating, loss of invaluable time—these are regular features of a journey by bus or tram in Calcutta, specially during the peak-hours. Hundreds and

thousands choose to avoid the hazards of such a journey, and walk the distance. The main arteries leading from Howrah and Sealdah stations to the B.B.D. Bagh-Burrabazar areas present, on week days—especially during peak periods—a striking spectacle of pedestrians in continuous streams, scurrying towards their destinations. The sight is not uncommon in many other thoroughfares in Calcutta.

**THINKING ON THE TRANSPORT PROBLEMS**  
 Transport bottlenecks in the country have been continuously exercising the minds of the Government, planners, and transportation experts. Different Committees went into the various problems, and made many suggestions. In terms of the recommendation, in February 1969, of the Metropolitan Transport Team of the Planning Commission, a full-time organization, known as the Metropolitan Transport Project (Railways), began to function at Calcutta in July 1969. This Organisation submitted its report in October 1971, recommending a North-South 16.43 km Rapid Transit System (RTS) from Dum Dum to Tollyganj, which was also the recommendation of the team of Soviet Consultants, who had come to Calcutta to advise the MTP in this regard. With the approval of the Planning Commission, the Central Government gave the green signal to the project at an estimated cost of Rs. 140.3 crores.

**THE RTS LINE**  
 The rapid transit system from Dum Dum to Tollyganj will be a double track railway line, covering a route length of 16.43 km. A 1.5 km stretch from the Dum Dum end will be on the surface, while the remaining will be underground. It will have 17 stations, viz: Dum Dum, Belgachia, Shyam-bazar, Sovabazar, Girish Park, Mahima Gandhi Road, Central, Chandni Chowk, Esplanade, Park Street, Maidan, Rabindra Sadan, Bhawanipur, Jatin Das, Park, Kalighat, Rabindra Sarobar, and Tollyganj. The average distance between two stations will be 1.02 km—the minimum being 0.59 km between Chandni Chowk and Central, and the maximum 2.2 km between Dum Dum and Belgachia.

**PROPOSED SERVICES**  
 During the rush hour, it is planned to run 24 trains per hour (with intervals of 150 seconds) in each direction in 1979. In

1983, the proposal is to run 28 trains (with intervals of 1281 seconds), and in 1990, 31 trains (with intervals of 116 seconds). The halt at each station will be half a minute. The running time from Dum Dum to Tollyganj will be 30 minutes, from Dum Dum to Esplanade 17 minutes, and from Tollyganj to Esplanade 13 minutes.

311 trains per day will be run in one direction in 1979, 374 in 1983 and 429 in 1990. These trains will run from five o'clock in the morning to midnight, after which the trains will be sent to the Depot for maintenance. Each train will have eight cars, with one class of travel only. The maximum carrying capacity per car will be 320 passengers, and the maximum speed 80 kmph, the average speed including station-stops being 33 kmph. The halting time at each station is 30 seconds. The driving cabs of the underground trains will have miniature signal boards, and automatic over-speed control. Ultimately, trains will be run by remote control. The

*An artist's impression of an underground station*



power will be electric, drawn from the Calcutta Electric Supply Corporation, the alternative sources being the West Bengal State Electricity Board and the Damodar Valley Corporation. Though the fare level has not yet been fixed, it is likely that the journey by RTS trains will cost the passenger an average of 30 paise per trip.

**CONSTRUCTION**  
 Six to seven years will be required for constructing the 16.43-km line, which will be overground for a distance of 1.5 km from Dum Dum. The next 1 km, up to the Chitpur Railway Yard, will be shallow underground. Further 1 km will be drive-tunnel, laid at a depth of about 18 metres. The rest of the line, from Shyamabazar to Tollyganj, will be shallow underground, and will be laid at an average depth of about eleven metres. The line will run under the north-south main roads, along Bhupen Bose Avenue, Chittaranjan Avenue, Jawaharlal Nehru Road, Ashutosh Mukherjee Road, Shyama Prasad Mukherjee Road and Deshpandya Sathmal Road to Tollyganj (near Tram depot). The method of construction is known as 'Cut and Cover', in engineering parlance. When the work is in progress on a particular section, vehicular traffic on the roads on that section will be diverted to alternative roads.

The physical work of construction of the tunnels, and the lines will be in full swing, from early 1973. By 1974, work will be taken up on the length from Dum Dum to Rabindra Sadan. By 1975, the work on the remaining section from Rabindra Sadan to Tollyganj will also get into stream. A short length is expected to be ready for the running of trial trains during 1978, and running of trains carrying passengers is expected to start by 1979.

**LOOKING AHEAD**  
 During the construction period, however, the citizens of Calcutta will have to put up with considerable inconvenience and disruption in their civic life. But these will pale into insignificance with the completion of the Rapid Transit Line in Calcutta, which gives the country its first intra-city underground railway, ultra modern in character and highly utilitarian in service. It is the culmination of the sustained efforts, over the years, of the country's planners to find a satisfactory answer to Calcutta's chronic and ever-mounting transport problems. The day ahead promises to be bright. Meanwhile, the present dawn is radiant with new hope.



July 1969. An agreement was signed with a consultancy firm of the Soviet Union whose experts visited Calcutta. Meanwhile the engineers of MTP(R) visited metro-networks of other countries. Ultimately recommendation was made for construction of the first Rapid Transit System (RTS) line from DumDum to Tollygunj which received the green signal from the Union Government in June, 1972. The MTP(R) started the work in right earnest by setting up offices on rent in the Martin Burn building in BBD Bag and at the then Ranji Stadium at Eden Gardens, Calcutta. A large construction depot was setup at Brace Bridge on a land provided by the Kolkata Port Trust. The length of the line from DumDum to Tollygunj was 16.43km of which 1.5km was planned to be on the surface. A total number of 17 stations were planned – 16 underground and one on the surface. The average distance between two the stations is 1.02kms. The stations were planned to be in two tiers – "concourse", to be reached down by a flight of stairs situated between the road and the platform, having booking counters and checking gates of tickets which would be the gateway to the platform. Since electricity drives a system, to assure its steady supply, plans were drawn up to have electricity from Calcutta Electric Supply Corporation (CESC) at three different receiving stations located at Shyambazar, Central and Jatin Das Park stations. Each of these stations was to draw power from CESC, DVC and West Bengal State Electricity Board (WBSEB). Three phase power at 33KV obtained from CESC was planned to be converted into 750V DC supply for running the trains. This 750V DC supply was to fed through a third rail which was to be insulated from the ground and placed by the side of the running rail track inside the tunnel. To make the journey comfortable, particularly during summer, partial air-conditioning and specially designed ventilation system was planned. Since earlier, an underground railway was ruled out in Calcutta for its worst soil conditions, comparable to Osaka, extensive soil tests were carried out all along the alignment. The total cost of the project was estimated at Rs. 140.3 crores. The foreign exchange content was to be 23.7 crores for the import of components for coaches manufactured indigenously by the Integral Coach Factory and for electrical, telecommunication, signaling and control equipments. The expected year of completion was 1979 when the daily traffic was estimated at 1.12 million passengers. Further, the passenger traffic was estimated at 1.53 million in 1983 and 1.73 million in 1985. The fare, though not fixed, was to be 30 paise per trip. The 'cut and cover' method was to be adopted for the stretch from Shyambazar to Tollygunj and tunnelling was planned under the Chitpur railway yard.

It was on 29<sup>th</sup> December, 1972 that the foundation stone of the subcontinent's first underground RTS or metro from Tollygunj to Dum Dum in Calcutta (now Kolkata) was laid by the then Prime Minister Indira Gandhi who said it would herald "a new era, a new life" in the city and "urged" all its citizens to bear with "patience the marginal troubles that might crop up when the work on the underground starts.

Calcutta, which had been a city of procession, is now a city of development and progress", she added. Newspapers carried supplements under the heading 'Rapid Transit System for Calcutta'. While S. S. Mukherjee, General Manager of the MTP(R) wrote an article in detail covering all aspects of the project, J. N. Roy, Chief Project Engineer of MTP(R) penned down an article on its engineering aspects enlightening the citizens about all its aspects which is rare nowadays. In an advertisement as MTP(R) stated, "The Calcutta underground becomes a reality" while the Eastern Railway conveyed, "Our fraternal greetings to the new project" heralding "A new partner is born" followed by the South Eastern Railway greeting MTP(R) as a "Welcome partner to a common endeavour".

It was indeed a historical and significant event as in the late 1940s foreign experts had ruled out an underground railway in the city owing to its poor soil conditions comparable to the city of Osaka. However, it was a slow and tardy start to the work. As there was no activity for a quite a length of time, the initial euphoria gave way to cynicism. A section of the citizens even protested the traffic diversion rehearsals. Work started after nearly two years. In the meantime, extensive









soil tests were carried out all along the route. Buildings and plots of land were acquired, wherever necessary. Since the road space in Calcutta was barely six percent compared to twenty five percent in Bombay and Delhi, land acquisition became a must which was a herculean task in itself. To overcome the problem, Metro Railway (Construction of Works) Act, 1978 was enacted which was applied in the first instance to the metropolitan city of Calcutta. There were hiccups as many buildings developed cracks, parks and part of the maidan were taken over for building godowns; trees were cut leading to outrage from another section of citizens; roads were dug up and hardly re-laid. In addition, water supply got affected drawing angry protests from citizens. The situation worsened in September 1978 as unprecedented floods caused havoc submerging the trenches dig up for the tunnel. Work which was already moving at a snail's pace came to a halt and remained suspended for months. The project became an object of ridicule. "No point in constructing a giant sewer" or "a waste of public money" were some of the phrases used by the disadvantaged citizens who had turned from admirers to bitter critics. Hardly a day passed when newspapers did not carry reports highlighting the woes of the citizens. The metro was at a receiving end!

Gauging the mood of the citizens and to pacify the critics, the metro authorities went into an advertising overdrive promising a bright future for the city in transportation. An



advertisement in Bengali read "Metro to spread the wings of speed" or "Calcutta did not come to be in a day". With this, Metro promised a "bright morrow". The campaign worked wonders. Metro had certainly drawn up a new map of Kolkata as on 24<sup>th</sup> October, 1984 as the first underground four-coach green yellow train ran a distance of 3.4km from Esplanade to Bhowanipore (now Netaji Bhavan) on the present down line in eight minutes revolutionizing intra city mass transportation in India. Tickets were priced at one rupee. The inauguration was not an easy task as the car sheds at Dum Dum and Tollygunj were yet to be connected with the truncated route. So novel method was adopted by lowering the coaches through an oblong opening of 4m x 23m kept on the top of the box between Park Street and Esplanade stations. With the first commercial run, the critics were silenced as euphoria once again swept the city.

Initially trains ran for a couple of hours in the morning and in the evening. With the extension of the route and with growing member of passengers, services were increased and were run throughout the day. However, a section of citizens had fear psychosis due to the negative campaign during the period of construction. To allay fears, the authorities came up with another master stroke by inviting eminent personalities to have a ride which immediately gave a positive message to the commuters. Things turned around for metro for big time. Soon, the entire stretch from Dum Dum to Tollygunj was completed in phases by 1995. Passenger patronage had led to its extension upto Dakshineswar in the north and New Garia in the south, making it into a 31km route.

**CALCUTTA THROUGH THE AGES**

Calcutta did not come to be in a day; it grew gradually. Before it became today's great metropolis, it had to pass through many a period of disorder, many a crisis. Consider the Calcutta of 1700. It had neither gas nor piped water, neither mansions nor paved streets. Of vehicles there was just one: the palanquin. The electric light or the motor-driven car was undreamt of. But the underground railway is no faraway dream in the Calcutta of today. It is very much a concrete project. Considering Calcutta's huge population, limited size, narrow streets and paucity of surface carriages, the underground railway has become an immediate necessity. In order to give shape to this gigantic project, we need, before all else,

**CALCUTTA DID NOT COME TO BE IN A DAY**

the understanding and cooperation of the great people of this city. We know that the Calcuttan is a most patient and considerate being. We do trust that he will put up with the temporary irritations and inconveniences that are inevitable when such an enormous transformation is taking place, bearing in mind the dazzling picture of a bright morrow. The underground railway is not just one more mode of transport; it is a major step towards drawing a new map of Calcutta.

**MTJ** THE TUBE ETCHES A NEW MAP OF CALCUTTA METROPOLITAN TRANSPORT PROJECT (RAILWAYS)

medium

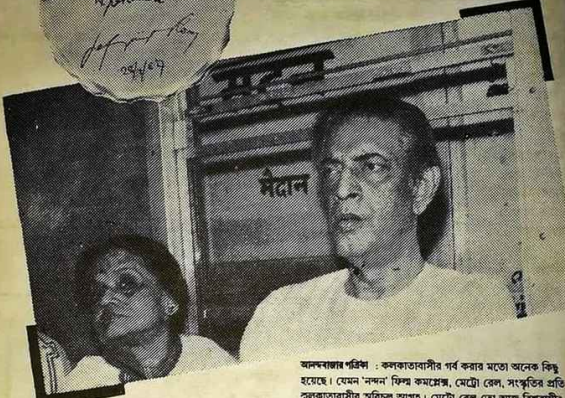




কলকাতা মেট্রো সফল

A most notable reference  
Jeffrey King  
2014/17

# আমাদের সর্বোচ্চ পুরস্কার



অন্যদের প্রশংসা : কলকাতাবাসীর গর্ব করার মতো অত্যন্ত কিছু হয়েছে। যেমন 'নন্দন' বিশদ কামের, মেট্রো রেল, সাংস্কৃতিক প্রতি পলকাতাবাসীর খবরিতল আছে। মেট্রো রেল তো আচ্ছা বিশ্বাসীরা কাছে কলকাতার গর্বের বস্তু।

The Critic's man : Then there was the underground - 'Impeccably maintained and as good as any Metro in the world.'

স্বস্তামনে : "এই কলকাতায় আছে একটি 'নন্দন', একটি পাতাল রেল, তাই এখনও আমরা হুঁসি করি।"


সুস্থস্তামনে মেট্রোরেল : এত সুসজ্জিত এবং সুপরিচালিত পাতাল পথ পৃথিবীর কু কাম শহরেই আছে।

The Telegraph : The Metro Rail, "as good as any underground system in the world..."

আনন্দময় : গত আট বছরে কলকাতা গর্ব করার মত পেয়েছে তিনটি জিনিস। নন্দন, মেট্রো রেল আর সাংস্কৃতিক উদ্ভাস...

১১.১০ তারিখ প্রকাশিত সত্যাগ্রহ বাহু-এর ভাষ্যের অন্বয়বিশেষ

শ্রুতি অবিদ্যম্বর



মেট্রো রেলওয়ে  
কলকাতা

I care for you, you care for Metro



# রবিবারে মেট্রো রেলের মজাই আলাদা



এখন মেট্রো রেল রবিবারেও চলাচ্ছে। সুপুর ৩টে ২০মি: থেকে বাড়ি ৯টা ৩৩ মি: অবধি টালিগঞ্জ থেকে এসেছিলেন পূর্ণতা। রবিবারে মেট্রো চলে দেবুন মজাই আলাদা। অপরিস্রব গরম এড়াতে আয়ামদায়ক মেট্রোকে উপভোগ্য করুন। এই রবিবার যদি আপনার কোথাও যাবার থাকে মেট্রো চলেই যান। যদি যাবার না থাকে তবে মেট্রো চলেই আসুন। বাড়ির সবাইকে নিয়ে বিশেষ করে বাচ্চাদের। সময়টা চমৎকার কাটবে। অনেক কিছু করার এবং দেখার আছে। এসময়ানেই পূর্ণতা। রবিবারে মেট্রো চলে দেবুন মজাই চমৎকার মুরাল এবং পেসিং আর টালিগঞ্জের মজাদার পাথরে বাঁধানো বাগান দেখা। একবার এলে রবিবার আসতে হবে বারবার



মেট্রো রেলওয়ে  
কলকাতা

Buoyed by its success, the experts revived the Kolkata-Howrah Metro project which meant construction of a 16.6km tube railway from Howrah Maidan to Sector-V at Bidhannagar with a 520m stretch under the river Hooghly. This Rs. 10,000 crore (2023 estimate) project sanctioned in 2008 was delayed for various reasons only to be sorted out in 2009 when it was brought under the Ministry of Railways, with KMRCL being the executing agency.

The idea to connect Calcutta on the western side of the river Hooghly with Howrah on the other side has a chequered history. The idea to connect by rail was first mooted in 1862 by some eminent citizens who thought of a railway connection across Hooghly connecting Howrah and Sealdah stations. Interestingly Samuel Power, the Chief Engineer of Bengal Division, in his report for the first half of 1864 pointed out that expansion of goods shed at Howrah was not feasible "when the establishment of a great metropolitan station in Calcutta was under consideration". Since the Board of East Indian Railway was of the opinion that the terminus should be opposite Calcutta but the proper place for the terminus was at Calcutta itself. A proposal was made to bring the line to Calcutta by a bridge at a point two miles north of Calcutta at an estimated cost of £ 1,000,000. The plan was again jointly considered by A. M. Endel, the

consulting engineer of EIR and Samuel Power who found that in 1854 the matter was referred to by the Government of India to Rendel but did not make much headway due to Sepoy Mutiny. In 1862, George Turnbull, the Chief Engineer of EIR, at the direction of Government prepared plans for a bridge over Hooghly near Pultah Ghat which was rejected on the ground that it should be near Calcutta and should be a part of EIR network. In 1874, the laying of a pontoon bridge connecting Calcutta with Howrah across Hooghly by Sir Bradford Leslie again raised the issue of a rail connectivity.

Much later, on 18<sup>th</sup> February 1898, W. W. Hunter, Bradford Leslie, Ogilvy and Company and Chas N Vener wrote a letter to the Secretary Government of India Public Works Department, Calcutta. Subsequently, in 1899, the idea of constructing a Central station and bridge over Hooghly at an estimated cost of Rs. 4,25,00,000 was mooted by a syndicate "Calcutta Central Railway Syndicate" with the cost to be recovered from toll on passenger and goods. This was plan was scrutinized by a committee agreeing for a central railway station at Bowbazar being the "best site". However, it was rejected by the Lieutenant Governor of Bengal on the ground that the piers of the bridge would be dangerous to the shipping interest of the port and a central railway station would add to the congestion of the area and would not be



remunerative and opined for the development of Sealdah as a passenger station for traffic, to and from upper India, to which the Board of EIR concurred. Thus, the plan to have a high-level railway bridge was shelved.

The first idea to connect Bagmari, Calcutta and Benaras Road, Howrah – a distance of 10.4km by an underground railway beneath the river Hooghly at a cost of £3.5 million with 1925-1926 deadline was put forward and recommended by the Imperial Legislative Council at Shimla in its September 1919 Imperial session. This project finds mention on an editorial – "Tube Rail Project for Calcutta" of The Statesman on 14<sup>th</sup> July, 1929 which stated, "A tube railway under the Hooghly and across Calcutta will come at a surprise to those who have accepted the widespread belief that the nature of the subsoil of the city rendered impracticable for any such scheme. Mr. Lyndall, who was specifically brought to examine local conditions, was confident that a tube railway such as those in London or Paris can be driven under the Hooghly from Howrah to Sealdah without going to any unknown depth below the surface. It would cost four million pounds, would allow a two-minute service in either direction and would have its central station near Dalhousie Square".

Now after the difficulties were sorted out in 2009, tender was floated in 2010 which was split in two parts – Howrah Maidan to Mahakaran and Mahakaran to Sector-V. However, as acquisition of land posed a problem the project got delayed and the route had to be realigned in Benoy-Badal-Dinesh Bag area resulting in increase of length. Thereafter, the actual work under the river commenced in 2017 after legal disputes were settled. The real challenge to connect the two cities was the construction of twin tunnels of 10km each with 520m stretch under the Hooghly. Two imported sophisticated Tunnel Boring Machines (TBMs) were deployed to construct the tunnels which were completed in a record time of 66 days in April-June 2017. The diameter of each tunnel is 5.55m which lies at a depth of 13m below the riverbed. The centre-to-centre distance between the two tunnels is 16.1m. A 43.5m ventilation shaft, the deepest in the country, has been built near the Strand Road to pump in fresh air and to evacuate passengers in an emergency. Six rings are fitted to form a single piece of tunnel. The cost per single tunnel per meter is Rs 9.5 lakhs (estimated in 2017). The tunnels which can withstand severe earthquakes have a life of 120 years or even more. Imported rubber linings have been used which get stretched in water thus preventing seepage of water. The Howrah Metro station, the deepest in the country, is 33m below the surface. The 2.88m wide coach trains, each having a capacity to carry 2068 passengers, will ply on 1435m Standard Gauge track at an average speed of 80 kmph with a maximum speed of 90 kmph drawing power from third rail. The East-West Metro is expected to carry 8.08 lakh passengers daily in 2025. Though inauguration of East-West Metro was scheduled in 2020, collapse of one of the tunnels in Bowbazar in August 2019 had deferred the

inaugural run. Subsequently, experts have rectified the problem by taking corrective measures. However, since 2022, metro is running on a truncated route from Salt Lake Sector-V and Sealdah. The metro received the biggest boost on 12<sup>th</sup> April 2023 as history was created when a 6-coach BEML made metro rake no. 612 on a trial run left Mahakaran at 11.33 am and after the underwater journey reached Howrah at 11.55 am for the first time in India. Thus, Kolkata joined a select group of cities of London and Paris where metro runs below the river Thames and Seine respectively. Thereafter, the Hon'ble Prime Minister declared the project open on 6<sup>th</sup> March, 2024 with the first commercial run of the Howrah Maidan - Esplanade route taking place on 15<sup>th</sup> March, 2024. And with trial runs are being conducted between Sealdah & Esplanade starting from 21st January 2025, now citizens of Calcutta keenly await the commencement of commercial run on the entire stretch from Howrah Maidan to Sector-V thereby linking Howrah and Sealdah railway stations, one of the busiest railway stations in India with each handling nearly one million passengers per day.

Constructing the North-South corridor of metro in Calcutta, a city having a mere 6% road space and having poor soil conditions, was a challenge to the planners. As construction progressed and unforeseen difficulties cropped up, novel and innovative methods were adopted to overcome the encumbrances. Since many buildings suffered damages due to soil collapse, diaphragm walls were built on both sides of the alignment – a technique first adopted in constructing underground metro which was later followed by Rio de Janeiro and other cities of the world. As full air-conditioning was financially prohibitive, the method of partial air-cooling with proper ventilation was adopted to beat the summer heat – another novel approach. To run the metro by supplying current through third rail was a marvel and first in India and the legacy continues with a touch of modernization as the third rails are now replaced by rails built of aluminum to conserve energy.

To prevent flooding, keeping the high flood level mark of 1978 in mind, the height of the entry points was raised. The underwater connection between Calcutta and Howrah in the East-West Metro is the first in the Indian subcontinent. The 42m deep ventilation and evacuation shaft on the Strand Road and the 30m deep Howrah Metro station are the deepest in the country. The engineers stayed undeterred by the cave-in and collapse of the tunnel at Bowbazar and resurrected by putting in steel liners, again a technique unheard of in the history of engineering. No wonder, the building of the North-South and East-West metro can be called as pilot projects which had given invaluable lessons to the architects and the engineers alike who went to on to build metros in the other parts of the country.

*The photos of 'The Statesman' Supplementary, the MTP Brochures, MTP advertise & Bhowanipore station Exit gate photos were provided by the author.*

*Courtesy & Acknowledgement to 'The Statesman' archive.*

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# METRO RAILWAY, KOLKATA

## A Journey from Zenith to Zero

Rudranil Roy Chowdhury

The year was 1986. As an adolescent, Saturday evenings meant one thing: accompanying my father on a Kolkata Metro ride, often heading either to Esplanade or Tollygunge. Tollygunge held a special allure, as it offered the thrill of watching the fascinating rake reversal, a sight that captivated my young mind. Those rides left an indelible mark on me, embedding Kolkata Metro deep within my heart as a symbol of progress, innovation, and the spirit of the city.

The weekdays held their own charm too. My daily commute with my grandfather from Hazra to Mudiali on the iconic route 29 tram made school days something to look forward to. Sitting or standing behind the tram driver's cabin, marvelling at their skillful maneuvering, became a cherished routine. Similarly, weekends brought the joy of metro rides, where the efficiency and precision of rake reversals sparked dreams in my young mind. I imagined myself one day becoming a tram operator or a metro motorman, steering

these vehicles of wonder that connected the city and its people.

But as years rolled by, dreams and reality diverged. Kolkata's trams fell victim to political neglect and administrative apathy, perishing under the weight of modernization and short-sighted decisions. The same fate seems to be engulfing Kolkata Metro, a pioneer in urban transit that once held an unparalleled position in India. From its inception, the metro served as a lifeline for millions, offering relentless service with pride. However, its current state is a far cry from its glorious beginnings, crippled by inefficiencies, aging infrastructure, and mismanagement that mirror the fate of the trams.

For someone who grew up witnessing these icons in their prime, the decline of both Kolkata Tramways and Metro is not just a matter of infrastructure—it's a personal loss. This write-up is a reflection of that frustration, a voice for every



Kolkata who has seen the metro evolve from a symbol of progress to a shadow of its former self. It is a lament for a legacy that, once unmatched, now struggles to keep pace in the race for glory.

### :: INTRODUCTION ::

The Metro Railway, Kolkata - inaugurated in 1984, was a landmark achievement in India's urban transportation history, making it the first metro system of the nation. It emerged as a symbol of progress and technological advancement, promising to revolutionize urban commuting in Kolkata. The North-South corridor was envisioned to ease the city's chronic traffic congestion and provide a faster and a more efficient alternative to road transport. However, nearly four decades later, Kolkata Metro's reputation has been overshadowed by operational inefficiencies, contentious decision-making and a series of misadventures that have transformed it from a pioneering project into a testing ground for experiments by Indian Railways. This account delves into the journey of Kolkata Metro while tracing its decline through a series of flawed decisions, technical setbacks and systemic failures.

### :: A VISIONARY START WITH PROMISING BEGINNINGS ::

When the first phase of the Kolkata Metro was inaugurated on October 24, 1984, it represented a monumental step forward for urban transportation in India. Developed with significant challenges in tunnelling and construction, the initial North-South line showcased engineering prowess and commitment to public service. During its early years, the Metro received widespread acclaim for its efficiency, cleanliness and reliability. Its success inspired other cities across India to consider metro systems as viable solutions for urban transportation woes. However, the operational model placed Kolkata Metro under the jurisdiction of Indian Railways – a decision that would later expose the system to bureaucratic inefficiencies and experimental ventures.

### :: THE ONSET OF PROBLEMS : FAULTY RAKES AND EXPERIMENTAL APPROACHES ::

The metro system's evolution, particularly in terms of its rolling stock, has been fraught with issues that raise serious concerns about its future. The use of different rolling stocks, ranging from outdated models to experimental units defines the trial-and-error approach thereby turning Kolkata Metro into a hellhole. The ongoing practice of using varying rolling stocks highlights the broader systemic issues that plague the metro system, including bureaucratic inefficiency, political interference and a lack of coherent planning.

#### • The Trial-and-Error Approach

Kolkata Metro's rolling stock has evolved over the years, but the transition has happened in a rather disjointed and erratic manner. From the initial fleet of Soviet-era rakes, the metro system has gone through multiple changes in its rolling stock, with different types of trains being introduced for trial purposes. These trains range from outdated stocks that have



long since been retired in other parts of the world, to newer, more advanced systems that are often poorly integrated into the existing infrastructure. This erratic approach towards rolling stock is emblematic of the larger issues facing the Kolkata Metro – a lack of coherent long-term planning, a trial-and-error method of experimentation coupled with the absence of proper oversight.

In practice, the trial-and-error approach means that the metro often uses rolling stock that is not suited for its unique operational needs. The mismatch between the infrastructure and the trains themselves often leads to operational inefficiencies, increased maintenance costs, and, most critically, safety issues. For example, the introduction of new rakes without proper compatibility testing has led to operational failures, such as frequent breakdowns, issues with track alignment, and rapid wear and tear of train components. Instead of adopting a methodical approach to upgrading rolling stock, Kolkata Metro has become a guinea pig for Indian Railways to test various products, with little regard for the long-term consequences on the system's reliability and sustainability.

The problems for Kolkata Metro began in the late 2000s when Indian Railways introduced experimental rakes that proved to be riddled with flaws. The BHEL-Knorr Bremse AC rakes, deployed as prototypes, exemplified these issues. Despite being a test model, these rakes were pressed into full-fledged operation, subjecting commuters to frequent brake failures, malfunctioning of air-conditioning systems and door glitches. This period marked the start of Kolkata Metro's fall from grace.

The challenges did not end with the BHEL-Knorr Bremse rakes. In 2017, the Metro procured new rakes from the Chinese manufacturer CRRC Dalian. The first rake arrived with a host of defects, including compatibility issues with the unique track specifications of the Kolkata Metro system. Faulty braking systems and substandard electrical circuits further delayed its deployment into service. Despite extensive modifications over four years, these rakes remained a point



of contention, showcasing a glaring lack of quality control and foresight in procurement processes.

Adding to the woes, the indigenous ICF-Medha AC rakes, introduced in subsequent years, brought their own set of challenges. The initial set of rakes were incompatible with the Communication-Based Train Control (CBTC) system, a key technology for automation and operational efficiency. This incompatibility might stall automation upgrades, highlighting the lack of cohesive planning in integrating new technologies.

#### • Bureaucratic Inefficiency and Political Interference

One of the most significant factors contributing to the lacklustre approach is the bureaucratic inefficiency and red-tape culture that dominates the functioning of Kolkata Metro. The decision-making process within the metro system is slow and bogged down by endless layers of governmental approval and regulatory hurdles. As a result, important decisions about infrastructure, rolling stock, and service upgrades are delayed or hindered by indecision. This bureaucratic inertia severely impacts the ability of the Kolkata Metro to modernize its fleet and expand its services in a timely manner.

Moreover, the political interference in the functioning of Kolkata Metro further exacerbates these problems. The system's fate often depends on the whims and fancies of politicians rather than sound technical or operational considerations. The metro has been used as a political tool, with new projects being announced to garner votes or curry favor with specific constituencies, often without a clear understanding of the operational challenges or the financial implications. Political gimmicks like these disrupt the metro's smooth functioning, diverting attention from critical issues such as improving the quality of rolling stock, upgrading stations, and increasing service frequency.

Political considerations also lead to decisions that are more focused on creating visible infrastructure projects rather than addressing systemic flaws. This has resulted in the repeated introduction of different types of rolling stock based on political promises rather than operational needs. The absence of a long-term vision for the metro's fleet and a focus on quick, politically motivated fixes has stymied the growth of Kolkata Metro into a world-class public transport system.

#### • A System Without a Clear Vision

One of the most embarrassing issues with Kolkata Metro's rolling stock evolution is the lack of a clear, coherent long-term vision for the system. Unlike other global metro systems, which follow a structured plan for the gradual upgrade of their fleets, Kolkata Metro has largely lacked such foresight. The absence of a strategic vision for the metro's fleet has led to a situation where trains are introduced without sufficient regard for their compatibility with the existing infrastructure or the long-term operational needs of the system.

This leaves Kolkata Metro vulnerable to operational

disruptions, with each new model of rolling stock adding another layer of complexity to an already overstretched system. Without a clear and consistent vision, the metro has become reactive rather than proactive, making it difficult to address long-term challenges such as the increasing demand for services, the need for infrastructure upgrades, and the goal of reducing operational costs.

The lack of foresight also extends to how the metro's expansion has been handled. New corridors are often introduced without thorough planning of the rolling stock needed to service them, leading to the adoption of outdated technology. As a result, the system fails to achieve optimal efficiency, with resources spread thinly across various trials rather than concentrated on building a robust, standardized fleet. This lack of coherence is not just a technical issue but also a strategic one, undermining the metro's potential to evolve into a world-class urban transportation network.

#### • Consequences of the Trial-and-Error Method

The trial-and-error method of using different rolling stocks has had several damaging consequences for Kolkata Metro. Commuters are left with an unreliable service, experiencing inconsistent travel times, overcrowding, and delays due to incompatible trains and poor operational planning. The experience of the average passenger is one of uncertainty—no one can predict when or how their journey will unfold, as there is no consistent standard for the trains themselves.

Furthermore, the inefficiency extends to the financial health of the metro system. The lack of standardization in rolling stock has led to inflated procurement and maintenance costs, as each new model requires a unique set of spare parts and specialized teams for servicing. The system spends valuable resources maintaining a fleet that is not optimized for long-term use, which could otherwise have been directed toward expanding services, improving infrastructure, or enhancing commuter experience.

This ongoing inefficiency creates a vicious cycle: delayed decisions, cost overruns, political interference, and operational setbacks prevent the metro system from upgrading to more advanced, efficient, and reliable rolling stock. As a result, Kolkata Metro's future remains uncertain, with the system trapped in a cycle of underperformance.

### :: INFRASTRUCTURE FAILURES AND POOR PLANNING ::

#### ~ The Blue Line Blues or the North-South Corridor's Hazards

The Noapara-Dakshineswar expansion of the Kolkata North-South Metro Corridor has faced significant infrastructural shortcomings that have impacted its effectiveness and efficiency.

#### • Operational Inefficiencies Due to Flawed Planning

One of the major infrastructural shortcomings of the Noapara-Dakshineswar expansion is the flawed planning in relation to station design and operational flow. Specifically, the absence of proper rake reversal points at key stations, such as Dakshineswar, has rendered the second platform



unusable. This oversight significantly hampers the operational efficiency of the system. At terminals, where trains are required to reverse direction after completing a trip, the lack of dedicated reversal infrastructure leads to unnecessary delays. As a result, trains have to wait for long durations, reducing the frequency of services and causing congestion at terminal points. This flaw in planning has resulted in delays for commuters and contributed to operational inefficiencies that could have been avoided with more foresight in the design phase. The inability to efficiently reverse trains at terminal stations means that train schedules are often disrupted.

#### • Rapid Wheel Wear and Temporary Service Closure

Soon after the commencement of services on the Noapara-Dakshineswar section, a serious operational issue surfaced: rapid wheel wear of the metro rakes. The unexpected deterioration of the wheels forced a temporary closure of the section for repairs and adjustments. This technical failure highlights the inadequacy of initial testing and quality control during the commissioning of the metro expansion. Rapid wheel wear can be attributed to a range of factors, including poor track alignment, suboptimal train design, and improper maintenance practices. The temporary closure not only disrupted service but also damaged public confidence.

#### • The Persistent Woes of Over-Aged Non-AC Rakes

A significant issue that plagued Kolkata Metro, particularly during the mid-2000s to the early 2015s, was the continued operation of old and over-aged non-AC rakes. These rakes, which had already surpassed their codal life of 15 years, extendable to a maximum of 20 years if maintained impeccably, had deteriorated to a state where their operation severely hampered service efficiency. Unfortunately, the maintenance of these rakes was far from exemplary, with recurring technical glitches becoming a regular feature of the metro experience. A major point of contention was the faulty doors, which frequently malfunctioned, causing service disruptions, delays, and immense inconvenience to passengers. These recurring issues were not only frustrating for commuters but also highlighted a significant lapse in operational oversight and asset management.

Between 2005 and 2014, the problem became particularly acute, with the metro struggling to meet the demands of an ever-growing ridership. Passengers often found themselves stuck in stations or inside carriages due to doors that failed to close properly. Such malfunctions were further exacerbated by other technical issues including failures in the traction systems, braking mechanisms and onboard electrical components. While refurbishments were carried out to extend the life of these rakes, the efforts were largely superficial and insufficient to address the underlying wear and tear. Despite their declining reliability, Kolkata Metro continued deploying these rakes in passenger service until as late as 2015, a decision that crippled the metro's ability to provide a dependable transit system during that period. This prolonged dependence on outdated infrastructure not only

tarnished the metro's reputation but also underscored the urgent need for modernization and better maintenance protocols.

### ~ The Sorry State of Affairs of the Joka-Esplanade Metro Corridor or the Purple Line

The Joka-Esplanade Metro Corridor, part of Kolkata Metro's ambitious expansion plans, was envisioned as a vital addition to the city's urban transport network. It was supposed to connect the southern fringes of Kolkata to the heart of the city, significantly reducing travel time and enhancing connectivity for thousands of daily commuters. However, post inauguration, the corridor remains a glaring example of administrative inefficiency, lack of vision, and misplaced priorities, making it a topic of public frustration and ridicule.

#### • An Ambitious Beginning, Stuck in Time

The foundation stone for the Joka-Esplanade corridor was laid in 2010, with grand promises of completion by 2016. The corridor, spanning 16.72 kilometers, was designed to serve as a lifeline for residents of areas like Behala, Joka and Thakurpukur, which were largely underserved by public transport. The project's potential to alleviate traffic congestion in these densely populated regions was widely recognized, and it was hailed as a game-changer for Kolkata's southern suburbs.

More than a decade later, the project remains far from complete. Construction progress has been painstakingly slow, plagued by land acquisition hurdles and funding delays. While parts of the corridor have been inaugurated for token operations, the majority of the stretch remains unfinished. This endless construction delays and fast track inauguration has not only delayed the benefits of the project but has also turned it into a symbol of inefficiency.

#### • The Ridiculous Reality of One-Train-Operations

One of the most baffling aspects of the Joka-Esplanade corridor's current state is the 'one-train operation' system. The partial stretch from Joka to Taratala, which was inaugurated in January 2023, operates with just one train shuttling back and forth. Commuters are forced to wait long periods for the single train, leading to overcrowding. This setup severely limits the frequency and capacity of the service, rendering it practically useless for most commuters. Instead of providing a meaningful transportation solution, the corridor has become a mere showpiece, serving more as a political gimmick than a functional metro line.

#### • Endless Construction and Delays

The never-ending construction of the Joka-Esplanade corridor has been a source of public anguish and inconvenience. Major thoroughfares in Behala and Joka have been disrupted for years, with incomplete pillars, barricaded roads and construction debris becoming permanent fixtures in the landscape. The slow pace of work has not only caused traffic bottlenecks but has also had a detrimental impact on local businesses and residents.





The reasons for the delays are manifold. The project has suffered majorly from a lack of consistent funding and proper coordination between various government agencies. Additionally, land acquisition issues have been a persistent problem with disputes over compensation and relocation stalling progress. Despite repeated assurances and revised deadlines, the authorities have failed to deliver on their promises, further eroding public trust.

### ~ The New Garia-Airport Metro Corridor or the Orange Line - A Chronicle of Missed Opportunities & Mismanagement

The New Garia-Airport Metro Corridor, envisaged as a throughfare to connect Kolkata's bustling southern suburbs with its northern extremities and most importantly, the Netaji Subhas Chandra Bose International Airport, promised to revolutionize urban commuting. As one of the most aspiring projects in the city's metro expansion, it aimed to alleviate traffic congestion and reduce travel time across Kolkata's densely populated areas. Yet, more than a decade after its announcement, the corridor has become a cautionary tale of poor planning and logistical blunders.

#### • A Decade-Long Wait

The New Garia-Airport Corridor was conceptualized in the mid-2000s to provide seamless connectivity across the length of the city. However, what began as a purposeful project has turned into a nightmare for commuters and stakeholders alike. Despite construction starting in 2011, the corridor remains far from completion in 2025. Here too, land acquisition disputes between Railways, WB Govt., Kolkata civic authorities & prime culprits - The Kolkata Traffic Police are to blame primarily. Apart from that shifting of alignments, and administrative goof-ups have stalled progress at every step.

#### • A Tale of Token Inaugurations

In a bid to showcase progress, sections of the corridor have been inaugurated prematurely, leading to absurd operational scenarios. The most notable among these is the one-train



operation, here as well like Purple line, where a single train operates on a small stretch, offering minimal utility to commuters. This tokenistic approach has reduced the corridor to a political gimmick rather than a functional transportation system.

While authorities and political entities boast of milestones achieved, these bits and pieces inaugurations have drawn widespread ridicule and criticism. The absence of proper connectivity between operational stretches undermines the very purpose of the project and exacerbates public frustration.

#### • Technical and Logistical Oversights

The New Garia-Airport Corridor's development has been marred by glaring technical and logistical flaws. For instance, the alignment near Salt Lake Sector V has raised concerns about sharp curves and suboptimal station placement.

Moreover, delays in securing critical clearances and integrating signalling systems have compounded the problem. The lack of foresight in project planning has resulted in spiralling costs, making the project a financial burden on the exchequer. Frequent revisions to project timelines and cost estimates further highlight the inadequacy of initial assessments.

#### • The Abandoned New Garia-Baruipur Metro Extension

Perhaps the most striking example of mismanagement is the shelving of the New Garia-Baruipur Metro extension. Originally planned to connect Kolkata with Baruipur – a rapidly growing suburb, the extension was touted as a game-changer for the region's connectivity. Despite the construction of a state-of-the-art terminal station facility at New Garia, the project was inexplicably abandoned. Residents of Baruipur and nearby areas, who had pinned their hopes on the metro for faster and more reliable commuting options, feel betrayed by this lack of commitment. This episode underscores the absence of a cohesive vision and long-term planning in Kolkata Metro's expansion strategy.





### :: OPERATIONAL INEFFICIENCIES AND DECLINING STANDARDS ::

Operational inefficiencies have plagued the Kolkata Metro in recent years. In recent times, the Kolkata Metro has implemented a controversial decision to decrease train frequencies on the North-South Corridor. This decision, seemingly based on the preferences of metro officials rather than operational logic, has stirred significant discontent among commuters and raised critical concerns regarding the systemic inefficiencies and mismanagement. While metros worldwide strive to minimize time gaps between trains to handle increasing commuter loads, Kolkata Metro has moved in the opposite direction. According to the new directive, the officials have decided that every train should run the entire length from New Garia to Dakshineswar, instead of maintaining the previous practice of alternating between Dakshineswar and DumDum. This decision, seemingly arbitrary, has led to a substantial increase in the time gaps between trains, resulting in overcrowded trains, congested stations and a severe decline in the overall service quality. The initial practice, where alternate trains terminated or originated from DumDum, allowed for a balanced flow of services and better management of resources.

### :: RIDERSHIP STATS ::

The Joka-Majherhat section of the Purple Line, operational since March 2024, has reported relatively low ridership compared to Blue or Green Line. From March to August 2024, this corridor recorded approximately 79,000 passengers, averaging around 13,167 passengers per month. Likewise, the New Garia-Ruby section of the Orange Line, also operational since March 2024, has experienced similar low ridership, with an average daily count of approximately 1,141 passengers. In contrast, the Blue Line (Dakshineswar-Kavi Subhash) carried 8 crore passengers during the same five-month period. On the other hand, in the fiscal year 2023-24, the Green Line carried approximately 1.22 crore passengers, underscoring the significant disparity in usage. As of recent reports, the Green Line accommodates over 100,000 passengers daily.

The limited patronage on Purple/Orange lines is primarily due to their incomplete status and the fewer services currently available, which fail to provide comprehensive connectivity for commuters. Extended intervals between trains—operating at a hilarious 20-minute frequency on all lines except the Blue Line (North-South corridor)—are a major contributing factor to the low ridership. Commuters have expressed dissatisfaction with the infrequent services, noting that the long wait times significantly reduce the convenience of using the metro for regular travel.

### :: MANPOWER SHORTAGES ::

The Kolkata Metro faces critical shortages in several key operational areas, each of which has a direct impact on service quality, safety, and commuter experience:

- **Shortage of Motormen:** Operating a metro system requires highly trained motormen who are familiar with the intricacies of urban transit. Shockingly, Kolkata Metro has been forced to temporarily deploy shunting loco operators from South Eastern Railway to fill this yawning gap. These operators, trained for a different context, lack the specialized expertise needed to handle metro operations efficiently. This stopgap solution jeopardizes passenger safety and operational reliability, highlighting the failure to ensure adequate staffing for such a critical role.
- **Maintenance Technicians:** The shortage of technicians responsible for rake maintenance is equally alarming. Regular upkeep of rolling stock is essential for ensuring passenger safety and maintaining operational productivity. The lack of trained maintenance personnel has led to delays in repairs, increased wear and tear on trains and a decline in overall system efficiency. This neglect directly compromises safety and increases the risk of service disruptions.
- **Ticketing Staff:** At stations along the newer corridors, ticket counters remain largely non-operational due to the absence of ticketing staff. Passengers are forced to rely exclusively on vending machines, which are prone to technical glitches and offer limited customer support. The absence of counter staff particularly impacts elderly passengers, those unfamiliar with the machines and those facing language or technical barriers.
- **Recruitment Stalled Indefinitely:** Despite these glaring deficiencies, recruitment efforts for the Kolkata Metro have been stalled for years with no clear explanation from the Ministry of Railways, the Railway Board, or the Metro Rail Headquarters in Kolkata. Unlike other metro systems in India, where staffing needs are met proactively to support expanding networks, Kolkata Metro seems to have been sidelined. This inexplicable delay in hiring raises questions about the priorities of the authorities involved. The absence of a transparent timeline for recruitment not only demoralizes the existing workforce, which is overburdened with additional responsibilities, but also fuels public frustration over the metro's deteriorating service quality. This failure to prioritize



human resources undermines the metro's potential as a world-class transit system. Unlike metro systems in cities such as Delhi and Bengaluru, which operate under streamlined governance structures and prioritize recruitment, Kolkata Metro has become a victim of mismanagement and neglect.

### :: PROVIDING SERVICE GOES FOR A TOSS ::

Kolkata Metro, also grapples with a peculiar system of escalator management that starkly contrasts with its much-touted tagline, "Serving Customers with a Smile." While the metro continues to expand its network and modernize its infrastructure, the basic amenity of escalators remains mired in inefficiencies, often leaving passengers disillusioned. Escalators at different stations have been subject to recurring issues of being dysfunctional. If one escalator is defunct or under maintenance, the metro authorities rarely, if ever, bother to adjust the operational escalator to cater to the most critical need: assisting passengers in ascending. This practice is especially perplexing because the necessity of an escalator is more pronounced for going up than going down, particularly for elderly passengers, women, and those with physical challenges.



It is neither rocket science nor an engineering marvel to temporarily reverse the direction of a downward-moving escalator to provide upward assistance. Yet, this simple, logical solution seems to elude the decision-makers of Kolkata Metro. Instead, defunct escalators and poor management of operational ones have become part of the commuter experience, raising questions about the organization's commitment towards customer service.

At its core, this issue demands empathy—a willingness to understand and address the challenges faced by commuters. Metro authorities must recognize that for many passengers, particularly the elderly and those with limited mobility, an operational escalator is not a luxury but a necessity.

### :: INTRODUCTION OF QR-CODE TICKETS : A MIXED BAG ::

In a bid to modernize ticketing systems, Kolkata Metro



recently implemented QR-code paper tickets. While innovative, this system has created new challenges. Commuters who are not tech-savvy face difficulties using these tickets at entry and exit gates. Moreover, the disposable nature of the paper tickets has resulted in littering at station premises, making the areas untidy. This lack of foresight in managing waste and addressing commuter needs highlights another instance of poor planning.

### :: EAST-WEST METRO TEMPORARY CLOSURE PLANNING : AN UNPRECEDENTED MOVE ::

In a recent wave of media reports, the Kolkata Metro's East-West Corridor has been thrust into the spotlight with the revelation that officials are contemplating a temporary suspension of the entire metro service for up to 45 days for the integration of a new signalling system. This decision has raised eyebrows and provoked widespread criticism from commuters, industry experts and transportation authorities alike. The idea of halting operations for an extended period, despite the East-West Metro's steady growth and increasing ridership, can only be seen as an illogical and reckless move driven by a group of officials detached from the reality. This decision under the guise of integrating Phase 1 & Phase-2 signalling system is not only ill-conceived but also impractical given the current operational dynamics of the East-West Metro corridor.

The East-West Metro corridor, despite being plagued by numerous setbacks such as the infamous Bowbazar land subsidence incident, has steadily emerged as a critical lifeline for Kolkata's daily commuters. The corridor, which serves the vital Salt Lake and Howrah connections, has consistently grown in ridership, reaching a daily average of over one lakh passengers. To even contemplate suspending operations for such a prolonged period, without regard for the chaos it will inevitably cause, speaks to the lack of foresight and planning that has characterized the decision-making process within the Kolkata Metro administration.



### • A Disconnect with Global Best Practices

Globally, metro systems undergoing upgrades or the integration of technology such as signalling systems do not shut down operations entirely. Instead, they ensure a seamless transition, often integrating the new systems during off-peak hours or conducting phased upgrades. Major cities around the world, including London, New York, and Tokyo, have demonstrated that it is entirely possible to continue operations while introducing new technologies. In these cities, careful planning and coordination allow for ongoing services without leaving commuters stranded or causing massive disruptions.

The proposed suspension is in stark contrast to such best practices. It not only ignores the potential for phased integration but also shows a complete lack of consideration for the city's commuters, who rely heavily on the metro for daily travel.

### :: FROM HISTORY BOOKS TO CONFUSED COMMUTES ::

The names of metro and railway stations serve a vital role in urban and suburban transportation networks. They are more than mere labels; they are navigational tools, cultural markers, and, ideally, reflections of the geography or history of the areas they serve. For example, in the London Underground, names like 'Oxford Circus' or 'Baker Street' provide immediate geographical context. Similarly, in Delhi Metro, stations like 'Connaught Place' or 'Noida City Centre' clearly align with well-known areas, aiding both locals and tourists.

In Kolkata, however, this logical approach to station naming is frequently abandoned in favour of politically motivated names that confuse rather than guide. The naming of metro stations often strays from these principles, leading to confusion and frustration for commuters. This issue is particularly pronounced in the North-south & New Garia-Airport lines, where political whims and personal preferences have resulted in names that fail to correspond with the actual areas they represent.

### Examples of Confusing or Absurd Names

One glaring example is the "Netaji Bhawan" station on the North-South corridor. While the station is named after Netaji Subhas Chandra Bose, an iconic freedom fighter, it causes confusion because the area around the station is widely known as "Bhawanipore." While Netaji Bhawan is actually situated near Rabindra Sadan Metro. Most commuters would find it more intuitive if the station were named after the locality rather than a historical figure, no matter how revered.

Other baffling examples, the 'Masterda Surya Sen' station on the same corridor is named after another revolutionary leader. While the name honours his legacy, the station itself is situated in Bansdroni, a locality far better known to residents. The 'Kavi Subhash' station, while honouring the famous poet Subhash Mukhopadhyay, is better known to locals as New Garia. The list includes 'Gitanjali' (Naktala),

'Netaji' (Kundghat) – most people confuse it with 'Netaji Bhawan', 'Kavi Nazrul' (Garia Bazar) & 'Shahid Khurdiram' (Briji). All of these names have no distant connections with areas they belong to. But this use of an obscure reference makes it challenging for passengers to associate the station with its geographical location.

Similarly, the Orange Line, which runs from New Garia to the Airport, also offers examples of perplexing station names. For instance, the 'Ritwik Ghatak' station, named after the renowned filmmaker, is situated in the Uttar Panchanagram area, but the name gives no immediate clue about the locality it serves. The 'Hemanta Mukherjee' station, honouring the legendary singer, is located near Ruby Hospital, an area also known as Ruby or East Kolkata Township. Similarly, the 'Jyotirindra Nath Nandi' station, named after the esteemed writer, serves the Mukundapur area, also referred to as Singha Bari. The list includes, 'Barun Sengupta' station, commemorating the journalist, is situated near the Dhapa/Mathpukur area, known locally as Metropolitan and also Airport station ridiculously named as 'Jai Hind'. These names, though meaningful in a cultural sense, fail as navigational markers and add unnecessary confusion for passengers.

### The Impact on Commuters

The disconnect between station names and their geographical locations creates a significant inconvenience for commuters. For Kolkata citizens, it has become an added mental exercise to remember which station corresponds to which area. For tourists and occasional users, the confusion is even greater, as they are unfamiliar with the political or historical figures referenced in the station names.

The naming of metro stations in Kolkata is a microcosm of the tension between political aspirations & practical sense. While honoring historical figures is a worthy goal, it shouldn't come at the expense of clarity & convenience for commuters. A station name should act as a waypoint, immediately recognizable & linked to its surroundings. The current practice in Kolkata Metro undermines this basic function, turning station names into riddles rather than signposts.

### :: A GROWING DISCONTENT AMONG COMMUTERS ::

All the above discussed experimental nature of Kolkata Metro operations has not gone unnoticed by the public. The consequences of these decisions are most acutely felt by the commuters who rely on the Kolkata Metro daily. Overcrowded trains and stations have become the new norm, with passengers experiencing discomfort and delays throughout the day. The decreased frequency between trains only adds to the stress, as passengers are left waiting longer and with no certainty as to when the next train will arrive. This not only undermines the metro's credibility as a reliable public transport system but also impacts the daily lives of thousands of people who depend on the metro for their commutes.

Public sentiment has turned increasingly negative, with



many viewing the metro expansion as a series of broken promises. Social media platforms are rife with criticism and satire, reflecting the growing disillusionment among citizens. What was once heralded as a transformative project has now become a symbol of mismanagement and lost opportunities.

#### :: THE WAY FORWARD : RECOMMENDATIONS FOR REVIVAL ::

Restoring Kolkata Metro's reputation and operational efficiency requires a multi-pronged approach. The following measures are crucial for its survival –

**A Call for Reform and Long-Term Planning :** What Kolkata Metro desperately needs is a radical shift in how rolling stock decisions are made. A more structured, long-term approach is essential to overcome the fragmentation that currently plagues the system. Rather than continuing the trial-and-error method, the authorities must develop a unified strategy that aligns rolling stock choices with infrastructure capabilities and commuter needs.

A critical first step in this process would be to conduct a comprehensive audit of the existing fleet, assessing its compatibility with the city's infrastructure, operational needs, and long-term goals. The metro system should adopt a standardized approach to rolling stock, with a focus on sustainability, reliability, and cost-effectiveness. This would involve investing in trains that are compatible with Kolkata Metro's unique needs, designed for the specific conditions of the city, and equipped with the latest technology to enhance operational efficiency.

Additionally, there needs to be a commitment to greater accountability and transparency in decision-making. Political interference must be minimized, with a focus on merit-based decisions that prioritize the needs of the commuters over short-term political gains. Bureaucratic inefficiency must also be addressed, ensuring that the metro system can make timely decisions and execute projects without unnecessary delays.

The procurement process for rakes and equipment must involve rigorous quality checks to prevent the deployment of defective systems. Clear compatibility criteria should be established to ensure seamless integration with existing infrastructure.

**Enhance Infrastructure Planning :** Future projects must undergo comprehensive feasibility studies to avoid design flaws like those at Dakshineswar station. Existing infrastructural issues should be addressed urgently to improve efficiency.

**Increase Train Frequencies :** The decision to decrease train frequencies and run every train from New Garia to Dakshineswar, despite known infrastructural limitations, represents a misguided approach to managing the North-South Corridor of Kolkata Metro. The failure to address key issues, such as inadequate rake reversal facilities and faulty station design, has led to operational inefficiencies, overcrowded stations, and delays, all of which have worsened the commuting experience for passengers. Additionally, the

continued waste of public funds on short-term fixes and political decisions instead of long-term infrastructural improvements is a reflection of the systemic mismanagement of the metro system. Immediate restoration of the erstwhile services during the peak hours from DumDum be done along with finding a way to start some peak hour services from Mahanayak Uttam Kumar (Tollygunge) towards DumDum. Likewise, introduction of proper train operations with ample fleet of trains at both New Garia-Airport (Phase-1) stretch and Joka-Esplanade (Phase-1) stretch should be prioritised to regain public trust in metro and curb the ongoing negative impact amongst the commuters.

**Reviving the Passenger Welfare Committee :** Establish transparent communication channels to address commuter grievances and incorporate feedback into decision-making processes. Restoring public trust is key to the Metro's revival. Some years back, a Passenger Welfare Committee was constituted by the Metro authorities with some passengers as members of the same. Only a formal meeting was conducted which started and ended with introduction of the respective members. No further meeting or progress has been noticed so far. Immediate revival of that committee is the need of the hour to make the authorities aware of the ground realities of present times.

**Expedite Completion of Construction :** Authorities must prioritize the completion of pending stretches with realistic timelines and accountability mechanisms.

**Enhanced Communication :** Regular updates on project progress and challenges should be shared with the public to rebuild trust and manage expectations.

#### :: CONCLUSION ::

Kolkata Metro, once the pride of Indian urban transportation, now faces challenges stemming from poor planning, delays, and inefficiencies, compounded by the negligence of the Railway Board and the impact of political foul play.

The New Garia-Airport and Joka-Esplanade corridors exemplify these issues, marked by abandoned extensions, one-train operations, and never-ending construction. These shortcomings highlight the need for accountability, transparency, and commuter-centric planning.

To reclaim its legacy and meet the growing needs of Kolkata's residents, the metro requires a comprehensive overhaul. This includes prioritizing safety, efficiency, infrastructure upgrades, and sustainable long-term solutions. By addressing these systemic issues and eliminating external interferences, Kolkata Metro can restore its former glory and set an example for urban transportation across the nation.





# KOLKATA METRO

## CELEBRATING FOUR DECADES OF TRUST & SERVICE

Anamitra Bose

2024 marked the completion of 40 glorious years of nation's first metro rail. This phenomenal feat was celebrated with no holds barred by the Metro Rail Authorities and the Railway Board. A series of events spread across 5 days marked the momentous occasion. The celebrations were grand and gala as nearly everyone in the city sat up and took notice. But before the 'metro men' plunged in the birthday bash, an informal meet for defining the groundwork for celebration was carried out with some members of the Rail Enthusiasts' Society (RES) headed by Sri Sanjoy Mookerjee, the former Financial Commissioner of Indian Railways wherein valuable inputs and suggestions were given regarding the planned jamboree. The entire week leading to the historic day was dotted with various events making the celebration unique and inclusive. The celebration kicked off from 19<sup>th</sup> October and continued till 24<sup>th</sup> October, the day in 1984 when Kolkata emerged in the global map of being a 'metro city' in its truest sense.

**Day-1 = The Heritage Walk):** On 19<sup>th</sup> October, the saga of

celebrations began with a Heritage Walk arranged by Kolkata Metro to celebrate the occasion. The event was flagged off from Calcutta Port Officer's Club at Rabindra Sadan in the early hours of morning which was hosted by the General Manager P. Uday Kumar Reddy along with other high officials from the Metro Railway. As the walk continued till Esplanade, Retd. Justice Soumitra Pal, also member of RES, recalled his being one of the first witnesses of the trial run of the metro rake from Bhawanipur (now Netaji Bhavan) to Esplanade. His detailed narration took the listeners 40 years back, when the nation was taken by storm by the term 'metro' or 'subway' or 'Patal Rail' meaning Underground Rail in Bengali. During the event, the attendees were offered a special commemorative cap, a rose stick and water bottles. The walkathon that commenced at around 8 am reached Esplanade after some time where the dignitaries were welcomed with beverages.

The Metro authority had setup an exhibition of photography in the concourse of the Esplanade station of Green Line





Image courtesy: Akash Roy

which was inaugurated by the General Manager. The photographs depicted various milestones and unknown facts about Kolkata Metro from the 1970s when construction work had commenced as various methodologies, unique to the Indian conditions, were applied. Some exhibits showed the transition of travel authorities from Magnetic Strip tickets to RFID tokens and modern Paper QR code ones. Also, the various smart cards issued in various timelines based on significant themes were on display. A quiz session based on the legacy of the Kolkata Metro was conducted. The program concluded with a breakfast platter as senior officials and metro men shared their experiences and thoughts about their employer.

**Day-2 = Walkathon:** The Heritage Walk was followed by a Walkathon 20<sup>th</sup> October which was attended by the metro officials among others.

**Day-3 = Heritage Run of Non-AC NGEF Rake:** At around 10 am on 22<sup>nd</sup> October, a surprise message from metro railway became the talk of the town. Members of the RES along with some press personnel and certain dignitaries got an exclusive privilege to be a part of history by participating in a 'Celebratory Run' by a Non-AC NGEF rake from Mahanayak Uttam Kumar (Tollygunge) to Maidan station at 11:30 am. Metro presented an opportunity to get back to one's

Image courtesy: Akash Roy



Images courtesy: Anamitra Bose

childhood days or to those days of yore – an apt offering for a perfect occasion. The NGEF 16/18N rake had been beautifully decorated with garlands, colourful balloons, artificial flowers and signages of 40 Years of Metro. Internally, the entire rake was adorned with posters and images from different eras of Kolkata metro depicting its journey which witnessed many ups and downs.

At the stroke of noon, the General Manager of Kolkata Metro arrived with the chief guests of the day, Smt. Mamata Shankar and Shri Gautam Ghose – two eminent personalities from the film industry. As media personnel latched on the opportunity to interview the distinguished guests, the wheels of the legendary rake began to roll around 12:30 pm when the General Manager flagged off the 'Heritage Run' from Mahanayak Uttam Kumar station. It was time to rush towards the 'open' windows of the rake to record the journey throwing one back to those good old days. The train honked and it was all about revisiting the nostalgia of the Non-AC BHEL and NGEF rakes. The rake gradually rolled out from platform number 3 and plunged inside the tunnel to proceed northwards. As the DC traction motors rumbled and growled,

Image courtesy: Anamitra Bose





the whiff of the burnt brake shoes suffused the coaches implying the rakes were kept idle for a long time. Until the first five minutes of departure, the train laboured to cross 20 kmph speed and the motors were clearly struggling to keep up. Gradually, the train overcame the initial hiccups and as the rake approached Rabindra Sarobar, it accelerated and the usual DC motor sounds came as a breath of fresh air to the railway enthusiasts onboard. The sound of the motors and wheels reverberated the tunnel as passengers are reminded every bit of those cacophonous days which have gone into oblivion after the onset of the AC rakes. The train skipped Rabindra Sarobar, Kalighat, Jatin Das Park, Netaji Bhawan, Rabindra Sadan to finally stop at Maidan station to complete this joyride. The passengers present in stations enroute were surprised to witness the decorated Non-AC rake breezing past them. After disembarking the guests, the rake moved further north for Noapara to unwind for the day. The Metro authorities not only gifted a goodie jute bag at Maidan station along with refreshments after completion of the run but also presented the ones onboard with sweet memories to cherish for their lifetime.

**Day-4 = Technical Seminar:** After a day's break, metro authorities were back with the celebrations on the 23<sup>rd</sup> October at the B. C. Roy Auditorium of Sealdah which hosted a grand Technical Seminar. The prelude to the event started around 9:30 am with registration of the attendees while at 10 am it was launched with lighting of lamps and felicitation of dignitaries. The building housing the auditorium itself has a grandiose façade complete with a beautiful dome in the centre adorning work of art from the colonial era.

After the welcome note by **Mr. Subrata Sarkar, PCME, Kolkata Metro**, a special souvenir book on this milestone was unveiled and presented to the dignitaries. The first speaker of the seminar was **Mr. Manish Jain, PCSO, Kolkata Metro** who took the guests on a time travel to rewind and remind about the proposal embodying detailed plans of a tube rail for the then British India Capital of Calcutta, dating back to more than 100 years along with actual laying of foundation

*Image courtesy: Somsubhra Das*



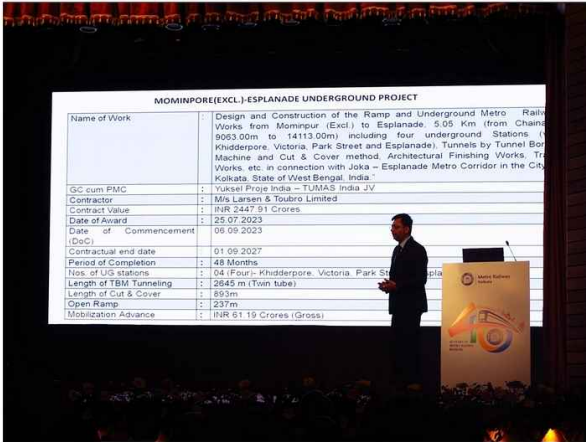
*Image courtesy: Anamitra Bose*

stone, post-independence, for Metropolitan Transportation Project (MTP), Kolkata on 29<sup>th</sup> December, 1972. The informative and insightful talk concluded with present status of the Kolkata Metro spanning the 4 operational routes and with its future expansion plans.

After Mr. Jain, **Mr. Rajesh Prasad, former Director (Operations), Railway Vikas Nigam Limited** took the stage. He threw some light on the position of India's metros in the global map. He emphasized how Railway Vikas Nigam Limited (RVNL) is playing a pivotal role in Kolkata Metro's future plans. RVNL, a Mini Ratna PSU under the Ministry of Railways, has constructed the Noapara to Dakshineswar section of the Blue Line and is currently executing the ambitious projects of Orange Line (New Garia-Airport via Newtown) and Purple Line (Joka-Esplanade) designs and constructions. Mr. Prasad also shared his experiences and the challenges he had to face during construction of the Noapara-Dakshineswar stretch when RVNL had to dismantle the Old Dunlop Bridge girders using diamond cutters. RVNL also did a commendable job while erecting girders over Chariyal Khal where it had to deal with overhead High-Tension cables. If these were not enough, RVNL then had to launch composite girders over the Sealdah-Naihati mainline taking minimal power blocks. With overcoming all these hurdles, the Noapara-Dakshineswar section was finally commissioned on 23<sup>rd</sup> February 2021. Mr. Prasad concluded his session with high hopes of a brighter future for the metro system in Kolkata.

Mr. Prasad gave way to **Dr. Mangu Singh, Ex-Deputy Chief Engineer, Kolkata Metro and former Chief, Delhi Metro Railway Corporation**. He opened up about the construction phases of the North-South Line when there was no experience at all in the rapid transit system sect and the various hurdles faced by the Metro authorities. The strategic deterrents like having a different contractor for every kilometre along with logistic handicaps are full-fledged stories in themselves. The audience listened in the awe about the leadership which overcame all the impediments and made MTP a reality. The





Images courtesy: Anamita Bose

session was followed by a tea break.

After the break, everyone regrouped for next the session by **Mr. Vipin Kumar**, Chief Project Manager/Kol-II at RVNL who elaborated about the various stumbling blocks and positive takeaways of the Purple Line. He focussed on the present encumbrances that the RVNL authorities are facing in four major areas where land issues are still not sorted out. He pointed out that RVNL needs a very small stretch of land from CMRI Hospital premises for construction of a viaduct in the Khidderpore area but after repeated requests CMRI authorities are yet to hand over the stretch resulting in delays; next is the parcel of land required from the office of the Consulate General of Nepal which is yet to be settled; then comes the land within the Alipore Police Lines under the jurisdiction of Kolkata Police which is required for taking the metro project ahead but it continues to remain a riddle and last but not least is the issue of transplantation of 1227 trees in the Maidan area out of which 149 trees had already been transplanted from Maidan to other areas. For construction of the Esplanade station of Purple Line, the BC Roy Market also requires to be shifted to a temporary 2-tier structure nearby. Mr. Kumar highlighted on the plan of using technologically advanced TBMs for construction of tunnels in the Purple Line which is set to be imported soon. The model room at Maidan is also a worth visiting place for railway enthusiasts. At present, the Joka-Majerhat stretch is only operational with the Majerhat station being the sole instance in India of a metro station been built over a railway yard.

As Mr. Vipin Kumar concluded, the audiences were ready to welcome **Mr. Shailesh Kumar**, GGM/Civil/Kolkata Metro Rail Corporation who took the audiences on a journey below the river Hooghly where nation's first under river metro services are being operated. The construction, planning and challenges were broadly discussed in the session. The audience were introduced to many marvels of this engineering feat.

After Mr. Kumar, **Dr. Swapnil Garg**, Professor of Strategic Management at IIM Indore presented a very different aspect of

Metro Railway. He brought to picture the various PPP models followed by such transportation projects and the minute differences between each of them. He explained in details the pros and cons of each model with various examples.

With all these brainstorming sessions, it was finally time for the most awaited symposium of the day – a session on International Station and Power Management by **Mr. Daniel Navascués**, Head of Siemens Mobility (Telecommunication and SCADA portfolio) and **Mr. Charline Graf**, System Manager, Telecommunication and SCADA. They put forward Siemens' Control Guide Digital Station and Platform Manager (DSPM) curated for the needs of Indian metro railway stations and systems. The speakers stressed on how Siemens products have minimized practical problems thereby efficiently managing power requirements. DSPM integrates three main systems viz., Physical Security Information Management, Power SCADA and Building Management systems. The entire system is a combination of real time inputs, digital processing and smart outputs. The inputs include Radio inputs like WLAN, 5G Network, Air Link, Antenna, GSM etc. processes through DSPM and executes the command through passenger, station and power systems. The data is also processed by security and control systems. All these systems are built upon Simatic WinCC Open architecture.

Some components of DSPM include :

- 1) Facilities SCADA - Real time monitoring and control of critical infrastructure like Ticketing system, Lifts, Escalators, Ventilation shafts thereby improving efficiency and safety.
- 2) Power SCADA - Manages power requirements of stations by analysing data models of power consumption and need.
- 3) Physical Security Management - The CCTV and other security are being controlled by DSPM.
- 4) Passenger Information System - Publishes passenger data after analysing and processing in two sub-modules Passenger Information Display System (PIDS) and Passenger Announcement System (PAS).
- 5) Capacity - Helps systems to analyse peak time capacity of a station and proper management.
- 6) Energy optimization operation through integration with other systems like CBTC, Control Guide Falko, Sitras
- 7) Decision Support System and Task automation helps to choose best workflow for the situation.

This session was a truly engaging one and the speakers answered all doubts and queries from a very knowledgeable audience.

The platform of global technology led to a conclave on indigenous excellence on the technological front as the young Hyperloop team from IIT Madras graced the occasion. **Mr. Aditya Khakse** and **Mr. Harikrishna T** was the speakers on behalf of TuTr, IITM Hyperloop team focussing on Linear Induction Motors (LIM) and Hyperloop technologies. As a part of IIT Madras startup, the TuTr team has built a 410 metres





Images courtesy: Anamitra Bose

long Hyperloop testing facility inside IIT campus, a first of its kind in Asia. The pod weighs 1.5 tonnes and will achieve a speed of 150 kmph inside 410 metres and a diameter of 2 metre. The principal technologies involved are Linear Induction Motors, Magnetic Levitation and Vacuum Tube. LIM are motors where stators are unwrapped and distributed like a cut section laid flat surface and rotor is another flat surface which acts as secondary of the motor. The torque generated between two flat surfaces moves the body forward much easily and efficiently instead of any generated force. LIM can be both one sided and double sided. The speakers emphasized on the need of hyperloops in India as TuTr and IIT Madras takes initiative to make hyperloops a reality in India.

The sessions concluded with the General Manager felicitating all the speakers with a special memento on behalf of Kolkata Metro which was followed by a group photograph and lunch.

**Day-5 = Cultural Evening:** The weeklong celebrations was set for a grand epilogue on 24<sup>th</sup> October. A looming Cyclone Dana, destined for a landfall in late hours of the day between the Bengal-Odisha borders, could not dampen the spirits of the Metro authorities as they went ahead with the gala Cultural Evening. On a lighter note, perhaps the Weather Gods even showed mercy after observing the intent of the metro men as nothing more than strong winds and light drizzles laced the city which in no way could intimidate the artists, the delegates and the guests. The BC Roy Auditorium once again played the host to the event which was anchored by the ever-graceful Smt. Madhubanti Maitra. Padma Vibhushan Ustad

The B C Roy Institute

Image courtesy: Somsubhra Das



1. Staircase inside B C Roy Bhavan, 2. Ustad Amjad Ali Khan, 3. Smt. Shobha Mudgal, 4. 40 yrs Special Smart Card.

Images courtesy: Somsubhra Das

Amjad Ali Khan, the exponent of Sarod and Padma Shri Subha Mudgal, the renowned vocalist of Hindustani classical music lit up the evening with their charismatic live performances. While Ustad Amjad Ali Khan's sarod recital was accompanied by sensitive tabla accompaniment earning enthusiastic responses from the audience, Smt. Mudgal's rendition reflected her deep knowledge and musical lineage that left the listeners with a rare sense of fulfilment. The august presence of two of the country's most revered artists not only brought the city's rich cultural heritage to life but also converted the event into a magnum opus as the captivated, ennobled audience were left asking for more. Ustad Amjad Ali Khan's tryst with Kolkata Metro continued as he was one of those dignitaries who were requested to take ride in the newly introduced metro back then, in 1985 – a sheer confidence building measure towards a panic-stricken public for undertaking the underground commute. The programme concluded with felicitation of these living legends hailing from the Indian Classical music font. The guests assembled for one last time at the dinner arranged by the Metro authorities.

As the first metro railway of India stepped into its 40<sup>th</sup> year of introduction, the authority and the Railway Board left no stone unturned to make the milestone an eventful one. All the events showcased and highlighted metro in a positive way. Apart from these, during the last two days of the celebration week, two heritage runs of NGEF Non-AC rake were also organised from Tollygunge (Mahanayak Uttam Kumar) to Maidan station and this time, anyone could board the train by purchasing a special ticket of ₹ 100 per person. More of such rides should be conducted every year to give a glimpse of the moving history of Calcutta and her metro, especially to the newer generations. Amongst the gamut of initiatives, Metro Railway undertook another one by issuing some limited-edition smart cards with the 40 years celebration logo on them. A weeklong of festivities thus came to an end as every individual participant went back with many fond memories.

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દાબોઈ જંકશન  
DABHOI J  
M.S.L. 43-12B II.



# A DAY AT DABHOI

Mick Pope





Mick Pope is a trainspotter hailing from the UK. His passion for ferroequinology has its roots to his great grandfather being a Station Master in his country of birth. He has been following his passion from the age of 14 with a primary focus of seeing and watching the number of every steam locomotive in the UK. With the culmination of the Steam Era in UK in 1968, he switched to document industrial and worldwide steam which justifies his coming to India for over 30 times since 1980. His connection with India was not limited to these visits only as his uncle used to be a teacher at the St. Georges School in the Nilgiris in the 1930s. He continues to visit many other places in Europe, Asia and Africa for quenching his thirst for passion.

In March 1990, I set out on my penultimate solo visit to India with the intention of seeing the rapidly disappearing steam locos, in particular the narrow-gauge lines threatened with closure or gauge conversion. Although I have visited many times since, this, and my visit in 1993, were my last opportunities to capture some video footage using my new Canon video camera. In those days there were no smart phones or mini digital devices and the camera was heavy using 8mm tape cassettes. I also had a tripod to carry. As a result, I limited my still camera to pocket sized one using negative film rather than the usual slide film.

I used the trusty Indian Railways agent in the UK, SD Travels, to book my train reservations and obtain my IndRail Pass which allowed 14 days of unlimited travel anywhere in the country. I landed at Dabolim in Goa and my first train was the Mandovi Express from Vasco Da Gama on the metre gauge to Miraj and then overnight by the Sahayadri Express to Dadar. After a switch to Central, I took the Gandhidam Express to Surat, a base from which to visit the Bilimora – Waghai line and after a short stay moved on to Vadodara.

The system I was visiting was famous for consisting of five different destinations radiating from Dabhoi, the centre of the system. Like many lines in the area, the system was built by the Gaekwar of Baroda to serve his subjects in the area. I believe the first, starting from Dabhoi was built in 1862 and the traffic was bullock hauled!

I was pleased to see that WP Pacifics and WGs were still present in the area and I managed to photograph one of the formers at Vishvamitri after a short run from by base. At Vishvamitri, I descended to the narrow-gauge station. Here there was a lively scene with a ZB 2-6-2 shunting and taking



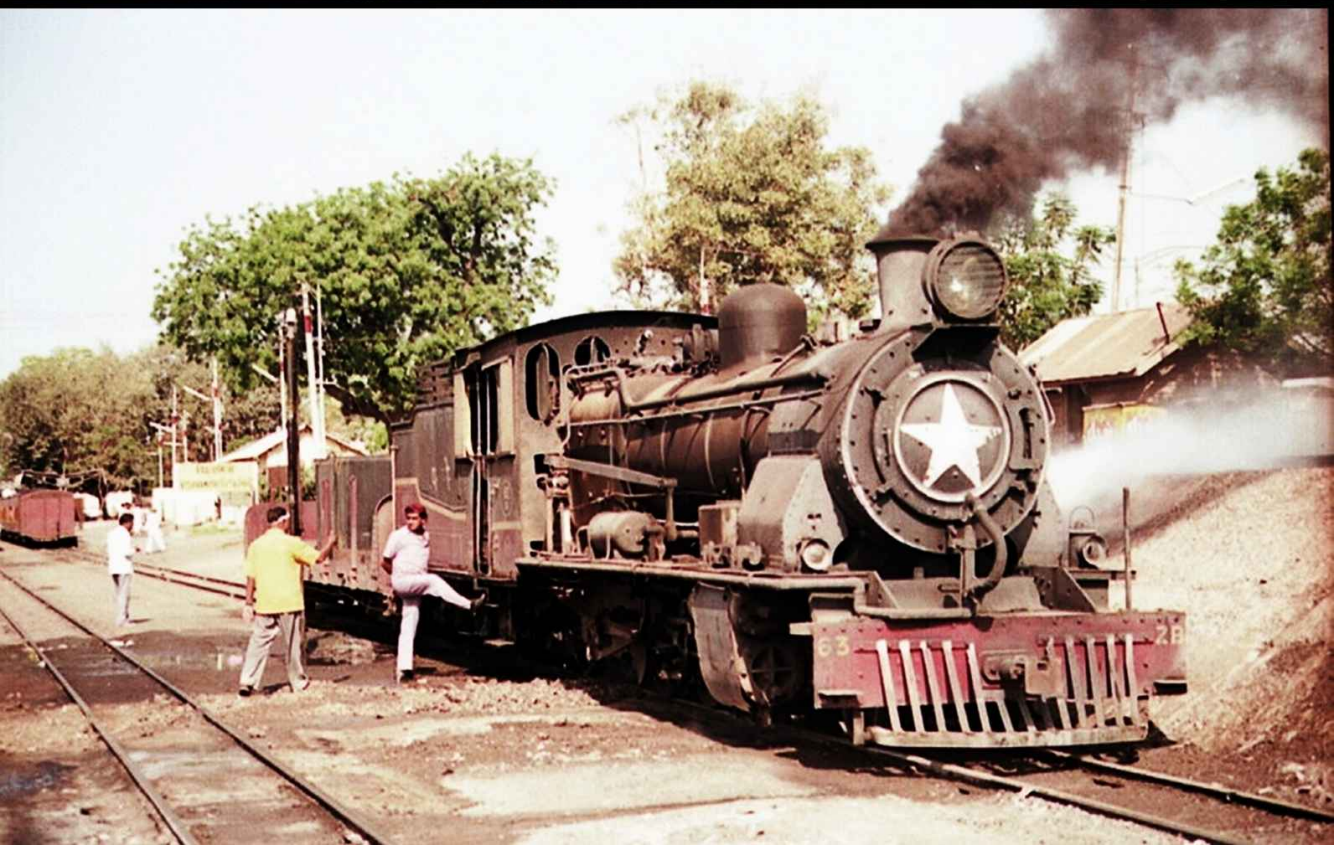
water before coupling up to my train to, initially, Pratapnagar. By this time, the ZB were the only steam locos operating on the line, but at least the lines on the system were still all steam. Pratapnagar, of course, was the location of the main repair facility on the system. I photographed some photogenic children carrying large clay jars and discovered along the route that they were vendors of water to passengers and they walked the length of the train at every stop shouting 'pani'.

Another puzzling sight was a trolley on the platform loaded with brightly coloured wooden objects in a dismantled state that at the time I thought were spinning or weaving equipment but have subsequently learned they are traditionally made items of furniture.

I stopped off at Pratapnagar to take some photos as there











were two trains in the station at the time. The stretch to Dabhoi was the busiest on the line with about seven passenger trains each way on a normal day. I had no photographic permit [they were notoriously difficult to obtain, not impossible but the bureaucratic process meant they usually arrived after you got home!] and so did not attempt to visit the locomotive repair shop.



It was then on to Dabhoi where there was much to see with loco moving back and forth from the loco depot and trains departing in various directions. I decided to cover the Chandod line but not by travelling on the train as I wanted to capture the departure from Dabhoi and the return from Chandod on my video, so I hired a local taxi. The Chandod line platform curved away through 90 degrees from the main through tracks in the station. The train made a very slow departure from the station and I had plenty of time to get to Chandod, the line being one of the shorter routes on the system. I assume there must be a turntable or turning triangle at Chandod as the loco was facing in the opposite direction by the time I arrived there! I captured the departure and then it was back to Dabhoi and on to a location between there and Pratapnagar where I had noted a long bridge that seemed to present a good location.



While waiting for the train, I had one of the scariest experiences of my steam railway travels around the world. I left the cab and driver at the roadside and descended down a steep embankment onto the flat ground below. I set up the video camera on the tripod and waited. Then I hear a rustling in the scrub vegetation around me and a man emerged, wearing just a dhoti and carrying a large machete. I quickly figured that the camera and my other belongings were











probably worth more than he would earn in many years! He approached me and, of course, there was no chance of verbal communication through a common tongue. He looked quizzically at the video camera and so I beckoned him to look through the viewfinder which he carefully did. This seemed to satisfy him and he shook my hand and disappeared into the scrub again, probably thinking how odd Europeans were! I got a good video but sadly my still photo has not stood the



passing of time very well. It was then time to return to Vishvamitri and from there, Vadodara for my next visit to the lines from Nadiad the following day.

What a wonderful system the Dabhoi system was. I only wish I had more time to explore the other lines in the system. Happy days!

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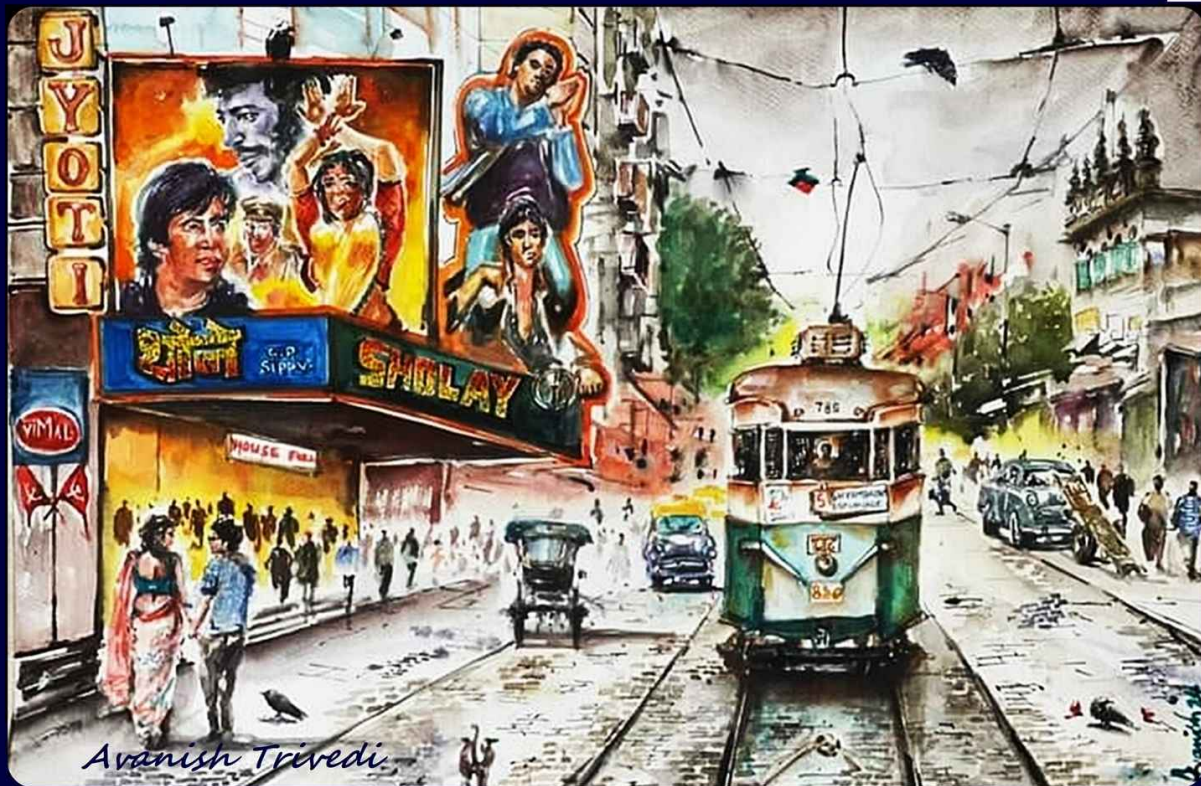




*Bipul Krishna Biswas*

# Railway Sketches





Arunish Trevedi



Tuhin





# The Saga of WAM-2

## A Paragon of True Versatility

Anamitra Ghatak



Anamitra Ghatak is an entrepreneur and management consultant based out of North America. Anamitra has been a railway enthusiast from a very early age. Growing up in Eastern India during 80's, he experienced the heydays of steam engines on Indian Railways. Later he lived and worked in Europe and North America to witness the most advanced passenger and freight railroad operations. With keen interest on motive power technology, he takes part in many railway enthusiasts' forums and supports researchers on related topics.

After the reorganization of Indian Railways (IR), the vast network underwent several transformations starting in the 1950s and gradually experimenting, consolidating and standardizing over decades. A lot of these developments took place through importing technology from foreign private corporations and eventually learning and adoption. For scaling up the traffic and gaining efficiency, Indian Railways decided to adopt 25,000 Volt Alternating Current (AC) electric traction in some of the significant stretches across its network. In this article we will focus on Eastern India and look at the challenges the administration faced to usher in a new era of electric traction and acquired WAM-2 locomotives from Japan that became a cornerstone of several other passenger and freight locomotives to operate across India later on.

In the 1950s, Indian Railways was a mish-mash of several privately owned and operated systems that were brought under the command of the Government of India. The network was moving on steam locomotives but there was the ambition on making the routes that saw high volume and heavy industrial freight traffic more efficient using electric traction. At that time, only Bombay suburban railways were electrified with 1500 V Direct Current (DC) electrification. But IR knew that while DC technology worked very well for suburban passenger traffic of that time, for the heavy hauling high volume industrial traffic of the East, it was not possible to achieve the desired results. While the decision was made to expand only on AC electrification, IR was also doing its due diligence on the locomotives that would be required to operate on these lines.



IR worked with the European and Japanese suppliers to identify locomotives that could fit the need of its requirements. After meticulous cost / benefit analyses, IR selected the first two batches of mixed electric locomotives – (a) BBM-1 (later **WAM-1**) from the European supplier group *Groupement 50Hz* (Kraus-Maffei, SFAC, La Brugeoise et Nivelles) and (b) BBM-2 (later **WAM-2**) from the Japanese Consortium (Hitachi, Mitsubishi and Toshiba). All these locos were to be delivered by late 1950s to early 1960s. While the Europeans bagged the order of 100 WAM-1s and later another 100+ WAG-1s for pan-Indian operations, the Japanese got the order of only 38 WAM-2 variants and these were brought for Eastern Railway where they spent their entire codal life till early 2000. IR assigned the serial numbers of 20300 to 20337 to this class of locomotives.

Shifting focus to the Eastern Railway (ER), a lot of being done to electrify its main route from Howrah to Mughal Sarai (now Deen Dayal Upadhyay) Junction. Howrah mainline catered to suburban local trains up to Burdwan Main and Tarakeswar. During early 1950s, some suburban lines were electrified on 3000 Volt DC power and some DC electric locomotives were deployed to pull local and express trains. DC EMUs were also brought in. But soon after, it was decided that ER would no longer pursue DC traction. The DC locomotives and EMUs were sent to Mumbai (Central Railway) and the focus was shifted back to 25 KV AC 50 Hz electrification. The results

were immediately visible. The entire Howrah to Mughal Sarai was electrified by late 1960s within a decade via the Grand Chord line that passed through Dhanbad, Gaya and Sasaram.

#### • Finding Home in Asansol :

Back in 1950s, ER think tank saw the need for a comprehensive maintenance of the newly arriving AC locomotives. Asansol Junction was at the epicenter of the passenger and industrial freight traffic of Durgapur-Asansol area. It was decided to home the new AC locos at Asansol. Next to the existing steam maintenance facilities, land was given to establish a new AC electric loco shed for WAM-1 and WAM-2 locomotives. While the WAM-1 (and later WAG-1) locomotives were also being heavily used in neighboring South Eastern Railway's mining belt, WAM-2 locos were mainly operating in Eastern Railway territory.

#### • Phase 1 : Odd jobs – Freighters, Expresses & Suburban EMU's :

At this time, the WAM-2 locos were relatively new. However, they were put on shuttle services in and out of Howrah and Sealdah. Under ER, Sealdah Suburban was rapidly electrified with 25 KV AC. Shantipur, Krishnanagar City, Dankuni and Bongaon branches went AC electrified by 1965. Gradually all Sealdah South routes were electrified by 1967, pushing Sealdah Division to take over the main suburban traffic on AC EMU locals. But there was a small problem. There were







not many AC EMU power cars available. There again, the WAM-2 locos came to the rescue. These locos were sandwiched between EMU coaches, while the consist was driven by remote trailing cabs. This was a very unique arrangement that the WAM-2 locos were able to support right at the beginning of their career in ER.

Beyond the EMUs and some conventional rakes, WAM-2s were also put on occasional freight duties over ER, though a very few instances of WAM-2s hauling freight have been heard of.

#### • Phase 2 : Dependable Intercity Express Loco (Late 1960s to Late 1970s) :

As we said, by the late 60's, Howrah was connected to Mughal Sarai via the Grand Chord line. Known for their reliability, WAM-2s were deployed on all major mail/express trains for the short and long distances. At this time, WAM-2s were seen as the regular loco of the legendary Coalfield Express, Black Diamond Express, Doon Express, Sealdah-Pathankot (Jammu Tawi) Express etc. Later, the Howrah-Asansol Express got introduced which also got its dedicated WAM-2 on its inaugural run.

Since WAM-2 was more of an ER loco, they were not mostly venturing outside ER territory at this stage. However, their European counterpart WAM-1 was going all over India and from the early 70s, the WAM-4 locos started being produced. WAM-4 locomotives used the Japanese tap changer technology on top of ALCO truck and was tremendously successful in pulling 16-19 coach express trains at 110 kph. Blessed with Co-Co bogies, WAM-4s threw the real challenge for the WAM-2 locos. However, ER's regular fast mail and express trains were still with the WAM-1 and WAM-2s.

#### • Phase 3 : The long-distance loco (late 1970s till mid 90s) :

Despite being immensely popular with the railfans and traffic controllers over ER, WAM-2 continued to suffer from one problem. They were not being operated by other zones and pan India acceptance was not coming along. However, ER did their best in keeping the WAM-2s busy in mainly Howrah Asansol (for all trains via Patna) and Howrah Mughal Sarai (via Gaya) routes.

That Mughal Sarai barrier broke when Northern Railway (NR) decided to provide seamless E-loco connection from Howrah to Allahabad (now Prayagraj) Junction on Howrah Bombay Mail, Chambal Express and Shipra Express on WAM-2 locos. This is when ER's WAM-2 locos were running daily all the way from Howrah to Allahabad - 817 kms distance with a heavy load of mail and express trains over the ghat sections of Grand Chord line. The stretch between Mughal Sarai and Allahabad was being operated by NR crew. At this time, the only other train coming from Northern Railway territory with an electric loco was Kalka Mail. After operating behind WAM-1 locos for some time, NR's Ghaziabad shed provided WAM-4s to do the honors.

IR also upgraded a couple of WAM-2 locomotives to 120 kph standard to operate the new sensation called Howrah Rajdhani Express. However, despite renaming these modified locomotives as WAP-2, IR swiftly moved on to work on the WAP-1 project that would have Co-Co bogies and 130+ kph speed potential. As a result, the higher speed experiments on WAM-2 locos were discontinued.

#### • Phase 4 : The Gradual Decline (mid 90s onwards) :

Alongside IR's investments in more powerful WAM-4 and WAP-1 locos for coaching trains, a lot of mail and express trains started transitioning from vacuum brakes to air brakes. WAM-2 locos were almost 30 years old at this time and were not taken up for upgrades at this stage. The result was devastating for these locos overnight. Wherever possible, more WAM-2s were deployed. For instance, Black Diamond Express and Howrah Bombay Mail were given twin-WAM-2s for sometime. A lot of them had to be taken off the mail and express train duties and put in to slower trains that were still on vacuum brakes. The very WAM-2s that started in Sealdah with local trains made a full circle to return to Sealdah to pull Sealdah-Lalgola Passengers and Sealdah-Gede locals towards the end of their codal lives. When Bandel-Katwa electrification got completed, WAM-2s were put on some of the prime time fast Katwa locals that ran with longer rakes and plush second class vestibuled chair car coaches. Commuters loved WAM-2s for their swift acceleration. But finally, in and around year 2000, the entire batch of WAM-2









locos were rendered unfit. They were rapidly condemned and sent to the scrap yard by ER. Sadly enough, not a single one of these versatile locomotives got preserved whatsoever.

#### • THE VERSATILITY :

In the history of Indian railways, there are hardly any other locomotives other than the famous WDM2 that was given such a variety of duties. After pulling freight trains, suburban EMUs, Mail/Expresses and Rajdhani class of trains, they had to work as shunters at Asansol shed towards the end of their codal lives. Every duty was reliably delivered on by these puny machines.

#### • RAILFANNING SENSATION :

In their prime time, WAM-2s were pulling prestigious trains from the Deluxe AC Express to Howrah-Bombay Mail. On the famous four track mainline between Shaktigarh (near Barddhaman) and Sitarampur Jn. (near Asansol), WAM-2 hauled trains used to race at 110 with the expresses in tow. For many years, a WAM-4 hauled Coalfield Express had to lose the struggle to match up with WAM-2 hauled Mayurakshi Fast Passenger that ran in-parallel for a good hour between Barddhaman and Andal.

WAM-2s were also known for their high-pitch horn and a very unique purring sound coming out of their compressors.

It was not very hard to identify these locos by keeping the ears open. The other distinctive feature was their D shaped buffers and slightly smaller shaped lensed headlights.

#### • KEY SPECIFICATIONS :

WAM-2 locos used Mitsubishi traction motors (MB 3045-A) – four motors delivering close to 2900 HP on its Bo-Bo bogies. The locos were much smaller in length (47 ft.) than today's locomotives. These locomotives were equipped with air brake for the loco and vacuum brake for the payload.

Two locomotives (20333 and 20337) of this class got fitted with Silicon Diode Rectifiers to improve the performance and were called WAM-3s. These locos also had the reverse orientation of pantographs as compared to the original WAM-2s. However, WAM-2 and WAM-3 locos were parts of a mixed fleet and were hardly distinguished.

#### • LIVERY :

From the time of introduction, WAM-2 locos wore dark green and black livery with red stripes. Some WAM-2 and WAM-3s got variations of light blue liveries that distinctly identified them in the same color range as their distant cousin WAG-2 locomotives (Central Railway).

*All photographs used in this article were provided by the author.*

*All photos Copyrighted by their original owners.*

*Photographs courtesy: Mani Vijay, Harsh Vardhan, Murray Liston & IndiaRailInfo.*







Kunal Gupta is an IIM Bangalore pass-out after starting off as an engineer from Jadavpur University. He has worked across industries in sales & marketing roles in India as well as abroad. Based out of Kolkata, he now follows his passion for railways, aviation and theatre.



# My Childhood Train Journeys

Part - 1

Kunal Gupta



My mother tells me that my first train journey was when I was only three months old. Needless to mention I don't remember anything of my maiden rail travel. It was from Howrah to Midnapore in Gomoh Passenger – a train which has ceased to exist like many more passenger trains across the country. My father was posted in Midnapore and for the next 3 years most of my journeys were by road to Kolkata or even if by train, I can't recall anything.

My father thereafter got transferred to Hooghly which was closer to Kolkata and interestingly could be accessed from both Sealdah as well as Howrah. Well, my grandparents used to stay near Ultadanga Road (now Bidhannagar Road) – the penultimate intermediate station on the Sealdah mainline and our house overlooked the Sealdah mainline. So, a visit to Kolkata to my paternal grandparents used to be from Hooghly Ghat via Naihati where we had to change trains for our onward journey to Ultadanga Road. On the contrary my maternal grandparents used to be in South Kolkata and a visit to their place used to be routed from Bandel via Howrah. I was over 3 years when we moved in to Hooghly – needless to mention I do not remember much about these, barring the fact that there were 2 sets of staircases in Hooghly Ghat station – one covered and one uncovered. My father (and my grandmother too) had vertigo and they would prefer taking the covered one. The Bandel-Naihati locals were 4 coach EMU rakes then and I do remember once missing one of these resulting in crossing the Hooghly (Ganga) river by boat. The ride to/from Howrah was much more systematic and all I remember is as a 4/5 years old, I was eagerly waiting for Hind Motor station where I would try to see the ambassador cars in the factory from the train. My paternal grandfather was a rail enthusiast and possibly I inherited the liking for trains from him. It was during our stay in Hooghly that the infamous Darjeeling Mail accident happened in Ultadanga Road station (The Mail mounted on a stationary Habra Local) and my grandfather was one of those to reach the accident site in no time.

My father's next posting was in Kalimpong and that led to my

*Image courtesy: Team TrainTrackers*



first overnight journey. The journey was in a train that later on turned out to be one of my all-time favourites – The Darjeeling Mail. And this was my first journey to Sealdah station – all these while I was using the Ultadanga Road station. I remember a host of our relatives and friends coming to Sealdah station to see us off. At the rear end was the 2 compartments meant for Katihar – ½ of one was First Class. Then was the luggage cum guard compartment. Further towards the engine were in a row three First Class compartments. Once we boarded it was sheer bliss – you had a bunk bed – what an excitement for a 6 years old kid. The train left around 7pm or so – we waved to all those who had come to see us off. In no time we were cruising past our Kolkata home just before Ultadanga Road – unfortunately no one was there to wave us since both my grandparents were at Sealdah Station. I remember our first stop was in Dakhshineswar – we crossed Ganga thereafter and very soon joined the Howrah-Burdwan Chord Line (though unknown to me at that time). We reached Burdwan a little after 9pm where we had 20 minutes halt. One of my father's colleagues had come to meet us in Burdwan – another long-distance train arrived a few minutes after us and left much before we started – I was told it was Howrah Bombay Mail. After our dinner and visit to the toilet (which was yet another discovery), I had to reluctantly go to sleep. Woke up next morning and could see the lush green outside – we reached New Jalpaiguri around 8am or thereabouts. Not sure if my mother ensured that I wore a sweater before disembarking since for most Bengalis getting down at NJP means you have arrived at the hills. We left for Kalimpong shortly – however our stay in Kalimpong was extremely short unlike most Government postings where one is supposed to spend at least 2 years, if not more. Both my parents fell ill in the hills and my father was transferred to Kolkata in just a few months. I still miss Kalimpong since that was the golden period for me where we had to leave even before I got admitted to school. Our return was abrupt and that too during the Durga Puja with a huge rush in all modes of transport. There was a NJP SEALDAH Puja Special where we could manage into – alas not First Class this time.

*Image Source: Internet*







Image Courtesy: Jacob Stilling

Next year, in 1977, we planned to be in Ahmedabad where my uncle (phupha) was posted – a Defence Personnel. I had seen in the map how far it was and my father told me it is going to be a 2-nights' journey. I was extremely excited – a very long train journey with the added incentive of meeting my cousins. This was to be my first travel outside West Bengal ignoring the Bihar stretch of my earlier journey to NJP. The Howrah Ahmedabad express was possibly a tri-weekly or 4 days a week service those days. My father informed that while going it will be 2-Tier sleeper coach (Non-AC) – a species which has long disappeared. We got into Howrah station – I realized it is certainly much larger compared to Sealdah. I remember asking the TTE where our loco will be changed from electric to diesel/steam. Our man was pleasantly surprised since the question was coming from a 7-years old. We left HOWRAH around 8pm or so and the loco change was next day in Durg as far as I can recall. The other notable things which I remember were the train halting at a station – Vyara – we Bengalis pronounce it as Bhera which means lamb. Also do remember having my first ever flavoured milk enroute somewhere in Gujarat. The station name Anand was also quite a revelation for the 7 years old. We reached Ahmedabad around 5pm on the 3<sup>rd</sup> day – I was extremely exhausted after 45 hours journey. The return was nothing much reaching HOWRAH at around 4am in the morning.

In 1978, it was time to go to Bangalore – a visit to another uncle's (mausa) place during the Durga Puja. This is one travel which I will remember throughout my life – I had to travel to and from Bangalore many a times later on during my student days but my first journey was indeed different. Coromandel Express was a crack superfast that got introduced around that time and we were booked in this train – but the nature had different plans. It started raining incessantly and floods followed – our trip got cancelled. All rail connectivity was suspended between HOWRAH and KHARAGPUR and then the east coast line. Our trip got postponed – I was heartbroken. A few days later we were

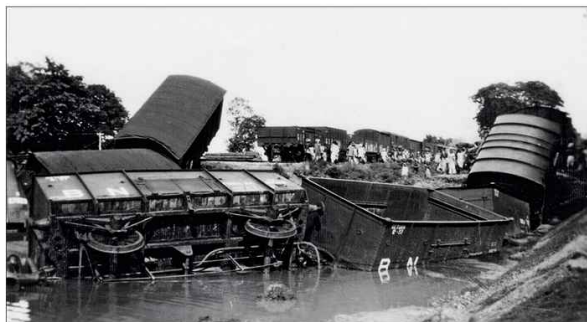


Image Source: Internet

rebooked for Bangalore once again but the bad news was majority of the SER (the then BNR) trains were not running which did include Coromandel Express (actually I had to wait for another 17 years for my first Coromandel ride). Madras Mail was the only train that was running and that too in a diverted route – just to add that direct rail connectivity between Kolkata and Bangalore was not there then and passengers had to change trains in Madras Central. We got into Howrah station – my aunt joined us and so did my cousin who was just 4 years old then. It was a well-kept surprise for me and I was elated to have him with us. Our train left Howrah at 8pm and hold on, the first station that we stopped was not Kharagpur but Burdwan. Yes, you read it right. The railway lines in the east coast were submerged and so were the ones till Kharagpur. At Durgapur, I remember that we stopped and in the adjacent platform barged in an express train which just whizzed past us. However, at Ranigunj we overtook this train albeit slowly when I noticed it was Howrah Delhi Express (later on Sealdah Delhi followed by Sealdah Jaipur – then again Sealdah Delhi followed by Kolkata Delhi Lalquila Express and finally Kolkata Patna express before resting in peace). We stopped in Asansol followed by Burnpur – I remember going to sleep for a short while to get up at Adra. Next morning we were somewhere near Jharsuguda when I woke up. There was a loco change in Jharsuguda and we were now diesel hauled. I was told that we are in Western Orissa. I don't recall all the stations in between but do remember Titlagarh. There was a bridge enroute where I could see the entire train – we were somewhere in between – what a view it was! Food was scarce. Finally in the evening we reached Vizianagram when my father announced that we have finally reached our actual route. An hour and half later we reached a station by the name Waltair – all I recall is a lousy smell just before entering Waltair. I was told that there will be a reversal here and I was surprised when I realized that we are traveling the opposite direction (Adra reversal I could not make out). Next morning, we reached Madras Central around 11am or so. The Madras Bangalore Express was sometime around 1pm or so (those days there only 3 trains between Madras and Bangalore – Mail, Express and Brindavan). I had heard about Brindavan Express and was dejected that we missed the same. Now after so many years, I feel travelling in





Image courtesy: Karick Chauhan

such a circuitous route to Madras in around 37 hours was indeed quite a feat. The journey to Bangalore from Madras was non-descript and my mausa was there in the station to pick us up onwards to Malleswaram. Their apartment was close to the railway line and this is here when I saw my first meter gauge train. Not one, but quite a few of them. We stayed in Bangalore for a few days and our return was also planned the same way as our onward journey. The tracks were still not ready for operation in the east coast and we had to take the same route back to Kolkata. So, on the designated day, we reached Bangalore City early in the morning – the express to Madras Central was possibly around 7am. Our train to HOWRAH from Madras central was sometime around 3pm or thereabouts. We reached MADRAS on time and then came the *'kahani mein twist'*. Apparently, the original route to HOWRAH got operational just a few hours ago and we were to take that route only. This essentially meant a late-night departure from MADRAS and more importantly spending a hell lot of time in Madras. As an 8 years old kid, I do remember quite a few things – while waiting in the platform saw my first RSA (Rake Sharing Arrangement) – do not vividly remember the trains but one train arrived at MADRAS and after the passengers deboarded, the boards were changed. In the early evening, my mother took me out of the station and if I recall correctly there was a subway to cross the road and thereafter a

Image Source: Internet



railway overbridge where we saw an EMU passing by – it was a MG (Meter Gauge) EMU from Egmore. We came back to the station and this time it was the 1<sup>st</sup> floor refreshment room – a place which later on I have extensively utilized. We had dinner there and back in the platform hopped into the stationary rake of Madras Howrah Mail. We were all too exhausted – waking up early in the morning and as soon as the train started, we feel asleep. Strangely, I don't remember much of the return journey barring the fact that we reached Kharagpur in the morning on the 3<sup>rd</sup> day and thereafter in station after station saw flood effected people staying put. It was not a pleasant journey and after some time the train was detained – we were told there was some 'rail roko' that was going on some distance ahead. Well my 1<sup>st</sup> brush with rail roko! We had to wait for quite some time and it was here when we realized emptying water bottles much before destination is a not a wise one. After the blockade was lifted, we started again reaching HOWRAH around 1pm in the afternoon.

These were the early train journeys of my life – at a time when I knew about EMU, long distance and passenger trains only and also for me locomotives meant were steam, diesel and electric. Growing up in a place next to the railway line, I was privy to a lot of EMU trains, a series of SEALDAH Lalgola passengers, occasional Muzzafarpur/Gaya/Salar (later on Bazarsau) passengers and just 3 Mail/Express trains – Darjeeling Mail, Upper India Express and Jammu Tawi Express. The Sealdah station was pre-dominantly a suburban section. It was during the tenure of the Late Ghani Khan Chowdhury's as Railway Minister that Sealdah got its next overnight express – Gour Express to Malda Town, possibly around 1980. I remember watching the maiden journey of the train from my dining room – well it was hauled by what we used to refer as Canadian steam engine. I started maintaining a scrap book and I remember the Gour Express inaugural run newspaper picture was one of my proud exhibits. Bhagirathi Express came along with Kanchanjungha Express from HOWRAH in 1983 – before inauguration newspapers were flush with all sort of name speculations

Image courtesy: Team TrainTrackers



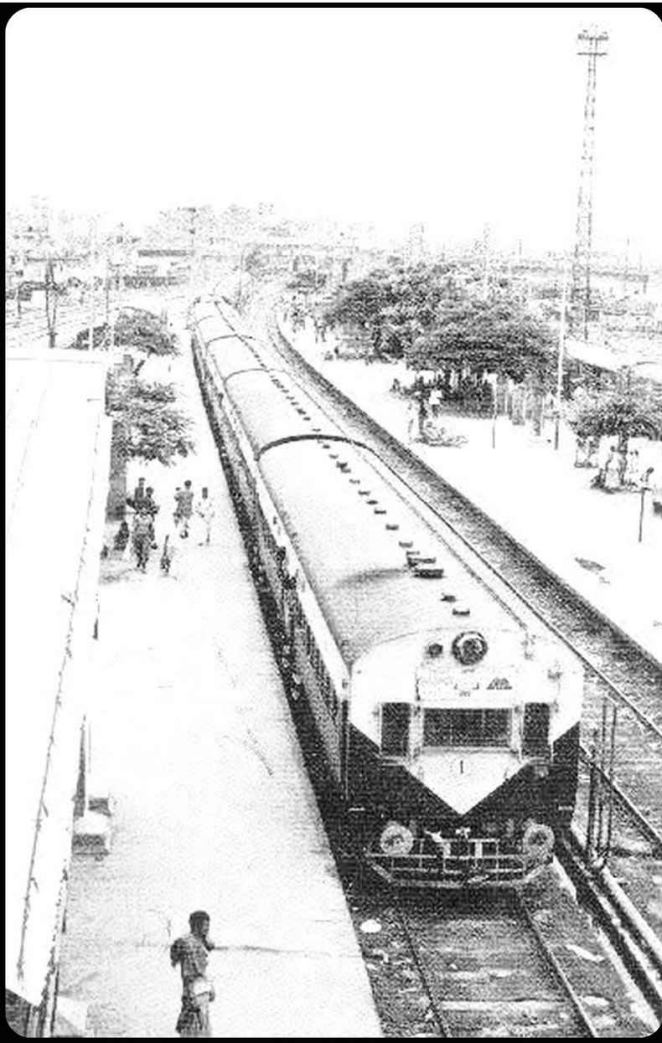


which included Siraj Express and Himalaya Express respectively and even certain newspapers mentioned that the new train to NJP will start from SEALDAH and not HOWRAH. Ironically, much later on, Kanchanjungha Express was actually shifted to SEALDAH from HOWRAH – by then it had lost its crack superfast sheen and was running till Guwahati. The Bhagirathi Express has 2 horizontal yellow stripes to start with and the inaugural loco also had similar livery. I rue my long-lost scrap book – it would have been a collector's item after so many years. It did have so many paper cuttings on inaugural time tables as well as first day runs. A year or so later SEALDAH division got a new train to Hasnabad – a diesel hauled Ichhamati Passenger. It was around the same time that the Circular Railway was introduced – I remember watching 2 motorized trolleys going from the SEALDAH side towards Bidhannagar Road side around 11am and returning early evening (By then Ultadanga Road station was renamed Bidhannagar Road station with newspapers reporting it is

soon going to be a terminal station for long distance trains). Once the train was introduced – a conventional rake with yellow and green livery resembling an EMU but still different and very wide doors like EMU with stairs to climb up/down – the rake used to come to SEALDAH yard on weekends typically on Saturday night after 10pm for its weekly maintenance – the best part was it had tube lights which was a rarity those days. 1984 also witnessed floods and HOWRAH was badly affected with water logging in the yards. A few trains from HOWRAH were diverted to SEALDAH – the first one I saw was the Danapur Howrah Express. Kamrup Express was the other one and late in the night I saw an all-AC empty rake whizzing past towards Bidhannagar Road – yes the HOWRAH Rajdhani. In my wildest dreams could I have dreamt of SEALDAH having a Rajdhani later on.

*(To be continued...)*

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Cover Photo Courtesy: Jacob Stilling*



*Diesel multiple-unit on Sealdah–Hasnabad service of Eastern Railway*







**TECHNICAL INSIGHT**

# INDIA

## INDIA - THE NATION WITH GROWING METRO SYSTEMS

### PART-VI : PUNE, KANPUR & AGRA

Anamitra Bose

Pune, also known as Oxford of the East, is one of the most livable cities of India apart from being one of the faster growing cities across Asia from economic perspective. Despite being served by the Central Railway suburban services and the PMPML buses, the growing demand for public transport forced city administration and urban planners to opt for a dedicated rapid transit system, connecting the educational institutes, manufacturing hubs and IT parks with the city centre. When the Bus Rapid Transit System (BRTS) failed, the Pune Metro project was finalized and DPR was submitted. Finally, on 6<sup>th</sup> March 2022, wheels of Metro started rolling in Pune.

While Pune had her way out, some other Tier-2 cities like Agra and Kanpur, continued to suffer with gradual choking

of traffic system in the absence of a robust transport system. Along with the failure of local administration to setup a reliable bus system in these cities, the traffic snarls and typical lawlessness made the road journeys tiresome. Taking a leaf out of the book of Lucknow, the Uttar Pradesh government decided to setup metro corridors in Kanpur and Agra. After DPR submission, the project received a cabinet nod as construction got started in 2019. By 2021 and 2024, Kanpur and Agra got their respective metro services with Kanpur Metro becoming one of the fastest implemented metro projects in the country.

#### :: PUNE METRO ::

In 2011, Pune became the latest city to be recognized as the 'Metro City' of India owing to its population count and





economic activity. The other metro cities already had metro rapid transits, either planned or in operation. Pune, though efficiently served by the Pune-Lonavala EMU services and Pune Mahanagar Parivahan Mahamandal Ltd. (PMPML) and MSRTC, felt the need of a metro railway for the city. Along with the premier educational institutions, Pune became a manufacturing hub for automobile and heavy machineries since late 90s. Outskirts like Pimpri Chinchwad were dotted with numerous production units. Since the early 2000s, along with the growth of Hyderabad and Bangalore as IT hub, various service-based companies like Infosys made Pune their 'home', thereby, further increasing the economic prospect of the city. Gradually, the product-based companies followed and Hinjewadi and other places became buzzing IT centers. Industrial and economic growth also pushes real estate growth, paving way for various residential complexes and projects in these areas. PMPML introduced the BRTS with dedicated corridors known as Rainbow BRTS. Despite numerous efforts, the system was a failure commercially and only 25% of the planned corridor was completed. This made the path for introduction of metro corridor.

In 2008, the Detailed Project Report on Pune Metro's two lines was submitted by DMRC. State approved the 31.25 Km initial plan in 2012 and Union Cabinet approved the DPR on 7<sup>th</sup> December, 2016. On 24<sup>th</sup> December 2016, the Hon'ble Prime Minister laid the foundation stone for the Pune Metro Purple and Aqua Line. These lines were being implemented by MahaMetro (Maharashtra Metro Railway Corporation Limited). Interestingly, on 29<sup>th</sup> December, Pune Metropolitan Development Authority (PMRDA) submitted the DPR for Pune Metro Line 3 separately. This was approved by state and centre in 2018.

#### • The MahaMetro Lines:

1) **Purple Line (PCMC Bhavan Swargate):** Out of a total of 16.59 Km long Purple Line, 11.5 long from PCMC Bhavan to Range Hills is elevated while the 5.09 km long stretch from Agriculture College to Swargate is underground. This stretch was included in Phase-1 plan of Pune Metro and was



executed by MahaMetro at a cost of Rs. 1600 crores. While construction work was being carried out in the elevated section between Kharalwadi and Morwadi, barricades was removed from New BRTS corridor which was objected to by PCMC. As a result, MahaMetro had to realign the corridor in 2018. The line has Depot at Range Hills and PCMC Bhavan has been built as a multimodal transportation hub integrated with PMPML and MSRTC buses.

As a part of the Phase-1 extension plan, the line is being extended from PCMC Bhavan to Bhakti Shakti Chowk in Nigdi. This extension was approved when DPR was submitted after extensive movements by social organizations and residents of Nigdi. Additionally, the corridor is being extended from Swargate to Katraj.

2) **Aqua Line (Vanaz to Ramwadi):** The 14.66 km long Aqua Line from Vanaz to Ramwadi will intersect Purple Line and Line-3 Purneri Metro at Civil Court station. The line was so named because it passes through the river bed of Mula Mutha River. The alignment of Line-2 was under continuous scrutiny and modifications since 2016 to late 2018. First alignment change came from DMRC only where they wanted to take the





to take the alignment along Mutha River to reduce project cost. Second alignment change had to be accommodated when the Indian Railways placed its extension plans. Third alignment change needed to be done when the National Monument Authority did not permit MahaMetro for any construction activity within 100 metres of Aga Khan Palace. For this, MahaMetro suggested three different alignments to PMC, out of which a diversion from Kalyani Nagar was approved. This increased the route length by 60 metres and project cost by Rs. 135 crores.

For Phase-2, the Line will be extended from Vanaz to Chandani Chowk, also known as Shivshrushti. The station was named after a planned permanent exhibition centre on Chatrapati Shivaji. The line will have a Metro Depot at Kothrud.

#### • The Purneri Metro:

Like Mumbai, another metropolis of Maharashtra was set to witness mass rapid transits being operated by multiple organizations within the city. The Line-3 of Pune Metro or Purneri Metro is owned by Pune Metropolitan Region Development Authority (PMRDA). On 3<sup>rd</sup> August 2018, the final bid of Design, Build, Finance, Operate and Transfer (DBFOT) model was awarded to Tata Realty and Siemens for joint venture (JV). This JV came together to form Pune IT City Metro Railway Limited to execute this project. The 23.3 km line will run from Megapolis Circle, Hinjawadi to Civil Court station where it will have a mega interchange with MahaMetro Purple and Aqua Lines. The section will be elevated with 23 stations. The Metro Depot will be at Maan, Hinjawadi in the land provided by MIDC. Proposal has been brought up to further extend the line from Civil Court up to Phursungi IT Park, Hadapsar. The line is expected to be operational by March 2025.

#### ROLLING STOCK:

**MahaMetro Lines >** The contract for Purple and Aqua Lines was awarded to Titagarh Firema Limited in August 2019 for 102 coaches. The order includes 34 rakes of 3-coaches each which is manufactured at Uttara para plant of Titagarh Firema Limited (also now known as Titagarh Rail Systems) in West Bengal.

Before the Titagarh rakes arrived, four CRRC Dalian rakes were brought from Nagpur Metro to commission and inaugurate the priority section of Phase-1 in 2022. As both of the metro systems are operated by MahaMetro, it was an easy process and the four rakes served Pune Metro until enough rakes arrived from Titagarh.

**Titagarh Firema Rolling Stock:** For the first time in India, an Aluminium alloy car-body rake was used in a metro system. Titagarh made 34 rakes and were the lightest metro rakes in the country with 15.5 tonnes axle load. The 3-coach rakes are fit for standard gauge (1435 mm) and 25 Kv AC OHE Catenary equipment.

The rake is configured in DMC-TC-DMC configuration where



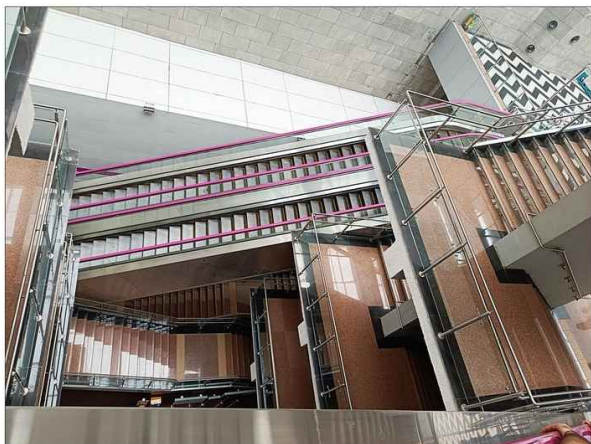
DMC (Driving Motor Car) length is 21.64 metres while TC (Trailer Car) length is 21.34 metres. The rake height is 3.9 metres while width is 2.9 metres. The 3-coach unit is connected by a semi-permanent traction bar. The train sets can be connected through automatic couplers fitted at both ends. The bogies are fitted with mono-bloc wheels in forged steel. The primary suspension is provided by nested coil springs and secondary suspension is provided by pneumatic suspension.

The rakes are fully air-conditioned and feature automatic doors, panic buttons, Passenger announcement and information systems, emergency evacuation door and audio visual passenger interfaces. Each coach has 4 passenger access doors measuring 1400 mm. The cab has one central emergency evacuation door and two cab doors. The passenger segment and cabs are equipped with a different air conditioning system with very low environmental impact.

The rakes are powered by an IGBT-based three phase propulsion system. Two four-quadrant IGBT traction converters, with microprocessor control are fitted on each DMC. Each converter powers a twin motor bogie, each







traction motor delivering 160 kW. The total power delivered by the 3-car rake consisting of 8 motors is therefore 1120 kW. The rakes can go up to a maximum speed of 95 kmph. The innovative and smart Train Control and Management System (TCMS) supervises and controls the traction unit, passenger diagnostics, status of the systems to the control centre for analysis and rolling stock status. It also helps in predictive maintenance and rolling stock availability. The average acceleration is  $0.6 \text{ m/s}^2$  and average deceleration is  $1 \text{ m/s}^2$  for the rakes.

**Puneri Metro Line-3** > While Line-3 will operate on the same standard gauge track, the traction supply system is 750V DC third rail instead of 25 KV AC OHE overhead catenary. The rolling stock contract for Line-3 has been awarded to Alstom Transport for 22 rakes, i.e., total 66 coaches.

The rakes are designed in Alstom's Engineering Centre at Hyderabad and manufactured at Sri City plant, Andhra Pradesh. The rakes are Alstom Metropolis train set type, with 3-coach configuration of DMC-TC-DMC. The rakes feature Alstom's state-of-the-art three phase propulsion system powered by IGBT. The maximum speed of the rakes is 85 kmph.

#### SIGNALLING:

For both MahaMetro and PMRDA Line-3, the signalling system will be Communication Based Train Control (CBTC) signalling system provided by Alstom. The signalling system is known as Urbalis 400. The system has all the advanced features like ATO and ATP and is compliant with GoA-4 scale.

Two more lines have been approved as a part of Phase-2 construction of Pune Metro. The Blue Line or the Line-4 will run from Khadakwasla to Kharadi via Swargate of 25.86 km and the Green Line or the Line-5 from Paudphata to Manilbaug of 6.11 km have been approved by PMC and awaiting final nod from the Union Cabinet. The 11 km extension from Ramwadi to Wagholi is also planned in Phase-2. With a considerable footfall in the already

operational lines, Pune Metro's future looks bright.

#### :: KANPUR METRO ::

Being the financial capital and the largest urban centre of Uttar Pradesh, Kanpur lacked a systematic public transport like the city bus system. The railheads like Kanpur Central, Rawatpur, Anwarganj are mostly connected by auto rickshaw and other unorganized transport medium. Unlike other Tier-2 cities like Indore, Kochi or Mysore, the city lagged behind in building up mass employment sectors like SEZ or IT Park. Still, the legacy of industries in the city like leather, textiles and chemicals continue to grow as many new residential complexes are also being setup. In order to seamlessly connect all these dots, the Uttar Pradesh Metro Rail Corporation (UPMRCL) prepared a DPR. Ultimately, the Kanpur Metro, a mass rapid transit for the Kanpur City was approved on 28<sup>th</sup> February, 2019. In November 2019, construction began on a priority basis between IIT Kanpur to Motijheel.

Kanpur Metro created a record worldwide among all mass rapid transits by starting commercial operations on the priority corridor by December 2021. This was the fastest instance of a mass rapid transit to be constructed and added a new feather to the cap of mass rapid transit chapter of India.

• **Orange Line (IIT Kanpur to Naubasta)** : The Orange Line of Kanpur Metro from IIT Kanpur to Naubasta is of 23.8 km, out of which 15.2 km will be elevated and 8.6 km will be underground. There will be 21 stations enroute out of which 14 stations will be elevated and 7 stations from Chunniganj to Transport Nagar will be underground ones.

• **Blue Line (Agriculture University to Barra-8)** : The Blue Line will have 8 stations (3 elevated and 5 underground) with total route length of 8.6 km. The two lines will have interchange at Rawatpur station. At Rawatpur, the lines will also connect to North Eastern Railway's Rawatpur station on the Kanpur Anwarganj - Farukhabad section.

#### ROLLING STOCK:

In December 2020, the rolling stock contract for Kanpur and







Agra metro systems were awarded to Bombardier Transportation by Uttar Pradesh Metro Rail Corporation (UPMRCL). For Kanpur Metro, 39 Bombardier Movia trainsets of 3-coach configuration, i.e., 117 coaches will be manufactured at Savli Plant and designed with the help of Bombardier Germany and Bombardier Hyderabad office. After Bombardier has been globally acquired by Alstom Transport in January 2021, the rakes supply, delivery and maintenance will be handled by Alstom.

Kanpur Metro is based on 1435 mm standard gauge system and 750V DC third rail traction system. The Movia rakes are 3-coach trainsets with DMC-TC-DMC configuration. The rakes have been provided with the advanced MITRAC (Modular Integrated Traction System) propulsion system based on IGBT. The rakes are built on stainless steel body and feature a aerodynamic ultramodern design. The rakes can accommodate 960 passengers at a time with automatic sliding doors and full-width gangways. The passenger information system integrated with TCMS keeps passengers updated with all necessary information. The coaches are fitted with FLEXX metro bogies for smooth operation and suspension system.



#### SIGNALLING SYSTEM:

The Kanpur Metro system is equipped with Bombardier (now Alstom) CITYFLO 650 communication-based train control and signaling system.

As of December 2024, the section from Motijheel to IIT Kanpur is open for commercial operations. Trials are being carried out from Motijheel to Kanpur Central Railway station section.



#### :: AGRA METRO ::

The fourth largest city of UP, Agra is one of the most prominent tourist destinations around the globe that needs no introduction. Once the capital of the Mughal Empire, the city is rich with history and culture while being vibrant with industries as well. The UPSRTC runs the Bus Rapid Transit System and city buses, but a mass rapid transit system soon became the need of the hour.

The Agra Metro DPR was approved on 28<sup>th</sup> January 2019 along with the one of Kanpur Metro. The Agra Metro will have two corridors of 29.65 km with a Yellow Line of 14.27 km from Sikandra to Taj East Gate and a Blue line of 15.4 km from Agra Cantt to Kalindi Vihar. The section from Mankamaheshwar Mandir to Taj East Gate was chosen as priority corridor as construction began in early 2021 to be commercially inaugurated on 6<sup>th</sup> March 2024.

#### • Yellow Line (Sikandra to Taj East Gate):

Out of the 14.27 km corridor from Sikandra to Taj East Gate,







the section from RBS College to Taj Mahal is underground with 7 stations and the rest of the section is elevated. Priority corridor of 6.5 km from Mankamaheshwar to Taj East Gate was opened on 6<sup>th</sup> March, 2024. This line will be beneficial for tourists and visitors as it connects all important sites like Sikandra, Taj Mahal, Agra Fort, Jama Masjid etc. The line is having its metro depot near Taj Mahal station called PAC Depot.

• **Blue Line (Agra Cantt to Kalindi Vihar):**

The 15.09 kilometer line will be fully elevated and connect the major railhead of Agra Cantt. to the rest of the city and some tourist spots on Yellow Line. The Blue line will have interchange with Yellow Line at Agra College station. In future, the depot serving Blue Line will be constructed at Kalindi Vihar.

**ROLLING STOCK:**

The joint order for Kanpur and Agra Metro was placed to Bombardier Transportation for rolling stock of 3-coach Movia Trainsets. Agra Metro will use 28 trainsets, i.e., 84 coaches for its operations. The rolling stock of Agra Metro is exactly similar to Kanpur Metro except the livery which is lighter shades of orange for Agra Metro while the Kanpur Metro

**SIGNALLING:**

Similar to Kanpur Metro, Agra Metro is also using CBTC signalling system of Bombardier (now Alstom) CITYFLO 650



This chapter on Metro Railway emphasizes on the 'to-be-successful' metro segments of in Pune, Kanpur and Agra. While the Pune Metro already experiencing good footfall and serving the catchment area quite well with two corridors buzzing with passengers all the time, the important corridor of Puner Metro to connect the IT hubs of Hinjawadi will be a game changer for sure for the public transport sector in Pune. With exponential growth of economic activity and real estate prices, a well planned mass rapid system was bound to be hit and so it is with the MahaMetro Lines.

The prospects are not exactly bright with the Agra and Kanpur metros as both of them see sparse footfall till now. Though the presently operational corridors are too small to make any impact, still a question arises if a Metro Light or Tramway would have been more viable in these two Tier-2 cities. Unlike other cities belonging to the same grade, these cities do not have a great industrial future ahead either. Though as metro railway enthusiasts, we must be optimistic and hope for better results and returns once the entire corridors get operational for public use.

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*Pune Metro photographs courtesy: Somsubhra Das.*

*Kanpur Metro photographs courtesy: Anamitra Bose.*

*Agra Metro photographs courtesy: Arkopal Sarkar.*

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# SUBARNAREKHA

## CENTENARY CELEBRATION OF ELECTRIC TRACTION

### AN INITIATIVE BY THE TATANAGAR ELS

Somanko Tiru

It was December 2018 when SER / Chakradharpur Division celebrated the commencement of the Diamond Jubilee of introduction of 25 kV Alternating Current Electric Traction. On December 15, 1959, 25kV AC traction was first introduced in the Rajkharswan-Dangoaposi section in the Chakradharpur division of SER. During the celebration a plaque was laid at Dangoaposi to earmark the same along with marking the message **60 GLORIOUS YEARS OF 25 KV ELECTRIC TRACTION** on 3 WAP7 Class Locomotives of ELS/Tatanagar bearing road numbers of 39011, 37060 and 30731. Dangoaposi, Chaibasa and Kendposi stations were also decorated to observe the occasion. Kendposi needs a special mention when it comes to introduction of 25kV traction. It was at a location close to this station that a transformer and circuit breaker, lend from French state-run rail company SNCF, were set up in 1959. The overhead wires between Kendposi and Rajkharswan were charged and the

pantograph of loco no. 20250 was raised at the station to feed power from the wires for the first time in 1959. The Tatanagar Electric Locomotive Shed was set up in 1962 which started to home AC locomotives and it became only the Second AC ELS of Indian Railways after Asansol ELS which has the distinction of being the First AC Electric Locomotive Shed of the nation.

#### A Proposal & The Shift in Focus :

As Tatanagar ELS was nearing its 60 Years of coming into being, an idea came up to commemorate the special year by naming a locomotive and getting a message painted on the same. Naming of locomotives was a regular practice in the earlier times, along with special liveries, but later got limited for some unknown reasons though the ELSs from the southern part of the country were executing such plans to perfection. The idea of naming a locomotive was submitted





by me to the then Sr. DEE/TRS/TATA, Mr. Shashikant, in 2019 and he appreciated the same, but before could any steps be taken, the world began to reel with the 2020 pandemic and everything was paused. Mr Shashikant was later transferred to Bokaro ELS and Mr Vinod Kumar took over. After things got normal, the previous proposal was again floated to the new Sr. DEE of TATA and then DEE/TRS/TATA Mr. Alok Ranjan. The proposal was again appreciated by the shed authorities but then due to the zonal policies, locomotives which were selected for earmarking got transferred to other shed as things got paused again. Mr. Alok Ranjan then gets transferred from TATA and Mr. Niranjan Kumar fills the boots. Once again, the authorities had to be approached but as 2022 culminated, the idea, concept and theme needed to be changed. From 60 Years Celebration of ELS/TATA, the concept was changed over to 100 Years of Railway Electrification in India and the new proposal was submitted in mid-2023.

Now the question comes as to why the change in concept was brought in! It was on the 3<sup>rd</sup> of February 1925, that the first Electric Train in India was operated between Bombay



Victoria Terminus and Kurla Harbour. The Centenary Year of IR's Electrification was approaching and as the Ministry of Railways is aiming at 100% Electrification, it was the best possible milestone that one can commemorate.

#### Selecting the Names & the Locomotives :

A lot of names, including Dalma, Subarnarekha and some other names all related with Jamshedpur, were in my list but after consulting with TATA ELS authorities, SER authorities and my fellow rail enthusiasts, Subarnarekha was finally selected. Subarnarekha is one of the two major rivers flowing through Jamshedpur, the other being Kharkhai, and is often termed as the lifeline of Jharkhand.

After selection of name, it came down to the selection of locomotive for the commemoration. Tatanagar WAG 9HC # 38490 was selected as it is the first locomotive allocated to ELS/TATA in the financial year 2024-25 which coincides with the Centenary Year of Railway Electrification in India. Another factor that had to be kept in mind was the propulsion of the locomotive. Tatanagar is the sole shed which homes locomotives with BHEL propulsion in SER





# INDIAN RAILWAYS

GLORIOUS 100 YEARS OF ELECTRIC TRACTION  
(1925-2025)

## 37787

TATANAGAR

BC-2



Somanko is a native of Jharkhand state but born and brought up in Kolkata. Works as private accountant and has degree in Science and Technology. A rail aficionado to the core with special interest in Electric Traction, Advanced Rolling Stocks and Ticketing System among others.



thereby negating the probability of transfer of BHEL propulsion equipped locomotives to any other sheds within SER. It was sheer luck that 38490 was equipped with BHEL propulsion and it fitted the bill.

The locomotive got commissioned in May 2024 but due to some unavoidable circumstances the commemoration could not be completed. Just before the scheduled inspection of 38490 which was due in August 2024, a call from the ELS was made for necessary markings and measurements for the said purpose and then finally on 30<sup>th</sup> August 2024, the name and the message were finalized. Measurements were marked on the body of 38490 for scripting the name Subarnarekha and it was the next working day where the technical team completed the naming. Finally, after a long wait of more than 5 years, the dream of naming a locomotive of Tatanagar ELS, got fulfilled. This wouldn't have been possible without the support from the concerned officials. With the christening of WAG 9HC #38490 as Subarnarekha, the loco earns the distinction of being the first named WAG9 Class Locomotive of SER and Electric Loco Assembly and Ancillary Unit (ELAAU) of CLW's Dankuni as well.

Now, for the message part to commemorate 100 years of

railway electrification, Tatanagar ELS suggested to go ahead with the proposal for its application on some WAP7s. Tatanagar had received 3 directly allocated WAP 7s, viz. 37787, 37788 and 37789 from the Railway Board in the later part of 2024 and all three locomotives were rolled out from Banaras Locomotive Works in December. 37787 and 37789 reached Tatanagar in the latter half of December 2024. Both the locos were commissioned in the first week of January 2025 and a message **GLORIOUS 100 YEARS OF ELECTRIC TRACTION (1925-2025)** was inscribed on their sides.

#### Acknowledging the Men Who Mattered :

Thanks to Mr. Vinod Kumar (Sr. DEE/TATA), Mr. Niranjan Kumar (DEE/TATA), Mr. Ankit Pandey (ADEE 1/TATA) for the necessary clearance. Thanks to Mr. Rajesh Prasad (SSE/M6/TATA), Mr. Anil Kumar (Eng/Insp/TATA) and their team who coordinated with me and always appreciated the proposals. Special thanks to Mr. Atulya Sinha (Ex AGM/SER and the current CAO/RWP/BELA) and Mr. Vikash Anand (Dir. EE RS / Railway Board) for encouragement and last but not least, thanks to all my rail enthusiast friends.

Since commissioning, WAG 9HC 38490 has been performing freight duties as Multiple Unit loco along with WAG 9HC 33387 and later worked as a single unit and was seen hauling both passengers and freighters services. Both 37787 and 37789 did passenger duties and hauled the most prestigious train of Tatanagar Coaching Depot – the Steel Express.

*All photographs were provided by the author & are copyright protected*







# TRAIN-18 SAGA of TATANAGAR

## Story of Tatanagar's Vande Bharat Inauguration

Somanko Tiru

Not everyone is familiar with the name 'Train-18' but yes, Vande Bharat is a household name, in India, at present. Train-18 which is known as Vande Bharat was first developed in 2018 by ICF under the leadership of Dr. Sudhanshu Mani and his team. After repeated trials of the Train - 18 (T-18) rake, on 15<sup>th</sup> February, 2019, the first Vande Bharat train was flagged-off between New Delhi and Varanasi Jn. As soon as it was introduced it became the fastest train of India, in terms of average speed, covering a distance of 759 KMs in just 8 Hours with an average speed of 95 Kmph.

### The Prelude:

It has been more than 5 years since the first Vande Bharat (VB) was inaugurated and almost all major cities have now got connected with the VB Services. The focus of the Railway Ministry then shifted to Tier-2 and Tier-3 cities for Vande Bharat connection and planning was done accordingly. Firstly, the industrial and educational hubs were taken into account and routes were being framed to connect them with other major cities. Before the inauguration of Ranchi-Varanasi Vande Bharat in March 2024, planning was on to

introduce Tatanagar-Varanasi VB but the demand for a new VB to Patna from Tatanagar by then had got stronger. Two daily trains were plying for Tatanagar - Patna sector but not a single one was left dedicated anymore after the Tatanagar-Danapur Super Express was extended to Ara and eventually to Buxar and the South Bihar, which used to ply between Durg and Rajendra Nagar Patna, also getting extended to Ara. Both these trains were accumulating more patronage than ever, so the demand for a new train between Tatanagar and Patna arose.

It was then decided to run a VB between Tatanagar (TATA) and Patna (PNBE) in IRTTC Meeting 2024 which was held in Jaipur from 10<sup>th</sup> to 12<sup>th</sup> April, 2024. The proposed VB was routed via Chandil-Muri-Bokaro Steel City-Gomoh-Gaya. The train was planned to depart from Tatanagar early morning and return to Tatanagar by night. Railway Board approved the proposal and preparation started thereafter. Tatanagar is a NSG-2 Category station and has 5 Main Platforms and 1 more platform is available to cater DEMU/MEMU services for Badampahar. To start a dedicated VB Service from Tatanagar meant a complex operation. Another problem which was needed to be dealt with was of the Primary Maintenance of



the T-18 Rake. Tatanagar Coaching Depot has 3 Washing Lines with none electrified. While the requirements of homing Train-18 Rake, by TATA coaching depot, were being finalized, a proposal for operating Puri-Tatanagar Vande Bharat was floated with morning departure from Puri implying that Tatanagar had to keep the rake in one of the platforms before the said VB starts the return journey. So, with two proposed VBs to Tatanagar, the preparation finally started. First up, the order came to Electrify Washing Line 1 of Tatanagar Coaching Depot where the T-18 Rake will be maintained. It was July 2024 when things started taking shape. Foundation work for OHE started in the first week of July. A month's deadline was given to have washing line 1 electrified. Staff of Tatanagar Coaching Depot started their Vande Bharat maintenance training in the Hatia Coaching Depot. In the meanwhile, the ECoR cited issues for introduction of a new train from Puri and the proposal for Puri-Tatanagar VB was revised to Bramhapur (BAM)-Tatanagar (TATA) VB. Now the situation becomes more complex than ever. Bramhapur don't have any facilities for homing any type of rakes nor do they have water filling facilities. Water filling is one of the most basic requirements needed to have for terminating a VB in any particular station.

#### Amidst The Thick of Things:

As part of preparatory measures, all staff of Tatanagar got trained for VB maintenance. Soon, electrification of TATA Washing Line was done as date for introduction for both the VBS from Tatanagar got announced. 15<sup>th</sup> September was selected for the date of inauguration along with other the other planned VBs across Jharkhand. It was already a foregone conclusion that the Hon'ble Prime Minister will flag off the trains physically, from Tatanagar Railway Station. Just few days before the inauguration some more changes were made in the final time table of both the Tatanagar bound / originating VBs.

Initially, the Tatanagar-Patna Vande Bharat was planned to run on all days a week except Mondays but then some crucial changes in the schedule was brought in along with change of routes. It was decided to run a Vande Bharat via MURI-BKSC-GMO (20893/94) from Wednesday to Sunday while another one was planned via BRKA-DTO-GHD (21893/94). It was also decided to run a VB with a different set of number (21895/96) but by the same route as 20893/94. The final schedule stood with 20893/94 operating from Tatanagar/Patna from Wednesday to Saturday and 21893 leaving Tatanagar on Sundays while 21894 departing Patna on Mondays followed by 21895 departing Tatanagar on Mondays and 21896 on Sundays from Patna. With this new planning, Tatanagar-Patna Vande Bharat implied no services on Tuesdays.

For the Tatanagar-Bramhapur VB, it was decided that the morning departure will be from Bramhapur instead of Tatanagar and as Bramhapur don't have any facilities for any kind of maintenance, Tatanagar Depot was allocated one extra rake so that the rake which arrives TATA from BAM is

taken for maintenance and a fresh rake will go as TATA-BAM. With all these planning being approved, preparations for Hon'ble Prime Minister's Tatanagar visit starts.

The Washing Line Electrification is complete by now. Rake V2.0 nos. 63 and 64 of 8 coaches, which were allocated to SCR and SWR respectively were transferred to SER (South Eastern Railway), Tatanagar CDO along with Rake V2.0 no 33 (8 Coaches) which was initially allocated to WR. Rake 63 and 64 arrived Tatanagar, early morning on 6<sup>th</sup> September. Trial runs were conducted in TATA-BAM route on 8<sup>th</sup> September and TATA-PNBE route on 10<sup>th</sup> September. Both the trials were successful. PR team from MoR shot some drone visuals near Chilka Lake during the trial which were used in the promos during the inauguration. For the flagging-off of the Bramhapur-Tatanagar VB from Bramhapur end, the rake for BAM was dispatched to Bramhapur on before the inauguration. Guest lists and list of Railway Enthusiasts were being prepared for the inaugural journey. GM/SER along with other PHoD made frequent inspections at Tatanagar so that the programme could be made a Grand Success.

Coaching Depot team comprising of Mr. Avinash Singh (CDO), Mr. Manoj Kumar (SSE C&W), Mr. A Patra (SSE), Md. Shahzeeb (JE) and others worked round the clock to make the rakes ready for the inauguration. Commercial Department of Tatanagar Mr. Sunil Kumar Singh, Mr. Rakesh Kumar and Mr. Omkar Singh were dealing with the guest's arrangements. Other officials of SER were mostly focused on Tatanagar. Special thanks to PRO 1/SER Mr. Sopan Datta for his guidance and co-ordination.

#### The Day Before:

From early morning of the day before the inauguration, on 14<sup>th</sup> September, rehearsals were being conducted with the rake for the placement on the platform, announcements, welcoming of the VVIPs and other programs. Giant screens and hoardings were installed all around the station premises. School children were being groomed for exchange with the Hon'ble Prime Minister and for media interaction. Everything was going on smoothly but then weather became to play spoilsport. It was raining heavily and incessantly since the night of 13<sup>th</sup> September and was continuing on the 14<sup>th</sup> as

*Incessant Rain...*

*Image Courtesy: Arkapal Sarkar*







Image courtesy: Somanko Tiru

well. Weather forecast gave no hope as they predicted intense downpour till 16<sup>th</sup> September. Everything was however ready by the end of 14<sup>th</sup> with positive hopes.

**The D-Day:**

The Inauguration Day was going to be a day for the people of Jamshedpur to remember forever. The city is getting its own Vande Bharat and that too, two at one go. It rained the whole night and continued on the morning of 15<sup>th</sup> as well as the weather forecast held good. Hon'ble Prime Minister's helicopter could not take-off from Ranchi as it was coming down heavily in Tatanagar. Decision was taken that the Prime Minister will flag-off the trains from Ranchi itself.

Tatanagar were brimming with guests, delegates and other visitors. Inclement weather could not dampen the spirits though the absence of the Prime Minister for obvious reasons took some sheen away. However, the Union Minister, Shri Shivraj Singh Chouhan was present in Tatanagar Station and interacted with the crew of Tatanagar-Patna Vande Bharat and the school students who were onboard. After a small Cultural Programme, the trains were flagged-off virtually by

Images Courtesy: Arkopal Sarkar



TATA-PNBE VandeBharat @ various stops

Images Courtesy: Arkopal Sarkar

the Prime Minister from Ranchi.

The passengers including school children were overwhelmed with joy as the train rolled out of platform no.1 Tatanagar station. Some members of Rail Enthusiasts' Society and other Railfans from SER, ER and ECR were onboard too. The crew of Tatanagar-Patna Vande Bharat consisted of Mr. S S Munda (LP M), Ms. Ritika Tirkey (ALP), Mr. Dhiraj Kumar Gupta (ALP), Mr. N Banerjee (CLI), Mr. S Banerjee (Train Manager), Mr. D K Tank (Standby TM). The crew was of Tatanagar Lobby and they were in-charge till NSCB Gomoh. From Gomoh, the ECR crew took over. The school children and many guests, who were onboard from Tatanagar, deboarded at Chandil.

Onboard, the passengers were served with Snacks, Lunch and Dinner as per the standard timings. At all the halting stations, some cultural programme was staged. Some performance by Bharat Scouts and Guides, Bokaro were undertaken inside the train. The train reached Patna with a minimal delay of 10 minutes thereby completing the Inaugural Run with great success. Soon, the empty rake departed from Patna for Tatanagar after about 20 minutes.

**The Epilogue:**

Post Inauguration, it was notified from the Railway Board *The Best View possible...*

Images Courtesy: Arkopal Sarkar





that regular run for both the Vande Bharat trains of Tatanagar base will commence from 18<sup>th</sup> September. As all the 3 rakes returned to base by 16<sup>th</sup> morning, they were taken inside the depot in turn for maintenance. The decorations were carefully removed and the rakes were thoroughly cleaned. Coaching Depot Officer/Tatanagar, Mr. Avinash Singh, who was onboard the Inauguration Special, ensured the rakes are properly maintained in the depot.

As referred earlier, there were other planned VBs across Jharkhand that were inaugurated on the 15<sup>th</sup> September. The introduction of the Rourkela-Howrah Vande Bharat was planned for a two way inauguration, at the last moment. Thus, the 3rd rake (no. 33) of Tatanagar Depot was sent to Rourkela for the Inauguration.

Among these 3 newly inaugurated Vande Bharat trains of SER, the Tatanagar-Patna one is doing better than the other two in terms of patronage. Just like Ranchi-Howrah, the Howrah-Rourkela service is mostly being availed by the



people of Tatanagar. The future of Tatanagar and its rail connectivity seems very bright with availability of all these new options.

*All photos are copyright protected. Cover photo & below photo courtesy: Arkopal Sarkar*

Tata-Patna VB @ Gaya junction





# Bhagalpur-Howrah Vande Bharat's Maiden Voyage

Somsubhra Das

Vande Bharat, the semi high speed train that has taken the nation by storm, has spread its wings of connectivity across the various nooks and corners of the country. Vande Bharat (VB) trains are no longer limited to the megalopolises only but also have reached out to several towns and cities of historic and commercial significance. Who would have thought about a Bhagalpur VB connecting Howrah/Kolkata becoming a reality! But as things panned out, Bhagalpur got its first VB on a day which became significant for the state of Jharkhand which got as many as half a dozen of VBs either originating or passing through it. The VBs introduced on 15<sup>th</sup> September, 2024 includes Bhagalpur-Howrah, Gaya-Howrah, Rourkela-Howrah, Brahmapur-Tata, Tata-Patna, Deoghar-Varanasi. The next day saw another set of 5 newly introduced VBs in Kolhapur-Pune, Pune-Hubbali, Nagpur-Secunderabad, Durg(Raipur)-Visakhapatnam, Agra-Banaras along with introduction of 20-Car Rake for Varanasi-New Delhi VB.

The Bhagalpur and Gaya VBs have their bases at Howrah while the Rourkela one has its base at Santragachi. The two VBs connecting Tata have their bases at Jamshedpur itself and the Deoghar VB is based at Varanasi. The Bhagalpur VB rake is an 8-coach consist flaunting saffron shade. It was gorgeously decorated for its maiden run and was flagged off from Bhagalpur by 11 in the morning as per the Inaugural Run Schedule. It had a 20 minute scheduled stop at its





would be every commercial stop, viz. Barahat Jn., Mandar Hill, Hansdiha, Nonihat Bhaturia Halt, Dumka, Rampurhat and Bolpur. Enthusiasm was its peak for the locals amongst whom many saw a VB for the first time. The 20 minute halt at every stop was for letting the locals board the train and feel the ambience which was unique in itself.

A special two-coach service was arranged for bringing back 'passengers' onboard to Bhagalpur from Nonihat Bhaturia which trailed the VB enroute. The railway authorities took excellent care of the Social Media Influencers, Media persons, VIPs, School children among others. Hospitality was of the highest order as the processes involving issuance of passes, serving excellent quality food and every other aspect met no administrative impediments or hassles.

The overall journey was as smooth as one would expect. The enthusiasm of the onlookers at every passing station mulls the appeal of VB amongst the masses. The train reached platform no. 22, a well half an hour in advance as per the schedule as it met a Gaya-Howrah VB which was also introduced that day, proceeding towards the car shed. All guests were greeted with an RPF Band playing live with full vigour. The Howrah Station was all decked up with cultural programme going on in the backdrop of arrival of two newly introduced VB. It was a memorable journey indeed. Heartfelt thanks to the authorities concerned who pulled off the event with flying colours.

*All photographs provided by the author & are copyright protected.*





# Vande Bharat Chronicles : Speed Meets Legacy

September 15th and 16th, 2024, marked a historic moment for Indian Railways and the nation, as nine Vande Bharat Express trains were inaugurated across various parts of the country. The simultaneous launch of these semi-high-speed trains was a testament to India's dedication to revolutionizing its rail network, improving regional connectivity, and providing world-class travel experiences to passengers. This remarkable achievement reflects the government's vision for an efficient, modern, and sustainable transport system.



Courtesy: Shivang Tandon AGC-BSB VandeBharat Express Courtesy: Pintoo Singh



KOP-PUNE VandeBharat Courtesy: Lalram M Mandavkar



BAM-TATA VandeBharat Courtesy: ECoR RfS



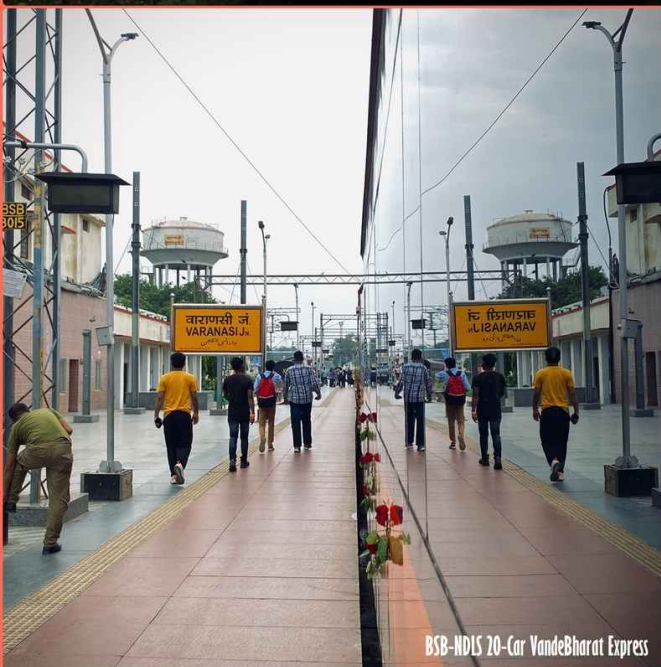
# Vande Bharat Chronicles : Speed Meets Legacy

The newly introduced Vande Bharat Express trains included key routes like Tatanagar-Patna, Berhampore-Tatanagar, Howrah-Rourkela, Howrah-Bhagalpur, Agra Cant.-Varanasi, Kolhapur-Pune, Pune-Hubbali, Durg-VSKP & Nagpur-Secunderabad strategically chosen to address regional connectivity needs and reduce travel time between major cities. These trains promise not only faster journeys but also unparalleled comfort with their cutting-edge technology, plush interiors, and onboard amenities. Each route caters to a diverse range of passengers, from daily commuters to tourists, ensuring that the benefits of modernization reach every corner of the nation.



DURG-VSKP VandeBharat

Courtesy: Abhisek Tripathy



BSB-NDLS 20-Car VandeBharat Express



Courtesy: Twesh Singh



# Vande Bharat Chronicles : Speed Meets Legacy

The grandeur of the event was matched by the enthusiasm of the public, with thousands of passengers eagerly awaiting the opportunity to experience these high-tech trains. The Vande Bharat Express trains, with their sleek design and advanced features like GPS-based information systems, automatic doors, and onboard catering services, signify a new era of luxury and convenience in Indian rail travel.



NGP-SC VandeBharat Exp Courtesy: Vijayaraghavan Krishnamurthy



NGP-SC VandeBharat Exp Courtesy: Vijayaraghavan Krishnamurthy



ROU-NWV VandeBharat Exp Courtesy: Kaushik Majumdar



PUNE-UBL VandeBharat Exp Courtesy: Harthik Vandhar

Pune – SSS Hubballi  
**VANDE BHARAT EXPRESS**

**TIME TABLE**

Train No 20669 SSS Hubballi - Pune (Wednesday, Friday & Sunday)		STATIONS	Train No 20670 Pune - SSS Hubballi (Thursday, Saturday & Monday)	
Arrival	Departure		Arrival	Departure
05:15 AM	05:00 AM	SSS Hubballi	10:45 PM	-
06:55 AM	05:17 AM	Dharwad	10:20 PM	10:22 PM
09:00 AM	09:05 AM	Belagavi	08:35 PM	08:40 PM
09:15 AM	09:17 AM	Miraj	06:40 PM	06:45 PM
10:47 AM	10:50 AM	Sangli	06:10 PM	06:12 PM
01:30 PM	-	Satara	04:37 PM	04:40 PM
-	-	Pune	-	02:15 PM

**FARE CHART**

**CHAIR CAR CLASS**

Stations	Dharwad	Belagavi	Miraj	Sangli	Satara	Pune
SSS Hubballi	365	520	860	875	1075	1530
Dharwad	-	485	825	845	1040	1505
Belagavi	-	-	620	625	850	1295
Miraj	-	-	-	365	505	975
Sangli	-	-	-	-	495	965
Satara	-	-	-	-	-	735

**EXECUTIVE CLASS**

Stations	Dharwad	Belagavi	Miraj	Sangli	Satara	Pune
SSS Hubballi	690	1005	1600	1640	2045	2780
Dharwad	-	930	1540	1575	1980	2725
Belagavi	-	-	1125	1145	1585	2230
Miraj	-	-	-	690	970	1705
Sangli	-	-	-	-	950	1690
Satara	-	-	-	-	-	1245

Note: All the fares mentioned above include catering charges

**SOUTH WESTERN RAILWAY**





# CELEBRATING MILESTONES WITH GRANDEUR & STYLE

# THE SEALDAH DIVISION WAY

Somsubhra Das

**Prologue :**

Have you ever thought of an idea about a rail network circumnavigating a city to disentangle its traffic snarls and ensuring seamless vehicular movement! Well, that is what exactly the planners had in mind when Kolkata's Circular Rail became a reality. Back then, it was not only a path breaking concept but also a noble idea that kept the city moving. Later, with the expansion of metro rail network, circular rail became the feeder link connecting the various growing metro routes thereby furthering the cause.

Discussing Kolkata's tryst with mass rapid transit system, two names - circular rail and metro rail, are always taken in the same breath as they complement each other like no other modes of transport. While the Circular Rail is a part of the services offered by Eastern Railway (ER), the Metro Railway Kolkata stands as a separate zone of our national carrier which is unique in itself. On the auspicious occasion of completion of 40 glorious years, both the entities celebrated the moment with style and grandeur. But celebrations were not limited to these two events only as 2024 saw another milestone being achieved. The Sealdah-Ranaghat connection under Sealdah Division of Eastern Railway completed 162 years of its inaugural run that changed the face of connectivity from the state capital to the far-flung districts.

Thus, this watershed moment was also solemnized with a celebration.

**Historical Perspectives:**

The year 1875 saw introduction of a rail route under the aegis of the Calcutta Port in those British India days as Calcutta Port Commissioners' Railway (CPCR) which later got converted into Circular Rail in 1984. This CPCR line was primarily built for transshipment of goods and materials from/to the port. Post independence, in 1965, a high-level metropolitan transport team was formed whose report recommended the concept of Circular Rail. Later, on 15<sup>th</sup> August, 1984, Circular Rail saw the light of the day with service commencing between Bagbazar and Prinsep Ghat which got connected with DumDum Jn. in 1990. But the Circular Rail was not 'circular' until 2005 when a viaduct was built along the alignment of the erstwhile port lines joining Prinsep Ghat with Majerhat on the Sealdah Budge Budge suburban line of Eastern Railway.

Thus, Circular Rail came full circle from a being a meagre 6 Km. route to a 36 Km. passage that connected the northern flank of the city with the southern limits thereby uniting the Sealdah Main suburban services with the Sealdah South suburban services as well. As mentioned earlier, Metro Rail



had a pivotal role in helping Circular Rail become circular in its truest sense as it was the metro authority who was awarded the contract for the construction of the viaduct.

On the other front, in 1862, rural Bengal got connected with Kolkata, once railways reached out to Ranaghat from Sealdah. To be more exact, trains were started between Sealdah to Kushtia, then within undivided Bengal which is now in Bangladesh (formerly East Pakistan). The route at present falls under the Sealdah-Ranaghat-Gede suburban route and Chilahati-Parbatipur-Santahar-Darshana line on the Bangladesh part. However, Sealdah had already come to prominence when a train from Beliagutta (now Beliaghata) and not to be confused with the Beliaghata Road station on the Sealdah-Hasnabad section) connected Port Canning (present Canning station) in January 1862 by the Calcutta and South-Eastern Railway Company which was formed in 1859. But the connection between Sealdah and Ranaghat commencing in September, 1862 by the already formed, the then Eastern Bengal Railway (founded in 1857), drew more attention and this very route still continues to be the Main line of Sealdah Division.

Sealdah has grown by leaps and bounds since then though it continues to maintain its age-old wings or wedge in the form of Sealdah North, Main and South sections. The North and Main sections were under the jurisdiction of the then Eastern Bengal Railway (EBR), while the South continued as the Sealdah South suburban network. With metro connectivity now coming to Sealdah, the station is set to grow further by catering to more than millions in a day. Today, Sealdah station is not merely station; it is a Living Heritage with 890 suburban services.

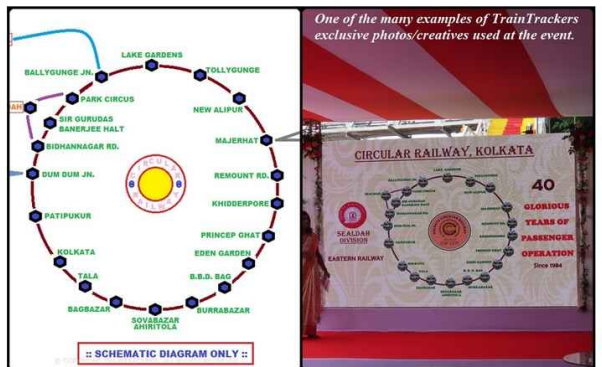
### Planning the Celebrations :

The Circular Rail has had a great impact on the patterns of traffic movement in the City of Joy. Thus, it was imperative that the system that revolutionised Kolkata's transport celebrated the 40 years of its existence for being one of the mainstays of commute. For recognising the service it has rendered for all these years, some members of TrainTrackers - a ferroequinological group (also being members of the Rail Enthusiasts' Society - a registered society) along with some from the Rail Enthusiasts' Society headed by Sri Sanjoy Mookerjee, former Financial Commissioner of Railway Board, met the Divisional Railway Manager, Sealdah Division for placing the proposal of celebration to commemorate the 40 years of Kolkata Circular Rail. During discussion, the issue of celebrating 162 years of railway connectivity from Sealdah to Ranaghat also came up. Soon, we were discussing twin celebrations with greater emphasis on the Kolkata Circular Rail event. Various sessions with the Hon'ble DRM Sealdah followed as innovative ideas and proposals kept pouring in, especially for the Circular Rail event. Sr. DFM Sri Tridib Sarma needs special mention for all the co-ordination, enthusiasm and support from his part. Many proposals were put forward which included running a train to commemorate the



occasion, garlanding the station boards enroute, issuing of Edmondson Tickets for the occasion, transforming a room within the railway property at the Prinsep Ghat Station into a photo gallery, decorating stations with informative flex and placards etc.

Though suggestions like garlanding the stations, issuance of Edmondson Tickets for the event were initially endorsed, only to be shelved later. It was finally decided to run a 6-coach EMU on 21<sup>st</sup> September, 2024 for the occasion with embellishments adorning the puny train which included history of the route among others along with refurbishing a room for photo gallery as proposed. Decorating the Kolkata and Prinsep Ghat stations with signage and photos was also on the agenda. Team TrainTrackers contributed to the cause by sharing their exclusive photos and maps for the purpose. The railway authorities worked on the original concepts provided by TrainTrackers and presented those with subtle modifications. Many photos of Kolkata Trams, trains were also used in the photo gallery which had exclusive rights of Team TrainTrackers. Besides contributing by these means, Team TrainTrackers also spent hours photographing and providing photos of iconic monuments and places of immense historical significance in and around the alignment of the Circular Rail. The PR Team of DRM Sealdah also stood up to the challenge to deliver the goods.



One of the many examples of TrainTrackers exclusive photos/creatives used at the event.



Some more examples of inspired work by the PR Team.





For the Sealdah-Ranaghat event, the railway authorities took it upon themselves to prepare for the event fixing the date of celebration on **29<sup>th</sup> September, 2024** with some invaluable inputs from the Rail Enthusiasts' Society (RES). From all perspectives, it was obvious that celebrations for this episode had to be at the famed Sealdah station whose complex now houses 21 platforms along with a metro connect and has obviously become one of the cornerstones of connectivity in the state, be it for suburban or for the non-suburban sectors.

### The D-Days :

• **21.09.2024** > For the Circular Rail event, the Heritage Run was planned with a 6-Car EMU for a non-stop run from Kolkata Station to Prinsep Ghat Station. Likewise, the train was beautifully decorated with balloons, ribbons, placards under the supervision of AEE Sri Jayanta Karmakar at the Barasat Car Shed. It left for Kolkata station at around 10.20 hrs. from the Car Shed. Of the six coaches, the first coach # 52007 was reserved for the invited guests and staff, the second coach #53034 was reserved for the invited guests and staff, the third coach #58019 carried an Art Exhibition on the 'Swachh Bharat' themed drawings and paintings by the school children, the fourth coach #53031 and the six coach # 50029 were reserved for Railway Officials and their families for members of RES while the fifth coach #74005 was exclusively earmarked for lady passengers.

Soon after the train reached Kolkata station, the Hon'ble DRM Sealdah inaugurated the event by unveiling a special commemorative ticket after addressing the media about the auspicious occasion. At about 11.40 am, the Heritage Run commenced reminiscing the initial days of the route to reach Prinsep Ghat at around 12.10 pm with Motorman Sri Suman De and Train Manager Sri Shiva Gurung at the helm. On reaching Prinsep Ghat, a cultural programme was staged which was illuminated with speeches from Sri Milind Deuskar – the Hon'ble General Manager of Eastern Railway and Sri Dipak Nigam – the Hon'ble DRM Sealdah. Prinsep Ghat hosted the Photo Gallery and an exhibition of artefacts made from scraps of various departments of Sealdah Division.

• **29.09.2024** > After the great success of Circular Rail Event just a week earlier, Sealdah Division geared up for celebrating yet another milestone of 162<sup>nd</sup> Anniversary of maiden train run between Sealdah and Ranaghat Jn/Kushtia. Once again, RES lend support for the event which saw people attending the celebration point on the concourse of platform numbers 12 and 13 of Sealdah station. A photo exhibition was also on offer showcasing the rich heritage and history of Sealdah station along with anecdotes describing its glorious past. Platform no. 5 was specially decorated and illuminated with photos depicting the glorious past of Sealdah.

The theme of the programme revolved around 'Swachhata Hi Sewa' campaign – a part of 'Swachh Bharat' Mission. The cultural fest was also based on this theme which was staged at Barrackpore, Kanchrapara and Naihati stations. Students



from a school at Ichhapur delivered a noteworthy presentation reflecting the journey of railways. For the Heritage Run, a brand new 3-Phase 12-coach ICF made EMU (248535-248536) of Narkeldanga Shed did the honours. The embellished train was flagged off at 11.45 hrs. amidst much fanfare from platform no. 5 of Sealdah as the 31621 Sealdah-Ranaghat local (a regular passenger service) by the Hon'ble AGM of ER in presence of the Hon'ble DRM of Sealdah. A coach was earmarked for the special invitees, schoolchildren, members of RES and media personnel. Trees were planted at various stations including Barrackpore marking the railway's responsibility towards sustainable development.

### Epilogue :

Kudos to Sealdah Division for successfully pulling-off back to back celebrations marking a couple of major milestones in its otherwise illustrious history. The PR Team of the Sealdah Division has worked in tandem with the ferroequinologists from Team TrainTrackers and RES in making both the events leave a lasting impression in the minds of the people who use this network to reach their workplaces or home or for holidays. Be it for the Circular Rail or for the pivotal role in connecting places across the nation, Sealdah Division is truly serving many miles with broad smiles!

*All Circular Rail photos courtesy: Somsubhra Das unless mentioned otherwise.*

*All Ranaghat event photos courtesy: Akash Roy unless mentioned otherwise.*

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# CELEBRATING 15 YEARS OF YESWANTPUR DURONTO

## Somanko Tiru

18<sup>th</sup> September 2009 – the date that will remain etched to the memories of not only railfans but also of public as on that very date, the then Railway Minister, Smt. Mamata Banerjee, flagged of nation's first Duronto Express between Sealdah and New Delhi. This was a completely new genre of train with no commercial stops enroute. The train was a fully AC one. Later, many Durontos were introduced with AC and Non-AC accommodation and the Howrah-Yesvantpur Duronto was one of them which belongs to that second category of Durontos.

### • What is The Meaning of Duronto, Why This Name?

Duronto means 'restless' in Bengali. Duronto trains were planned in such a way that they will have only technical stoppages, where crew change, watering of coaches and food loading will take place. Reservation for the set of trains was only allowed between source and destination stations. Like the Rajdhani and Shatabdis, it had onboard catering facilities and food charges were included in the ticket. Later in 2015, a decision was taken by the Railway Ministry to convert the technical stoppages to commercial stoppages for the benefit of passengers and to garner revenue. Apart from this, Duronto trains sported a unique livery which is a green based one mixed with yellow with blue lines.

### • The Journey of Yesvantpur Duronto

With the ministry planning to introduce more Duronto trains during 2009 and 2010, on 30<sup>th</sup> December, 2009 a new Duronto service was flagged off between Howrah and Yesvantpur (Bangalore). The service started with Hybrid LHB rakes and had Technical Stops at Bhubaneswar, Simhachalam North, Vijayawada and Renigunta.

The first run commenced from Yesvantpur on 3<sup>rd</sup> January, 2010 and on 8<sup>th</sup> January, 2010 from Howrah. The train belongs to South Eastern Railway.

Later in 2020, on 13<sup>th</sup> March, the train was given LHB coaches with Duronto Livery specially rolled out from ICF in 2019 and on 10<sup>th</sup> August, 2022 the terminal of the train was

shifted to SMVT/Bengaluru from Yesvantpur. The train is still running with same priority even after the commercialization of the technical stops.

### • Planning the Celebrations

As this train remains the most preferred train between Kolkata and Bengaluru, SER Fanatics – a Rail Enthusiast Group led by Shankhadip Maiti and Soham Das along with some other railfans decided to celebrate completion of 15 Years of its Commercial Service. This service being one of the significant ones of the South Eastern Railway, the railfans group emphasised this fact upon the South Eastern Railway authorities along with taking officials of the Kharagpur Division in loop and it was decided to celebrate the special day on 8<sup>th</sup> January, 2025. A small celebration as approved by the SER authorities got planned before the departure from Howrah.

The preparation for the celebration started early on 7<sup>th</sup> January as some railfans started with arranging flowers and garlands for decorating the rake. Later that night, some members of the group worked overnight inside Santtagachi Coaching Depot for decorating the rake by putting posters and stickers that showcased the history of the train. Tatanagar WAP7 37060 was entrusted to haul the train on the special day.

On 8<sup>th</sup> January, the rake along with the loco, attached in front, was shunted to Howrah Platform no. 21. A cake specifically crafted for the celebration was cut by the Train Manager of 12245 HWH SMVB Duronto Express in presence of Station Superintendent (Operations) / Howrah South, Deputy Traffic Inspector / Howrah South, RPF, Commercial officials and railfans. The train departed Howrah on time with some railfans onboard till Bhubaneswar. At Bhubaneswar, some more rail aficionados hailing from the ECoR zone came to appreciate the occasion.

*All photographs were provided by the author & are copyright protected.*







*We would like to convey heartfelt thanks to all those valued persons for making our latest endeavour 'Calendar 2025' find a place not only on their desks but also in their hearts.*

*With your encouragement and love we shall strive to better ourselves in our next endeavour. Thanks again for the unwavering and unconditional support.*

*- Team TrainTrackers*





Image Courtesy: Jay Dhabaliya

# Photo Junction





Irfan Khan



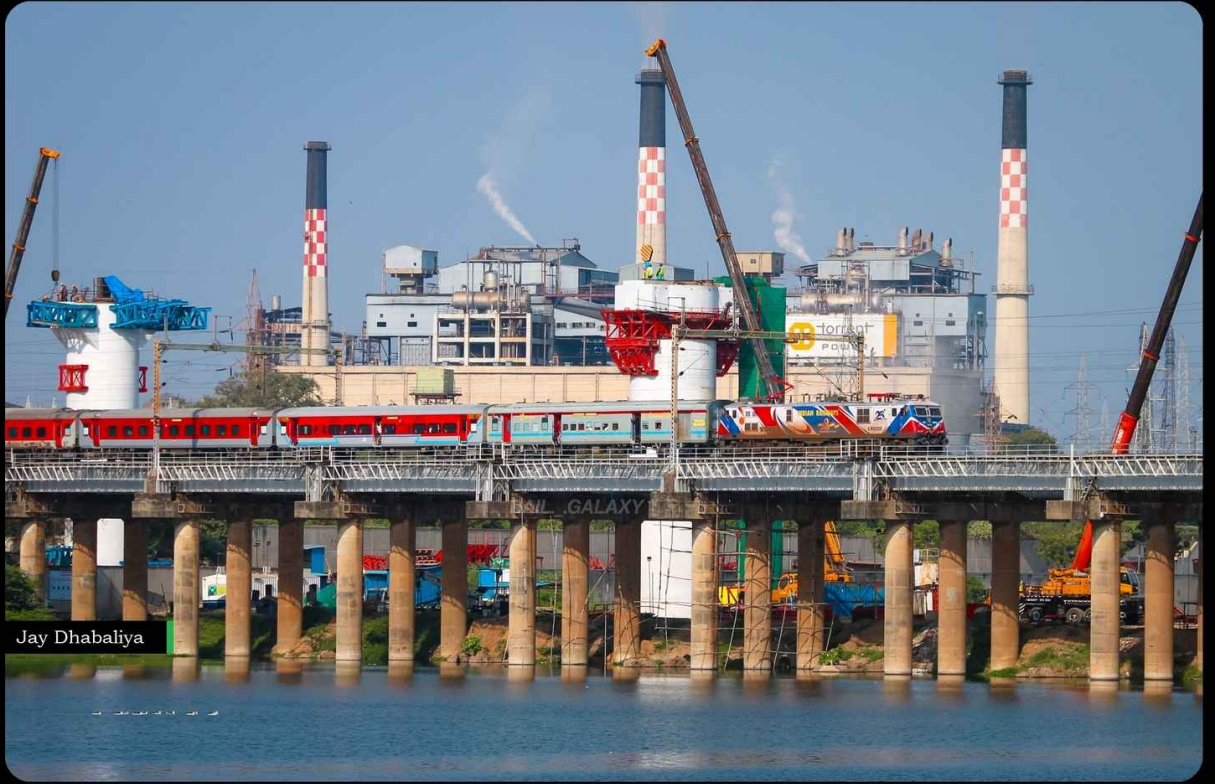
Protkarsh Kumar



Souvik Pal

Souvik





Jay Dhabaliya



Kamatham Sirish





Protkarsh Kumar



Protkarsh Kumar



# NEWS STATION

## DMRC Celebrated Legacy of its First Rake TS-01

On 24<sup>th</sup> December 2024, DMRC celebrated 22 years of passenger operations through various programmes. The principal event included the commemorative run of TS-01, the first rake for DMRC which was used for inauguration of train services on 24<sup>th</sup> December, 2002 by the then Hon'ble PM – the late Atal Bihari Vajpayee. The rake TS-01 was manufactured by Mitsubishi-Hyundai Rotem-MELCO consortium at South Korea and was received at the Kolkata Port which was then transported to Delhi by Indian Railways Network. During its tenure in DMRC, the rake has been transformed from initial 4-rake set to 6-coach consist in 2014 and then to an 8-coach rake in 2023. The rake has undergone two major overhaul and one mid-term rehabilitation schedule. During the latter, the rake got augmented with latest technologies like real-time route maps, CCTV, laptop and phone charging points etc. The rake in 2002 was quite ahead of its time with modern three phase propulsion system and regenerative braking and has a great track record with Mean Distance between Failures being above 84000 kilometres.

## Kashmir Rail Connectivity Boost

Indian Railways has successfully conducted trial run on Katra-Srinagar rail line as full operations are expected soon. In a significant development towards enhancing connectivity to the Kashmir Valley, a 22-bogie train successfully completed its trial run between Katra and Srinagar railway stations on 4<sup>th</sup> January. Officials hailed the event as a major step forward in the long-awaited railway project that aims to link Kashmir with the rest of India, via rail. The train, consisting of 18 air-conditioned coaches, two luggage carriers, and two engines, departed from Katra railway station at approximately 8 am and reached Srinagar within four hours. The trials included key infrastructure such as the Anji Khad and Chenab bridges, two significant engineering marvels that posed significant construction challenges. The successful completion of this project stands as a testament to India's engineering prowess and commitment to national integration.

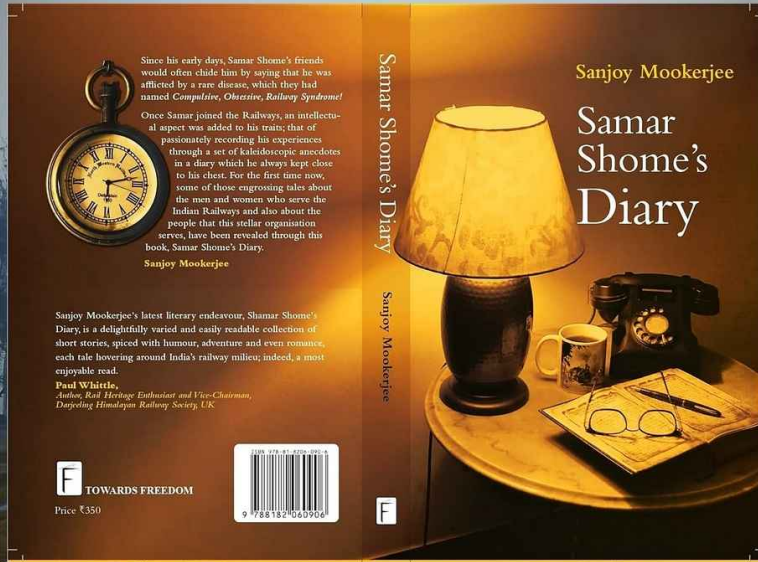
## Baby Sivok Steamed-up to Life

The only surviving 'A' Class locomotive of the Darjeeling Himalayan Railway – Baby Sivok, was made operational and steamed up on 7<sup>th</sup> December, 2024 on occasion of weeklong Ghoom Winter Festival. Baby Sivok was steamed up at the Tindharia Workshop. The 0-4-0 well tank steam locomotive was manufactured around 1911 by Oreinstein and Koppel, Germany. The locomotive extensively worked during the construction of Teesta Valley Railway, the DHR branch line from Sevoke to Geillekhola, which used to serve as a transit point to Kalimpong and Tibet. This resurrection of Baby Sivok was possible due to the efforts of engineers and workers at Tindharia Workshop and officials of NFR.

## Kolkata Metro Conducts First Trial Run upto Airport

Netaji Subhas Bose International Airport on its 100<sup>th</sup> year of operation, is all set to be connected with the Kolkata Metro network soon. On 14<sup>th</sup> December 2024, Metro Railway conducted its first ever trial run upto Jay Hind station (Airport station). The 6.25 kilometer stretch between Noapara to Bimanbandar is a part of 16.8 kilometer long Yellow Line from Noapara (on Blue Line) to Barasat. The trial run was to confirm the functionality of third rail, newly laid tracks and other systems. At present, the up line is only complete and down line is being constructed in full swing. Metro authorities are eyeing to start commercial operation in this stretch by March 2025.





Sanjoy Mookerjee, renowned for his evocative works such as *Howrah Junction*, *Assam Mail*, and *Girin Babu Tea*, is a celebrated author who masterfully brings to life the charm and history of India's railways and cultural legacy. Known for his engaging storytelling and vivid portrayal of characters and settings, his books transport readers to a bygone era filled with nostalgia and depth.

In his latest endeavor, *Samar Shome's Diary*, he ventures into uncharted territory, weaving a compelling narrative that promises to captivate readers with its nuanced storytelling, intricate emotions, and a touch of mystery. With this new offering, he continues to redefine literary excellence, blending history, humanity, and heart in his unique style.

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