Free e-Magazine

the rail enthusiast

Vol. 5 No. 2 May 2020

The Rail Enthusiasts' Society Quarterly

INDIAN RAILWAYS
In the Cinema

FROM OUR ARCHIVES
Selected Articles

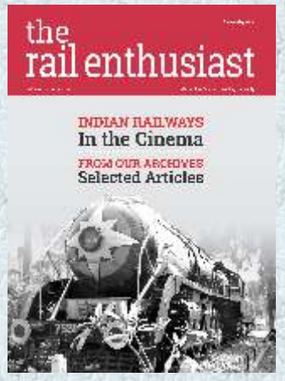
Last **DC EMU**

Rail electrification made a start in India as early as 1925 in the Mumbai (then Bombay) area. The system used was the 1500 Volt Direct Current (DC). In the late 1950s, when large scale electrification was undertaken in Eastern India, the 25,000 Volt Alternating Current (AC) system was adopted. The latter was standardised and all electrification subsequently was to the AC system only.

A small area around Mumbai and an even smaller area emanating from Chennai (earlier Madras) with DC electrification were aberrations and it was a matter of time before they converted to AC. The final section to be converted was the harbour line of the Mumbai suburban network. The picture below is of the last EMU train that ran on DC on the 9th of April 2016. DC traction thus worked in the country to the ripe old age of 91 years.

There is now no DC traction on the Indian Railways.

Photo: *Courtesy Harshad Joshi*



A Magazine
of the Rail Enthusiast,
by the Rail Enthusiast &
for the Rail Enthusiast

Vol. 5 No. 2 **14th Issue**

Printed by:
Jatinder Lachhman Singh

Published by:
Jatinder Lachhman Singh

On behalf of:
The Rail Enthusiasts' Society, C-494,
Defence Colony, New Delhi-110024

Printed at:
This is an e-Copy and no hard copies have been printed

Published at:
C-494, Defence Colony, New Delhi-110024

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J L Singh

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Released on 31.05.2020

Designed by:
BASIC-4 Advertising Pvt. Ltd.

Musings of the Editor...

Birthdays are special events, especially when you have seen more than a century and a half of them. The railway in India, officially born on the 16th of April 1853, celebrates its anniversary every year through fanfare, gala events, heritage runs, award-giving ceremonies, and the like. Alas! Not so on the 16th day of April 2020.

A quintessential rail enthusiast, a diehard railfan, Sanjoy Mookerjee captured the mood of the day through his pen. We reproduce what he recorded on the completion of 167 years of the Indian Railways.

Dadar station, Mumbai, struck by the Covid-19 lockdown

16th April 2020. Indian Railways has stepped into its 168th year. Like every year, I wake up on this day with a song on my lips.

But then the silence engulfs me. There's no sound from the railway tracks a hundred metres from my home; no hoot, no horn, no rattle. Why can I not find the millions of people who daily make IR their highway to prosperity? I want to rush across to the station nearby, but my eyes stop short as they rest upon the white face-mask lying on the bedside table, menacingly staring back at me.

It all came back in a flash: Coronavirus. The marauder has managed to grind the world and the Indian Nation to a screeching halt, and with it, Indian Railways have also been forced to stop in its track! It's a nation-wide lockdown on a scale which neither the country nor the planet has ever experienced before.

For more than a century and a half, wars have come and gone, calamities and nature's furies have visited us time and again. But the 167-year old Matriarch, our Nation's lifeline, has always kept her wheels turning, holding our hand in times of crises, undaunted, unperturbed! Even during the pains of partition,

Bilaspur station similarly struck

she had taken millions to the safety of their chosen homeland. Only twice in her lifetime did she pause, out of respect - once after Queen Victoria, then the Empress of India, left for the heavenly abode, and again, after the Mahatma, Father of our Nation, was martyred.

Today, on IR's birth anniversary, when humanity cowers terrified of an unseen adversary, I asked the grand old dame why she remains so stoic, so unmoving. "When nature continues to blossom all round, when the birds are encouraging humanity by singing the songs of life, when the sun daily presents to us heart-warming sunrises, why have you stopped in your tracks?"

The Matriarch replies:

"Extraordinary situations need extraordinary responses. Yes, passenger trains have stopped to save lives. But, for the warriors who battle on the frontlines, so that we may live to see many more sunrises, I am providing full logistic support. Daily, unseen, I carry trainloads of essentials, food and medical supplies, linking the Arabian Sea to the Bay of Bengal and beyond, and from the mighty Himalayas to the Indian Ocean. My stations and buildings are open for the comfort of those away from home, my hospitals, doctors and nurses, are there to look after the sick, my workshops have readied protective gear, mobile medical centres and isolation wards in record time to

CSMT during lockdown (Photos: Courtesy Rajendra Aklekar)

counter the pandemic, and my kitchens are serving food to the hungry and forlorn."

"I am Indian Railways. I fight to win!" she declares. "Through the silent labour of 1.3 million railway warriors bound together by 70,000 kilometers of steel ribbon, I pledge to hold the hands of 1.3 billion of my countrymen, come what may."

"We shall fight this invisible enemy together. The people of India shall overcome!"

CSMT Star Chamber sans people

Sanjoy recorded this on the 16th of April itself.

For obvious reasons, we have not been able to bring you the April 2020 issue of our magazine. We had all the material, we had all the photographs, a number of pages had been designed. We could achieve all this online, but one area where online wasn't possible is the actual printing.

Another area where online does not work is the delivery of the magazine. While we had been able to deliver about 80% of the last magazine before the lockdown descended on us, we apologize to the remaining 20% who would not have received their copies. We will post their magazines as soon as the situation returns to normal: we hope that you don't mind the adage that it is better late than never.

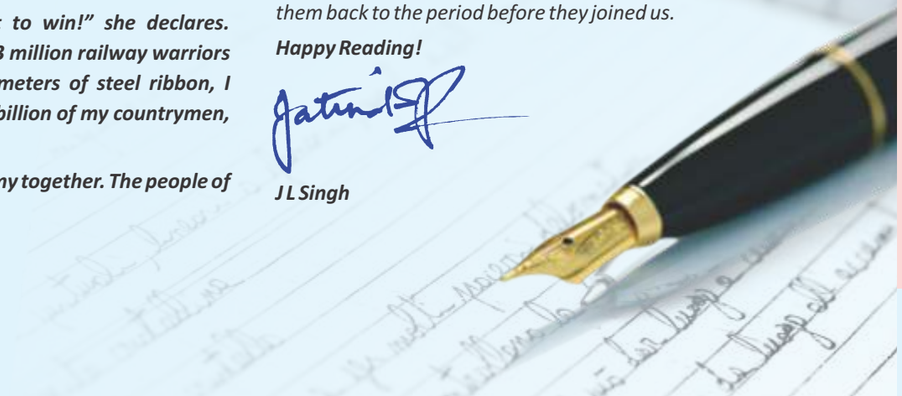
Taking all factors into account, we bring you this issue as a soft copy. It is in PDF format: not the best for a magazine but the best we compiled under the circumstances. The main purpose behind this soft issue is continuity. We hope that by the time of the July issue, we will be able to send you a normal 64-page journal.

We were tempted to write about the Covid-19 pandemic and the railway's role in it. However, there is a surfeit of information and writings on this subject in various journals, magazines, WhatsApp messages, Twitter, etc. As a result, we decided not to go into this area.

Apart from a potpourri of regular writings, we bring you selected reproductions of articles and features that have appeared in our initial few magazines. The intention is to remind readers of the kind of beginnings we had and where we are today. Many of our readers have joined us well after we had made a beginning; these reproductions will take them back to the period before they joined us.

Happy Reading!

J L Singh



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A pair of WDG4D locomotives leaving Visakhapatnam Yard

Feedback

Dear Editor,

Even if you had not specifically asked for it in your editorial, I would still have been keen to give you my feedback.

First, I must compliment you and all those who were associated with this excellent product. It was quite a challenging one because the Anglo-Indian community is a dwindling one as you rightly pointed out, especially its presence in the Indian Railways. I faced this problem myself when I was compiling my book 'Footprints on the Track'. I found that in many of the old railway colonies, which had been Anglo-India bastions, there was hardly anyone left to tell the tale. I was invited to attend a conference of the ISRS in Delhi in November 2019 and asked to bring along with me a retired Anglo-Indian steam driver but sadly, I couldn't find one who was ready to undertake the journey or any who were capable of expressing their experience and reminiscences and taking questions from the audience. However, I must appreciate Mr. S.K. Luthra's review of my book. He must have read every word of it.

I must say your editorial is a most original first-hand account of your own experience with the Anglo-Indian community at work and recreation. They worked hard and they played hard and this fact is well brought out by your editorial and in the articles you have selected, especially Mr. V Anand's famous one. You have rightly pointed out that the Anglo-Indian work ethic has been passed down from generation to generation and was simple: 'Do your duty and don't worry about the consequences'.

Noel Thomas with his wife at their Visakhapatnam residence. Note the framed picture of the launch of Noel's book, "Footprints on the Track", on the wall

The photos published are illustrative of the Anglo-Indian community at work and play, all steam stalwarts standing proudly beside the locomotives they loved and of two such who made the ultimate sacrifice for the train and the passengers under their watch. The photos of the railway institute and swimming pool at Liluah, the late Dennis Whitworth in his dining room and Indra Sharma's brilliant piece on hockey and the Anglo-Indians are excellent inclusions. All this has given due credit and is in fact an important part of the history of the Anglo-Indian community which will soon get submerged, will mutate and is likely to disappear altogether.

This is an issue which I feel every Anglo-Indian should read, the few left in India and the many in the diaspora and members of other communities too who have come in touch with these 'railway people'. It may also interest young researchers of the future.

With best wishes,
Noel Thomas
15.03.2020

Dear Editor,

I feel that the current February 2020 issue of **The Rail Enthusiast** is by far the most fascinating and interesting one ever published since the magazine began. It is really a watershed in our magazine's progress.

Hearty facilitations on bringing out such a memorable issue.

Best wishes,
Sanjoy Mookerjee
22.03.2020

Dear Editor,

I come from Munger. This town is only 8 kilometers from one of the largest and oldest railway townships in the country – Jamalpur. I had heard a lot of stories of the large number of Anglo-Indians at Jamalpur and the active social life that they had along with their sporting abilities. The February issue of the magazine has brought all these stories to life and I have now been able to visualise and feel what was earlier only in my imagination.

Life in Jamalpur and even in Munger (it was Monghyr then) would have been totally different then.

We can learn a lot from the Anglo-Indians. They not only worked hard but were also loyal to their employers. They were content with what they had and were not very ambitious. They also knew how to have a good time and enjoy life.

Regards,
Prem Agrawal
24.03.2020

Dear Editor,

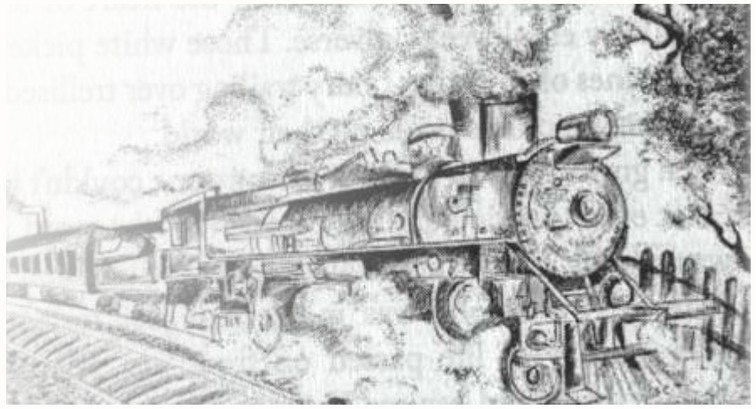
Thanks. Your latest magazine has a splendid variety of articles and I'm promptly circulating it to my DHRS Board colleagues who I know will enjoy reading it as much as I will.

Best regards,

Paul Whittle

14.05.2020

Editor: *Paul Whittle is the Vice Chairman of the Darjeeling Himalayan Railway Society (DHRS) in the UK*



Editor: *One of our members, perhaps our eldest member, P C Sen, had joined the railways at Jamalpur as a Special Class Railway Apprentice in 1949. I received a phone call from him wherein he mentioned that at that time there were a large number of Anglo-Indian families at Jamalpur and their way of life and attitudes have been very well brought out in the February issue of the magazine. The Institute was then full of life and activity.*

I had joined as an Apprentice at Jamalpur in 1966. By then, few Anglos remained at Jamalpur and the atmosphere and activities were nothing like what would have been the case in the late 1940s and early 1950s.

Rail Movies-1

Indian Railways in the Cinema

Warren Miller

A colleague of mine was visiting Delhi a few years ago to go to a railway conference, and he asked one of the Indian Railways' officers how the railways were seen by the public. The officer responded, "Well, about every second movie includes a railway scene, so the railways are very much part of everyday life."

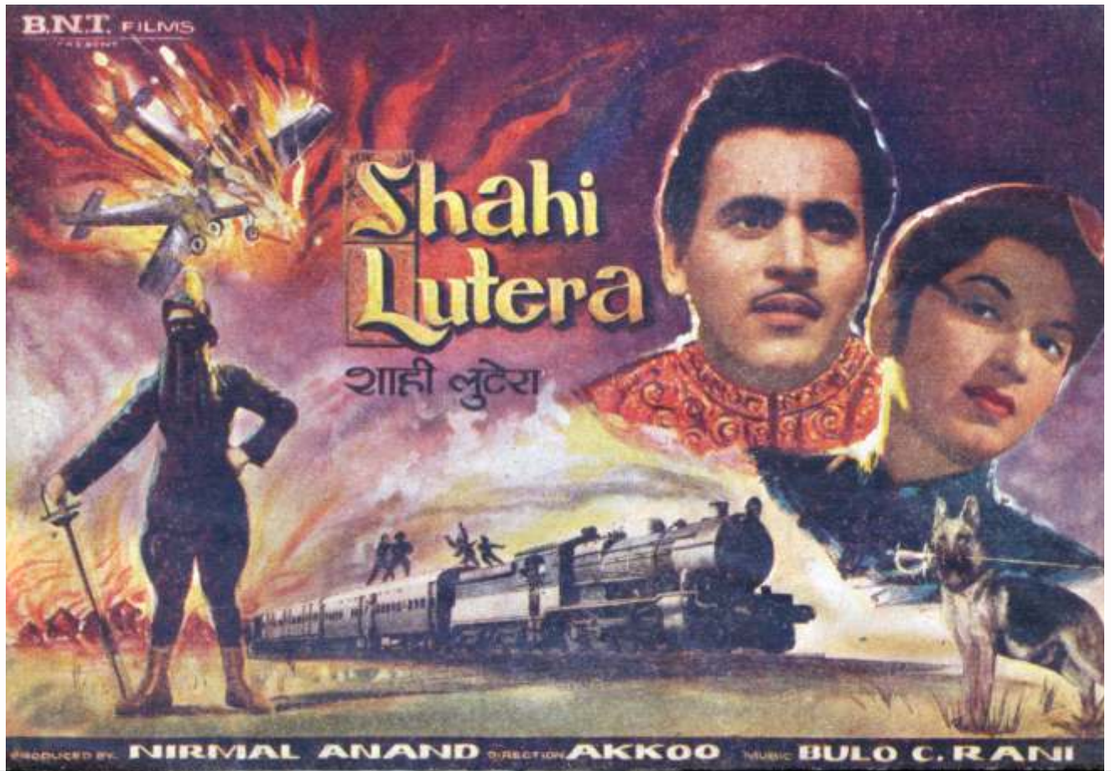
It's an interesting point, and probably correct: railways have been a common feature in Indian films since the earliest days of Indian cinema. It is interesting to look at the way railways have featured in films over the past 90 years and how this has changed over time. It's almost impossible to list every film which has included railway scenes, but the excellent IRFCA website contains a useful list of films with significant steam railway content, updated to 2010- *https://www.irfca.org/articles/cinema-steam.html*

Early days

From the 1920s through to the 1940s, films were the most popular form of mass entertainment and as the railway was the means of connection between towns and villages, it was a common setting for adventure and romance in films that audiences could easily relate to. Simple adventure tales were popular, and trains provided settings for suspense and drama. In the last decades of the British period, film-makers generally did not deal with political or substantial social subjects in any depth (though there were exceptions); the focus was on adventure and entertainment. A series of films that are typical of this era featured an action-heroine known as 'Fearless Nadia' (real name - Mary Evans). Many of Nadia's films had railway settings, as she saved trains from destruction at the hands of the villains or fought with the bad guys on the roof of a moving train. Nadia did all her own stunt work, in films with titles such as 'Miss Frontier Mail' (1936) 'Punjab mail' (1939) and 'Delhi Express' (1949). The posters advertising films in this period often used images of trains, even if the railway scene was only brief. Railway adventures drew audiences!

Films from this period can also be of interest because of the age of the railway scenes. In "Mela" (1948) the hero, Dilip Kumar, saves on old man from a train, the locomotive

The souvenir booklet of 'Shahi Lutera' shows plenty of action, including a train with a desperate fight on the carriage roof! The train shown is a photo but the figures have been added by the artist



The poster for Stunt Queen starring Fearless Nadia reflects the popularity of railway adventure scenes in films of the 1940s and 50s

Fearless Nadia fights the villains on top of a train. She was a circus performer before becoming a film star, so action scenes like this were typical of her films. This scene is probably from Miss Frontier Mail

clearly showing the railway name, GIP – Great Indian Peninsula Railway. (The scene was filmed backwards for safety: instead of pulling the man from in front of an oncoming train, the hero actually placed him on the track as soon as the train passed in reverse, and the film was then reversed). To save on costs, producers sometimes used a 'stock' scene of a train rather than filming a train scene specially for their movie. This occasionally resulted in a train appearing that was quite incorrect for the movie. However, most audiences would not notice this. Also, the same train scene might turn up in different movies! The scenes of the Darjeeling Railway in 'Jhumroo' (1961) and 'Chinatown' (1962) are identical.

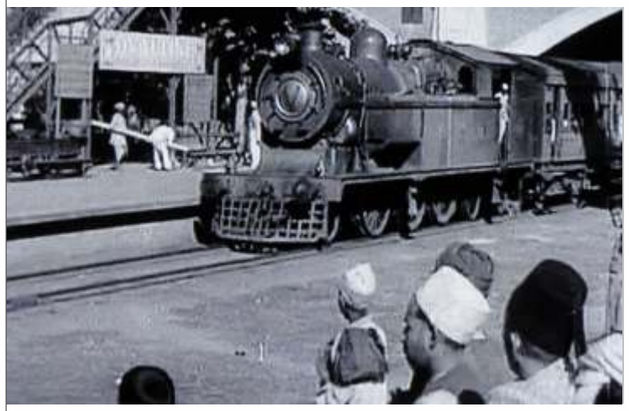
Newsreels can be another source of movie scenes of long-gone railways. A wartime newsreel from 1943 shows several high-quality scenes of GIP trains handling wartime traffic.

Some Bollywood classics

Following independence, the growth of popular big-budget 'Bollywood' movies, with their mix of drama, songs, dances, romance, mystery and humour, resulted in some classic films with strong railway content. The railway scenes often show locomotives and trains that have long disappeared from the tracks. In 'Sholay' (1975), Amitabh Bachchan and Dharmendra fight off dacoits who are attacking a train, after having charged through an obstruction placed on the track. The loco is a H4 type freight engine, number 026472.

One of the best known is 'The Burning Train' (1980). A superfast express is sabotaged and catches fire and runs out

An old newsreel from the 1940s shows the movement of military supplies by rail to the North Eastern battlefields. The older steam locos shown in such scenes have disappeared many decades ago



This wonderful scene of a metre gauge 0-6-0 loco comes from the American film, Kim, made in 1950

Many Indian films have opened with the arrival of a train at a small station, bringing the characters to the adventures which follow. This picture is the opening scene of Sholay, a Bollywood classic

In Sholay, the dacoits have blocked the track with a pile of wood, but in desperation the heroes drive the train at high speed into the obstruction. The locomotive stays on the rails, but only just!

Another newsreel scene, showing GIP steam loco number 527. The letter 'V' on its smokebox door probably stands for 'Victory'

This well-staged scene from the film Bhowani Junction was filmed at Lahore in Pakistan, and shows protesters blocking the path of a train to disrupt the railway

Bhowani Junction also included a rail crash. The actual crash is only seen from inside the train (less expensive than staging a real crash), but the scenes of the aftermath were very well done

Truly a piece of railway history! Here is a beautifully presented WP hauling the 'FlyingRanee' in a scene from Aadmi Aur Insaan

In Aadmi Aur Insaan, the afternoon tea is served in elegant Indian Railways' crockery. But beware – the coffee is drugged!

of control, while the heroes battle to slow it down before it runs into the terminal station at Mumbai Central (then Bombay Central). It was mostly filmed with real trains, but near the end some are obviously models. It still has plenty of thrills.

'Gadar' (2001) is a romance/adventure film set in the period following partition, and the climax is a long railway sequence when the hero, heroine and their son flee Pakistan on a train. The train is hauled by WP 7015 (painted to represent a Pakistan Railways' loco!) which suffered a bit of damage during filming.

Sometimes, films of this period include interesting and historic railway scenes that might not be found anywhere else. In 'Aadmi Aur Insaan' (1969) the climax is set on board a speeding express hauled by a WP, with several excellent shots of the train, including a rare shot of a very smart blue WP with a crown on the chimney, hauling the 'Flying Ranee'.

However, it is not only Bollywood blockbusters that include railway interest...

'Arthouse' films

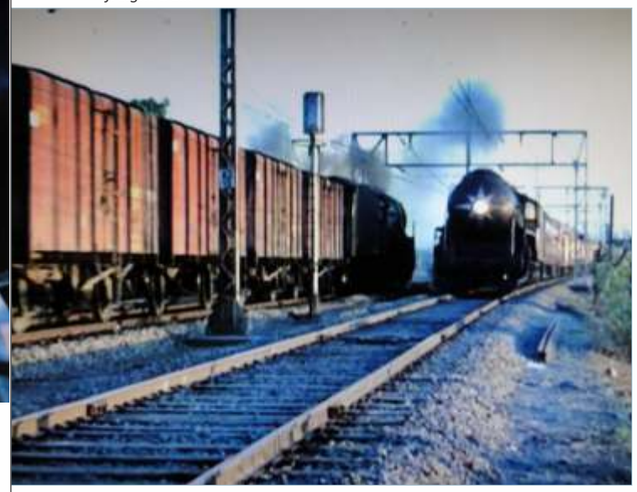
A number of India's producers and directors of more serious films (often referred to as 'arthouse' films because of their more limited audience appeal) have used a railway setting to develop their themes.

Satyajit Ray was a director who won world recognition for his films, which generally had strong social narratives. In his 'Apu' trilogy (three films about a young boy called Apu) trains represent Apu's break with his youthful village life. In 'Nayak' most of the film is set in the dining car of a train, where a journalist encounters a famous film star travelling to collect an award and makes him re-evaluate the meaning of fame and celebrity.

Gulzar was a producer/director whose films dealt thoughtfully with the lives of everyday people. Railways were a common aspect of his movies. In 'Kitaab' (1977) a small boy takes a train to run away from an unhappy home life: the engine driver takes pity on him and agrees to take him to his destination. There are several attractive railway scenes.

Tragic events of recent years were the basis for 'Bhopal Express'. The film opens with a train speeding towards the city of Bhopal immediately after the disastrous chemical plant accident, while the main character tries to stop it. The film then relates the events that led up to the disaster. The film won 7 international awards.

Continuing the journey in Aadmi Aur Insaan, we see the Express pass a freight train



Foreign films

Many overseas film makers have set their films in India, and railways often are part of the storyline. 'Bhowani junction' (UK 1956) is set on the Indian Railways just prior to independence and although the railway scenes were filmed elsewhere (UK and Pakistan), they nonetheless capture the atmosphere of railway work in those difficult times. The reconstruction of a railway accident scene was well done, including a full-size mock-up of an Indian loco on its side.

'Gandhi' (UK 1982) was a serious effort to portray the life of the Mahatma, and Indian Railways co-operated in the many railway scenes, providing an authentic train of the BBCI (Bombay, Baroda & Central India Railway), hauled by an H class 4-6-0 steam locomotive. The scene where Gandhi's train passes the site of a derailment is very effective. In 'Passage to India' (UK 1984), based on the novel by E M Forster, the Nilgiri Railway is featured when the film characters make a visit to the (fictitious) Marabar caves.

Many years ago (1950) the story 'Kim' by Rudyard Kipling was filmed by an American film company, in full colour, with much location filming done in India. Happily, it includes a couple of good scenes of a metre gauge steam loco (apparently a class F1 0-6-0) possibly at Lucknow. These could never be repeated today.

Movies today

Current movies continue to often feature railway scenes, some better than others. Suburban railways are more often seen, perhaps indirectly reflecting the greater urbanisation

Some of the best railway scenes ever seen in films are found in Gandhi. Indian Railways co-operated strongly with the filmmakers, with the excellent results seen in this authentic re-creation of a train of the 1940s

Scenes like this cost a lot of money to stage! In Gandhi, the train carrying Gandhi is shown moving slowly past the site of a derailment caused by protesters. No models here: the derailed loco is the real thing

of movie audiences nowadays. Mumbai's suburban network plays a key role in 'Saathiya' (2002) and 'Slumdog Millionaire' (2008). The hill railways have always been popular with movie makers, evoking romance, escape and beautiful scenery. The Darjeeling Himalayan Railway has been seen in many films, from 'China Town' (1962) to more recent films like 'Parineeta' (2005) and'Barfi' (2012). 'Barfi' includes much authentic filming on the railway in and around Darjeeling, Ghum and Tindharia, but also includes a full size mock-up of a DHR loco and train, on a road vehicle chassis, for night scenes at a location that was not available on the actual DHR. It's still quite convincing. Similarly, the Nilgiri Mountain Railway is often seen, as in 'Dil Se' (1998) starring Shahrukh Khan.

Improved film technology means that filmmakers no longer have to either film rail scenes on location or use 'stock' scenes of trains. 'Tees Maar Khan' (2010) includes a train robbery, but it is done using a very unconvincing mock-up of a diesel loco and freight wagons – extremely disappointing!

Computer generated special effects can now reproduce almost anything, including trains. This is often used in action movies, where the desired sequence would be impossibly difficult or prohibitively expensive. The film 'Rangoon' (2017) made use of digitally produced trains to portray the heroine's trip to the North West battlefields in the Second World War. The carriage interiors were film sets which accurately reconstructed rolling stock of that time. However, the successful use of computer imaging depends on the graphic designers actually knowing something about trains; in the recent UK movie 'Murder on the Orient Express' the scenes of the train are all computer generated. Unfortunately, the locomotive they created was ridiculous and did not resemble anything that ever ran!

Computer graphics were used to great effect in 'Ra One' (2011) for the climactic scene where the superhero (Shahrukh Khan again) battles to stop a runaway suburban train that is heading for disaster towards Mumbai CSMT. He saves the train by uncoupling the front power car, which

Romance blossoms on the Darjeeling Himalayan Railway in Parineeta. Vidya Balan sings to her boy friend, Saif Ali Khan, in the dining coach of the DHR, while a western tourist remains absorbed in his book

The Darjeeling Railway is the setting for much of the story in Barfi, and in this scene Barfi and his girl friend remove their trolley from the DHR tracks when a train surprises them

then runs on to spectacular destruction at CSMT. It's totally silly, but very convincingly done, and very enjoyable.

So, Indian Railways have been a staple feature in Indian movies for nearly 100 years, and looking back at some of the older movies (which can often be found on DVD or possibly online) the railway scenes provide glimpses of rail travel in years past. Railways may remain an element of film making in the future, but the increased use of computer-generated imaging may mean that portrayal of railways is no longer as authentic as in the past. In any event, movie audiences will continue to be thrilled by drama on the rails of India.

Photos: *Screenshots selected by the author*

Mayhem erupts outside Mumbai CSMT when a runaway suburban train crashes through the station and bursts onto the street, before it is brought to a halt by the superhero, Shahrukh Khan. (Audiences would probably not notice that although the tracks enter the station from the north, the train somehow crashes out of the western façade of the station, onto Dr. Dadabhai Naoroji Road)

Rail Movies-2

Bollywood's Love for Railways

Maleika Hussain

One of the primary objectives of the Rail Enthusiasts' Society is to attract the younger generation to rail enthusiasm and encourage them in this direction at every opportunity. We, therefore, bring you a write-up by Maleika Hussain, a student of Class IX of the Delhi Public School, Sector 46, Gurugram. She was one of the participants in the programme launched by the Rail Enthusiasts' Society in collaboration with the National Rail Museum for the training of volunteer guides. The subject she has covered is the same as that in the article by Warren Miller but her perspective has been quite different.

Jaa Simran jaa,
Jee le apni zindagi!
(Go Simran Go, Live your own life!)

Every Indian has these words engraved in his or her heart along with the legendary train scene that follows in the film *Dilwale Dulhania Le Jayenge* (DDLJ). It is arguably the most memorable train scene from Bollywood but by far not the only one.

Bollywood's affair with the railways started since the dawn of cinema in the country. Trains have always gone hand in hand with our films. Just a small scene with the familiar chuk-chuk-chuk ringing in the distance adds considerable charm to a film. From action sequences or plot twists, trains cast a magnetic and mesmerising spell in diverse circumstances. Here are a few ways in which trains have featured in Bollywood's films.

In action sequences: Stunts look far more dangerous and cool when performed on a train and Shah Rukh Khan pulled it off with swagger in the speeding train scene in the block-buster *Ra.one*. Fight scenes, especially in the close quarters of a rail coach are very thrilling as can be seen throughout *Sholay* and in the train robbery scene in *Dhoom 2*, to name just two films.

To bring characters together: In romantic movies like *Dilwale Dulhania Le Jayenge* (DDLJ) and *Jab We Met*, the protagonists meet on a train, talk for a while and develop a bond that leads to true love. It has become a tried and tested formula that the Indian film-going public seem to love. The movie *Chennai Express* took a jab at the classic DDLJ scene and recreated it albeit in completely different circumstances with comedy and action integrated as well.

To drift characters apart: One of the most heart wrenching goodbyes can happen on train stations. The ending of *Sadma* where Sridevi leaves on a train, breaking Kamal Hasan's heart, might be the most famous one. *Veer Zara's* train separation and Kajol's "*Tum Nahi Samjhoge*" scene in *Kuch Kuch Hota Hai* are more examples. Leaving on a train feels much more personal and vulnerable than any other mode of transport.

In songs: This one needs no further explanation. The train chugging on the tracks, producing smoke and rhythmic sounds, provides the perfect background for songs. The hit song "*Chaiiya Chaiiya*" was shot atop a moving train with Shah Rukh Khan headbanging and Malaika Arora dancing to the catchy tune. And the evergreen song *Mere Sapno Ki Rani* had Rajesh Kapoor chasing Sharmila Tagore in his car with the latter riding the toy train to Darjeeling.

The only catch with songs and the railways is that while steam locomotives, with their characteristic rhythmic beat, were ideal for providing the background sounds for a song; diesel and electric locomotives are just not able to reproduce the same melodious magic. With long welded rails now the norm, even the clickety-clack of the wheels on the rails is missing.

To express hidden symbolism: Trains have become synonymous with many different topics. They might be thought of as the wheels of progress or as a metaphor for life itself. Many movies subtly express these views through trains such as *Swades*, where Shah Rukh Khan's desire to get to know India better while being used to the comfort of the US is depicted by his travels by train.

To serve as the main focus of the film: There are films that feature trains and others that are completely based on a train. *The Burning Train* was fully shot in a train and a fire had broken out on its sets. A good deal of damage was suffered by the train as well. *Coolie* and *Coolie No. 1* revolved around train stations and the dynamics of the people working there. Highly debatable but *Chennai Express* can also be put in this category. It did have a story that was put in motion by that fateful train journey.

These are some of the most common uses of trains in the Indian cinema. There are some other miscellaneous uses like a child running along a train to show his innocence, a character returning home from a faraway place with the journey or beautiful surroundings being highlighted by a train ride. Many movies showcase India through train windows, *Swades* and *Aradhna* being apt examples. Others have characters age in a time leap while jogging past a train.

It is extremely evident that trains and the railways have a special place in Bollywood leading to an even more special place in the hearts of the movie-goer.

Test Your Knowledge of the Railways

1. Before this Corona Virus Pandemic, Indian Railways had stopped services only twice in 167 years – What were the two occasions?
2. "Walk into a huge, brick-built, tin-roofed stable, capable of holding twenty-four locomotives under treatment, and see what must be done to the Iron Horse, once every three years if he is to do his work well. On reflection, Iron Horse is wrong. An engine is a she – as distinctly feminine as a ship or a mine." Who wrote this after visiting which railway workshop?
3. Which Workshop had built the first indigenous locomotive in 1895?
4. The opening of a new railway section on the Great Indian Peninsula Railway led to which famous fictional bet at the Reform Club, London?
5. What kind of "Tickets" were introduced for the first time by the Sind, Punjab and Delhi Railways in Lahore around 1870s?
6. Which was the first Indian film to feature the railways in colonial India?
7. In May 2019 Indian Railways had made history by successfully running a 2-km long freight train between Bhillai and Korba railway stations, which was aimed at making goods transport cost-effective. What name was given to the freight train?
8. Which train has the following "Firsts" to its credit: It was India's first superfast train, the first long distance electric hauled passenger train, the first to have a 'Ladies Only' car. One of the longest running train services on the Indian Railways to have never run on steam power.
9. Name the two trains named after "Islands" in India?
10. When the then recently introduced railways in India needed a standardized time system to schedule the trains running across the country, this "time zone" was selected. Inevitably, it came to be known as 'Railway time'. Name the time zone.
11. The Railway Board was set up in 1905. Initially, where was its office located?
12. Who wrote the collection of essays titled 'Third Class in Indian Railways'?

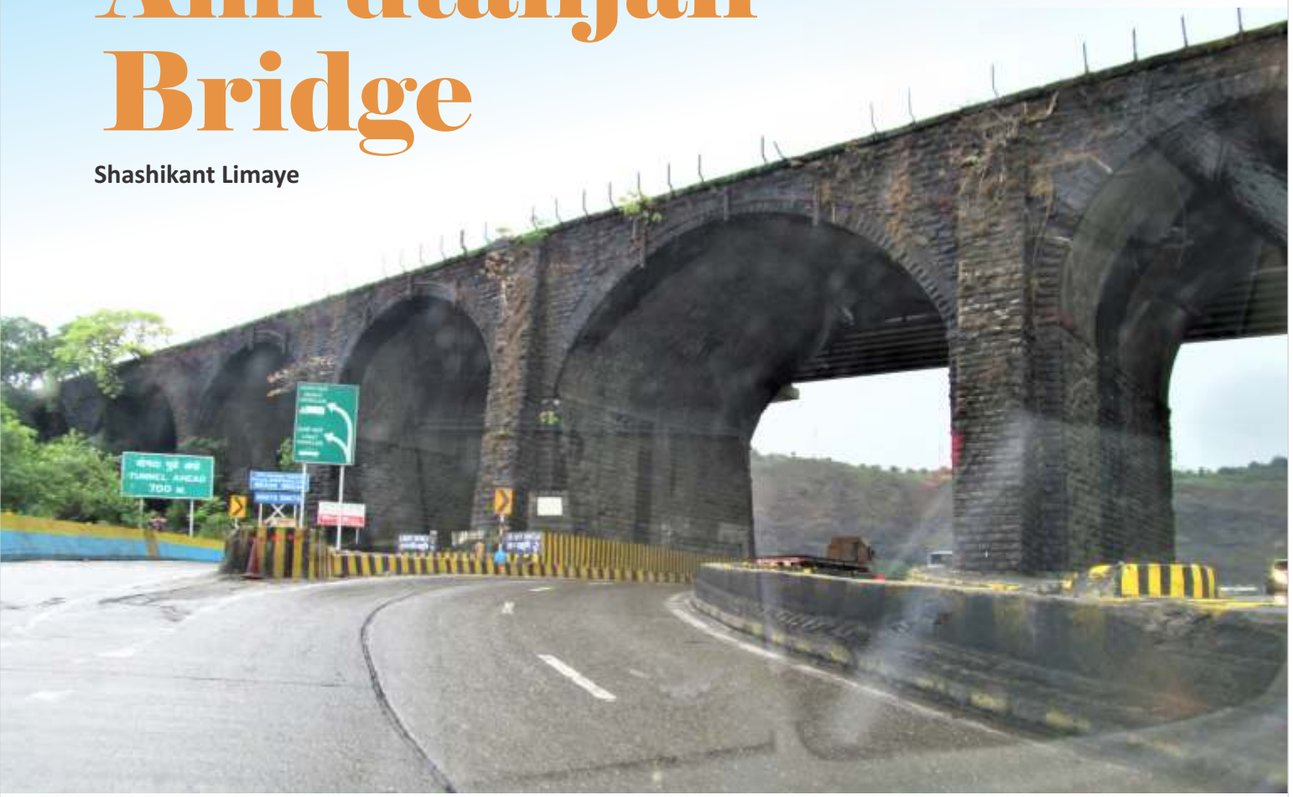
ANSWERS:

1. 2nd February 1901 – date of Queen Victoria's funeral and 31st January 1948, the day Mahatma Gandhi was cremated.
2. Rudyard Kipling visited Jamalpur in 1888 and wrote the above piece. (The first locomotive manufactured at Jamalpur was named Lady Curzon)
3. Ajmer Workshop (now part of North Western Railway)
4. Around the World in Eighty Days by Jules Verne. On reaching India, Fogg learns that, contrary to what was reported in the British press, the railroad was 50 miles (81 km) short of completion and passengers were required to find their own way from Bombay to Allahabad to resume the train trip.
5. Platform Tickets.
6. "Achhut Kanya". The film was based on the story, The Level Crossing, by Niranjan Pal (freedom fighter Bipin Chandra Pal's son).
7. 'Anaconda on Rails' connected three freight trains having 177 Wagons.
8. Deccan Queen.
9. Lakshadweep Express (Delhi to Ernakulam) and Andaman Express (Jammu Tawi to Chennai).
10. Madras Time instead of Bombay Time and Calcutta Time. Newman's Indian Bradshaw in 1880s was using Madras Time.
11. Shimla.
12. Mahatma Gandhi.

History

Amrutanjan Bridge

Shashikant Limaye



It was on the 16th of April 1853 that the first railway line was commissioned in India between Boribundar and Thane. This was accomplished by the Great Indian Peninsula Railway (GIP). Although lengthened up to Kalyan and Karjat in stages, it took another ten years to extend this line from Thane all the way to Pune (then Poona), a distance of some 160 kilometers, the complete section up to Pune being inaugurated only in April 1863. The reason? The formidable challenge of crossing the Sahyadri Mountain Ranges and climbing up 2000 feet (610 meters) over a distance of 20 miles (32 kilometers) to reach the Deccan plateau. The route up the hills is known as the Bhore Ghat and was hailed as one of the greatest engineering triumphs of the 19th century. The detailed survey and study of alternatives to cross the Sahyadri Hills was carried out under the direction of Mr. James J Berkeley (Chief Resident Engineer – GIP Railway) between 1853 and 1855. Some 3000 drawings were prepared. In the paper on the Bhore Ghat incline read by Mr. Berkeley at the Bombay Mechanics Institute on 21st December 1857, he writes, “In the performance of these operations (survey) it occurred to us that other and still greater station improvement were practicable by introducing two reversing stations – one we contemplated at Mhow-ke-Mala and the other very close to the Mail Road (at Battery Hill). By these means we hoped to accomplish further flattening of the gradients, and a considerable reduction of very heavy works upon the upper four miles of the section”. The 'Mail Road' referred to is today's Expressway below the proverbial Amrutanjan viaduct and the upper four miles is the stretch between Monkey Hill and Khandala. Apparently, the attempt to introduce a Reversing Station at Mhow-ke-Mala was not successful. It is thus beyond doubt that the reversing station was a well thought out scheme, and not a fortuitus unexpected development. You will read and hear of many anecdotes associated with the reversing station; most are far from true and at best apocryphal.

The reversing station near Mail Road was located on top of the stone masonry arch viaduct about 60 feet tall, which came to be known as Amrutanjan Bridge from the 1950s due to the advertisement in some 20 feet tall letters, AMRUTANJAN, on top of this bridge. The advertisement stood there till 2002. This became a landmark on the route just as the letters, HOLLYWOOD, on Beverly Hills is a landmark in Los Angeles.

Going through the Bhore Ghat required an enormous amount of work. The total quantities involved in the construction of the Ghat between Palasdari and Khandala illustrate the volume of the work and are enumerated below:

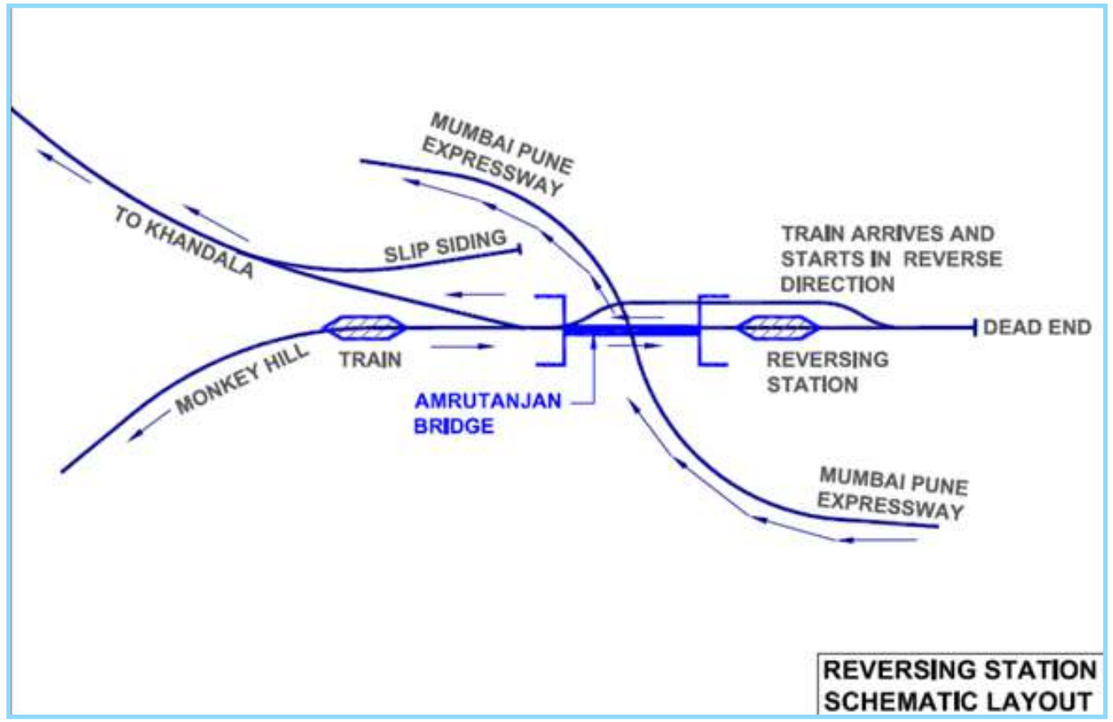
i) Earthwork in cutting : 55,000,000 cft. (Cubic Feet. Of this, excavation in rock was 48,000,000 cft.)
ii) Earthwork in embankment : 56,150,000 cft.
iii) Length of 28 tunnels : 11,579 ft.
iv) Masonry in bridges : 3,939,000 cft. (including 8 tall masonry arch viaducts)
v) Masonry in retaining walls: 2,052,000 cft.

The estimated cost of the work was £ 597,222/- whereas the actual expenditure stood at ₹ 1,11,64,872/- (approximately £ 590,000/-).

In his speech during the inauguration of the project, the then Governor of Bombay Province, Mr. Frere, praised the British Engineers and called this a superhuman feat which has proved the superiority of British power to the local populace of India. He further stated that in the process, they have left the skilled cave-temples of India far behind. But apparently, there is no mention of some 24,000 workers who lost their lives while constructing this railway section.

Initially, contract for this work was awarded to a British Contractor, Mr. Faviel, in the year 1855-56. But Mr. Faviel treated the labour force in inhuman ways and delayed payments to his subcontractors. This led to unrest in the labour force and resulted in the death of a British supervisor. This culminated in an enquiry instituted by the British Government and finally Mr. Faviel's contract was foreclosed. The balance work was awarded to Mr. Tredwell. Unfortunately, Mr. Tredwell died within days of his arrival in

Fig.1 - Schematic layout of reversing station between Monkey Hill & Khandala



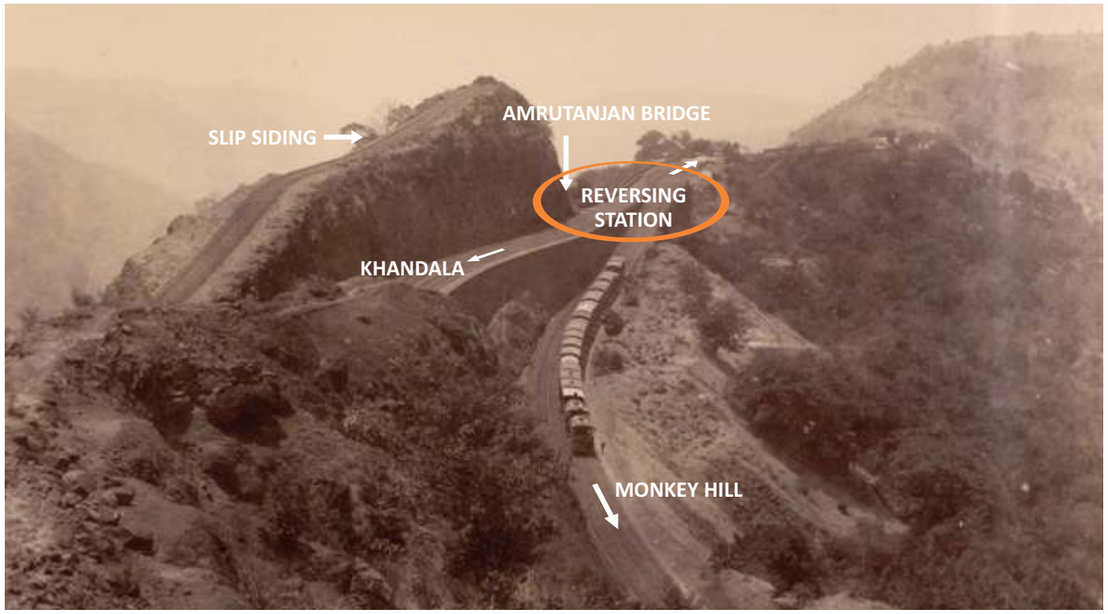


Fig.2 - Reversing Station - A view from top of Battery Hill

India in 1859 due to cholera. It was his wife, Alice, who accepted the challenge and completed the work during 1859-1863.

The Reversing Station functioned between 1863 and 1928, a period when short length trains were hauled by steam locomotives attached at both ends to negotiate the Ghat section. The remains of the water column, water tank staging, cabin, etc. at this station could be seen up to late 1990s. Reversing Station is a concept which is called Switch Back; such stations exist on the Darjeeling Himalayan Railway even today. This mechanism is adopted where the climb goes beyond the hauling capacity of the railway system and if the hill does not allow the railway line to wind around it. The concept is likely to have emanated from the famous hair-pin bends along road alignments in Ghat sections. The Mumbai-Pune Expressway has one such hair-pin bend very close to this location called Anda Point. In the switch back arrangement, the train coming from below enters a dead-end station (called reversing station) and stops. With locomotives attached at both ends, it starts its journey in the opposite direction taking the climbing up route. Fig. 1 shows the arrangement as it existed at the Amrutanjan Reversing Station.

Fig. 2 is a photograph of this station when it was in operation. Trains coming from Monkey Hill and going to Khandala, which was at a higher elevation, used to come to a halt at the Reversing Station and thereafter commence their journey in the opposite direction through the present left-hand-side Khandala tunnel (along Expressway) and follow the present Expressway alignment to reach Khandala Railway Station by cutting across the present Pune-Mumbai Highway stretch (Schematic at Fig. 3). Trains coming down from Khandala used to take the same path in the opposite direction.

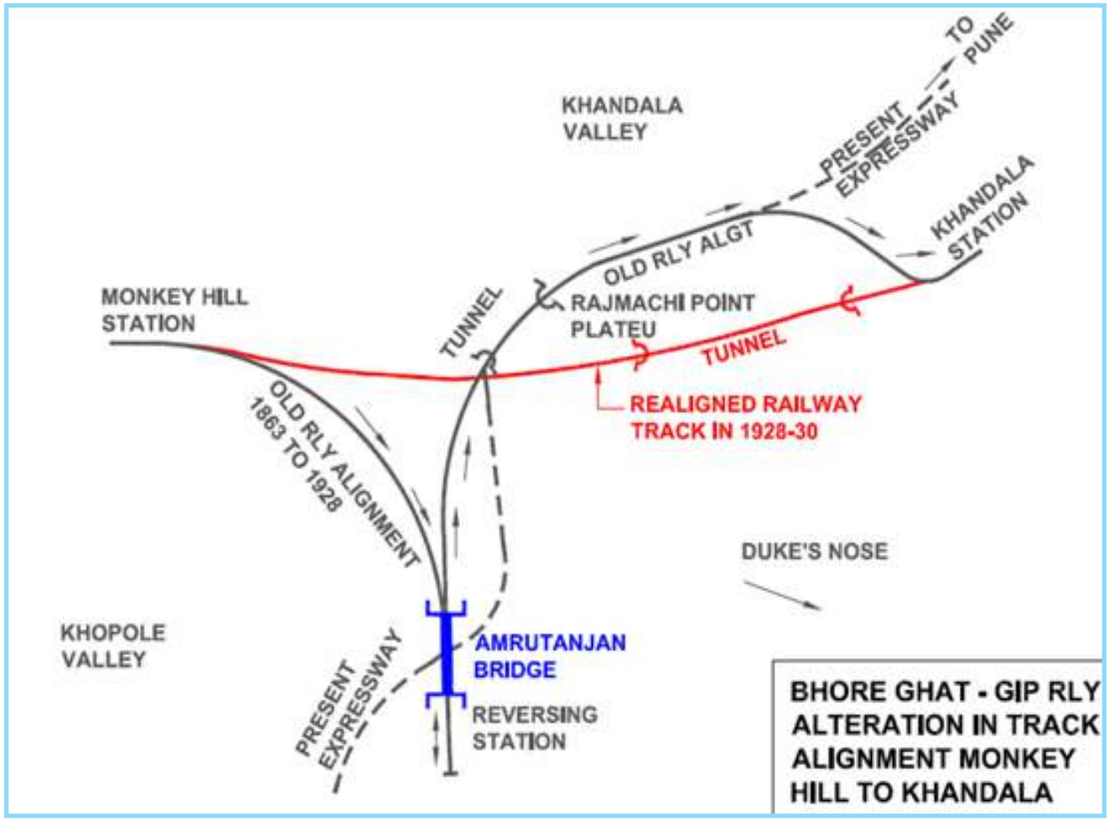
Such reversing stations cause major obstacles in efficient working of busy railway systems. By 1920, the traffic on the Mumbai-Pune-Madras route had increased substantially. In view of this, in 1920, planning started for electrifying the route from Mumbai to Pune in order to increase the line capacity to satisfy the rising demand and also to make the operations of trains through the Bhore Ghat much more efficient. The latter was the major bottleneck along this route. This obviously entailed examining the possibility of elimination of the Reversing Station. Detailed surveys were carried out in 1923-24 and after considering alternatives, the realignment scheme as shown in the 1930 map (Fig. 3) was zeroed upon. At that time also, one of the alternatives considered was to continue with the Reversing Station by lengthening the station loops to accommodate longer trains which were to be handled after electrification. But this involved rebuilding of the Amrutanjan viaduct as it was declared a weak structure even at that time. Extension of this viaduct by another 100-foot tall viaduct was also involved. The estimated cost of the extended viaduct was ₹ 35 lakhs but to this was added the cost of rebuilding the existing viaduct, capitalized value of operating savings due to (i) flattening of gradient along realigned route, (ii) reduction in length by 0.38 miles, and (iii) staff expenses on manning the station. Also added was capitalized value on maintenance expenditure on the new steel viaduct. This cost came to ₹ 67.70 lakhs as against the estimated cost of realignment which stood at ₹ 66 lakhs. While this calculation appears to be a ploy to justify the project of realignment, in the long run, it has proved its merits. Fig. 3 shows the schematics of the realignment scheme.

The author remembers that in a re-survey of Konkan Railway (1990-91), the tunnel length increased to 84 kilometers from the originally envisaged 24 kilometers because of straightening of the alignment, revising the ruling gradient from the planned 1 in 100 to 1 in 150 and revising the minimum radius of curvature from the original 440 meters (4 degrees) to 1250 meters. This reduced the total length of the alignment (Roha to Mangalore) from the original 840 kilometers to 740! These revisions resulted in a permanent recurring saving in operating and maintenance costs.

The realignment scheme between Monkey Hill and Khandala was estimated to bring about a saving of ₹ 5 lakhs per annum in operating costs which could have justified a capital expenditure of ₹ 100 lakhs as against the estimated 66 lakhs. In those times, this was a big amount and the same had to be approved by the Board of Directors of GIP! The total length of the section was 2.11 miles involving three tunnels, 3080 feet, 1160 feet and 320 feet in length. These were double line tunnels with increased track centres of 16 feet 7 inches due to 5 degree curves. The height of the side wall was 14 feet 10 inches and at the crown 22 feet 10 inches above rail level. The contractors who executed this project were M/s Tata Construction Company (major component of tunnels) and M/s Datto Narayan Datar of Pune. Electric supply was made available at site and mostly Ingersoll Rand equipment was deployed.

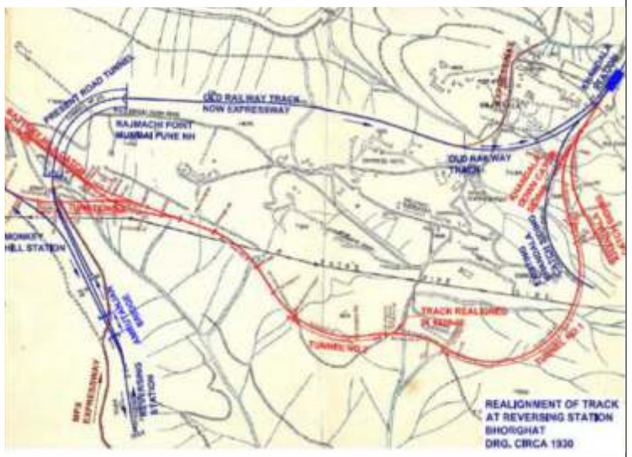
The project of realignment was completed and commissioned in 1928 and the historic edifice called Amrutanjan Bridge was abandoned by GIP. Fig. 4 is the original drawing of this realignment scheme.

Fig.3 - Schematics of Realigment Scheme between Monkey Hill & Khandala 1928



Although abandoned, the historic structure "Amrutanjan Bridge" stood there with all its majesty till 5th April 2020 when it was imploded to smoothen the alignment of the Mumbai-Pune Expressway which passes under it. The dismantling of the Amrutanjan Bridge had become inescapable due to very frequent fatal accidents of heavy trailer trucks at the location. The actual demolition was difficult owing to the heavy traffic on the Expressway. Thanks to the Covid-19 lockdown, traffic had been reduced to a trickle; this opportunity was not missed and the bridge demolished. A video of the demolition can be seen at *https://www.youtube.com/watch?v=W1gEfBNvfsQ*

Many of us have enjoyed the magical view of this formidable edifice whenever on a picnic to Khandala or while travelling by the Mumbai-Pune Road after Rajmachi Point or train (between Khandala and Monkey Hill) on this route. Particularly during the rainy season, one will be missing the divine view with the clouds climbing up from the Khopoli Valley over the formidable masonry arch viaduct. Yes, the well-known landmark, the Amrutanjan Bridge, has been consigned to history and relegated to a story in our memory.



Original Map of Realignment Scheme

About the Author: *Shashikant Limaye was a member of the Indian Railway Service of Engineers. He worked as Chief Engineer (Design) of Konkan Railway.*

Figures: *Courtesy the author*

Photos: *Courtesy V M Govind Krishnan*

Site of Reversing Station, Bhor Ghat

Nostalgia

Autobiography of an Unknown Locomotive

Abhijit Sen

Inspired by the name of Nirad Chowdhury's iconoclastic masterpiece, this is a far less ambitious narrative, lacking in the erudition and intellect of Niradbabu but compensated by emotion, passion and nostalgia. It is mired in history, yet woven in fiction. It narrates the autobiography of WP 7581, a star locomotive in its day. Today, it lies forlorn on a mounted pedestal outside the Divisional Railway Manager's Office at Sonepur, Bihar, an object of neglect, interspersed with stray inquisitiveness, a scrawl of graffiti or a few juvenile comments by visitors belying their complete ignorance...

I am WP 7581, once the pride of Eastern Railway's steam loco fleet, based at Gomoh Shed. My smokebox star, modelled after the rising sun, shone miles away as I stormed into view at the head of a speeding mail or express train and carried the headlight that shed a powerful beam into the dark starlit night. My characteristic bullet nose, streamlined cowlings, boxpok wheels and silver bands on my boiler, with gleaming brassware and shimmering steel, made me an object of awe and envy; I drew unending glances of admiration as I waited on a platform or was quenching my thirst from the water column. I have seen good days and bad; my position gradually usurped by younger & newer locomotives that neither had fire burning in their bellies nor could they survive without either electricity being constantly fed to them or power coming from diesel contraptions. With the passage of time, I was assigned more and more menial work but I did all my duties with pride. Never did I fail on a train, nor was I involved in a single accident till one day cruel fate extinguished my fires forever. I was spared the ignominy of the auctioneer's crude loud bid or the scrap yard, followed by the cutter's torch, that my brothers and cousins experienced. I am grateful that someone felt that even my geriatric frame had an element of beauty and decided to mount me on a pedestal for humanity to see, albeit as a mute spectator shorn of all my power and glory. But as I ponder over what has befallen my brothers, I console myself that I am still in one piece and in a position to tell my story...

I was born in 1954 at the Canadian Locomotive Works extensive facilities at Kingston, Ontario, Canada. I remember I shared the production lines with a Royal Hudson that was the last of the steam locomotives manufactured there for Canadian use and that headed to Ontario just a short distance away to go through its working life. However, I was told that I would go to India, thousands of miles away in a mysterious and faraway land, to serve a railway network that was being strengthened after the country's independence with the aid of the Colombo Plan – a regional collective inter governmental effort to strengthen economic and social development of the young

nation. So, along with 10 of my brothers, I was put on a goods train to Halifax and then on a steamship that unloaded me after a three-week voyage at the port of Calcutta (now Kolkata). It was a new land, very different to where I was born, but I was welcomed by the railway staff with unabashed pride. I had been seen off by a Works Manager but here the General Manager, no less, had come to receive me. I was delicately unloaded, garlanded and an auspicious coconut broken as a sign of welcome. The hectic hours prevented me from saying goodbye to my brothers, who were headed for Parel, Perambur and other exotic places. We, the 4-6-2 WP locomotives, were going to be the mainstay of passenger traffic on the Indian Railways for the next two to three decades till we were replaced by first diesel and then electric locomotives. If I recall correctly, the year was 1956.

I was moved to the Loco Works at Kanchrapara, a short distance away in Calcutta itself and was fully assembled before I was allowed to proceed on my own steam to Gomoh, a locomotive shed on the line that was referred to as the Grand Chord as it was the shortest route between Kolkata and Mugalsarai. The raw power of the fire that they lit inside me and the smoke that billowed out of my chimney kindled a spirit of adventure and awakening. But even in this exuberance, I did not fail to notice the unmistakable poverty all round, faces callow with hunger, people living in shanties compared to the benevolent society I had seen in Canada. I also saw many steam locomotives in various stages of disrepair, eking out a bare existence in pathetic conditions. The exception that surprised me were a few old HPS class locos. Of course, my WP cousins were all new; all throbbed with life and enjoyed a fresh livery. The first WP, built by the Baldwin Locomotive Works in Pennsylvania USA, I learnt, had been inducted into the Indian Railways only in 1947. Prior to the 2nd World War, almost all locos in India had been imported from Great Britain; only a few were built in the country. Since Britain was unable to supply locos during the War, a few American design locos were imported. These were liked so much, that

after the War, the Indian Railways opted for the 4-6-2 Pacific design WP for its passenger trains and the 2-8-2 Mikado WG for its freight traffic. These were, of course, Broad Gauge locos; for the Meter Gauge there were the equivalent YP and YG respectively.

So it was that I was based at Gomoh in the State of Bihar, a remote and desolate area but a busy railhead on the Eastern Railway zone's Grand Chord, the busiest section on the Indian Railways (IR). It was near the coalfields in a mineral-rich area. The steam loco shed was known for the pride it displayed on its steeds that made up Eastern Railway's prestigious workhorse fleet. On arrival at the shed, I was allocated the best bay and the best coking coal was reserved for me. Driver Cracker and his team, a veteran mail driver, was to take charge and he really looked after me as his own child. I vowed to obey his every word and never to let him down for he was given charge of the Air Conditioned Express, then the fastest train in India, timetabled to run at 55 mph (about 90 kmph) booked speed – higher than any other train, as it ferried the high and mighty between Calcutta and Delhi. I am told that when the first Rajdhani Express was introduced with a diesel locomotive in 1969, Driver Cracker was given charge to man the loco.

What a time we had! Cracker knew every sound of every lever of my frame; he knew exactly what adjustments to make at the controls and he and his team of three jolly firemen fed me with coal and water to whet my appetite. I sprang to life as he pushed my regulator up to allow steam into my cylinders and I would let out a long hoarse shriek and be off and away to obey his minutest command. The sight of the man at the controls proudly checking his pocket watch made him an instant hero with all passengers and turned me into a subject of unmitigated awe, admiration and fear. The 9-coach rake was child's play for me. Despite the route to Mughal Sarai taking me through the gradients of Gurpa and Gujhandi or over the mighty Sone River, I never lost time. It appeared that those happy days would never end even though the fate of my XC and HPS cousins

should have made me see the writing on the wall. These old veteran locomotives would ask me to spend a few minutes with them to share their glory days and to seek my sympathy over the miserable menial tasks like shunting in the station yard they had now to handle.

Although I did realize that the same fate would befall me as well, I continued my work with pride. Finally, Cracker shifted for a brief period to diesels before retiring and leaving in tears with his family to settle in Australia. A new crew was allocated to take over from him. Somehow, it was not the same with them. Worse was to follow as I was taken off the AC Express as these new box-like ugly locomotives with no personality that had arrived with the onset of electrification would do the job henceforth. I felt pangs of sorrow within: how could they compare me – a WP that generated my own steam, drove my own cylinders and powered myself over every obstacle – to some machine that had no strength of its own! Life has its consolations though; most of my WP brothers at Gomoh were suffering and were banished to faraway Southern Railway where trains were still steam-hauled. I was told I would go to Jhajha, not too far away.

So Jhajha it was, as fortunately, the electric wires had not arrived on the Eastern Railway zone's Main Line on which Jhajha was the main locomotive shed. There were no ugly catenaries and the friendly semaphores had not ceded ground to dwarf electric signals. I still did the honours on the Amritsar Mail and Toofan Express. I especially enjoyed leading the Toofan through the Rajmahal Hills to the admiration of countless bystanders. Crossing an XE-hauled goods train as the earth shuddered under the impact of intersecting 2000 HP of raw power or crossing a WP in the opposite direction as our crews waved to each other, were experiences I still remember. It seemed glory days had come again. But faint rumblings soon arrived – age was closing in on me and the new generation of crew did not have that motherly touch or care. I had to cede way to a new contraption called 'diesel' that was sprouting everywhere. I had seen these machines on goods trains at Gomoh in the latter days and I must confess I never bothered as I thought that as upstarts they lacked the grace that we extolled in our every action and motion.

By now, it pains me no end to recount how standards had started deteriorating all around. The expresses had countless stops added and I had to halt even before I recovered my breath. On the run they choked my vacuum repeatedly by pulling the alarm chain and it was an effort to start a load again and again. The coal was so brittle with minerals and stones that it hurt me and the hard water ruined my boiler tubes. Somebody stole my brass controls and my coat of paint too had been shorn of its resplendent grandeur and sheen. But I suppose I had done some good – so again while my other brothers had to haul slow passenger trains or get condemned, because of my better track record and no accidents, I was taken to the Sonepur shed where the Meter Gauge main line had been converted to Broad Gauge and the diesels and electrics had not reached.

I really am grateful to the staff at Sonepur. Despite working less important expresses to Barauni and Lucknow on single line sections at slow speeds that I am now ashamed to narrate, they took good care of me and I appeared well painted and appointed. My proud green livery had given way to a dull red and the smokebox star nowhere as ornate but a simple monochromatic affair. One day there was great excitement. An Englishman – God bless the soul of this steam enthusiast – by the name Lawrie Marshall was arriving with his entourage and they had organised a Black Beauty Contest where we would do a beauty parade. It was a little demeaning for me that I had to parade my looks to a generation that had not seen my days of glory, but my crew made up for it with care and affection. I told them – no garish meaningless decorations of mythological figures – and they agreed. The functional excellence and the simplicity of the decorations earned me the 'Best Loco' award. I wish I could tell you or show you how garishly some of the other locos had decked themselves to hide their age: I was writhing in embarrassment.

The excitement of the show attracted huge crowds and drew thunderous applause but unfortunately, also brought news that steam was closing down at Sonepur also. My WP and WG cousins had been fearful for some time that the end would come soon, as all new fast trains were given to those diesel beasts. Somebody told me that because of my impeccable record, I would be put on a pedestal and preserved. I did not know whether it was good or bad – how would I spend my days at a single place when I had roamed the steels fearlessly for so many years? Today, as I ruminate of the good old days, I think of Cracker, I think of Gomoh and I think what fate would have ordained for my brothers some of whom went to sheds as far away as Bhusaval, Baroda and Lucknow. Because we were confined to our zones, we never saw each other again but I do hope they did not have too painful a death; I do know that Western Railway and Central Railway zones took great care of their WPs! I also wonder what happened to the Royal Hudson that shared the production bay with me – how was its life at Ontario – did it meet the same inexorable fate of the cutter's torch or was it one of the lucky few that was nurtured by the preservation movement!

I now hear faint rumblings that they will take me to Rewari where they have set up some sort of a heritage centre. The folks at Sonepur are desperately holding on to me on the pedestal in front of the Divisional Rail Manager's Office – such is the bond they share with me. On the one hand there is a faint inner excitement that steam will again rush through my cylinders and smoke through my chimney, but I also fear that now they know not how to handle steam. In my last years, will I put on a pathetic show with two coaches and even so my new masters would not trust me and would have one of those electric contraptions called WAP4 backing me up lest I fail? Do I have to bear this indignity when I have thundered to Howrah days on end bang on time with 82 DN Air Conditioned Express for the passengers to rave of their experience as they alight and board their cars on the Platform 9 carriageway while I would bid goodbye with a few stray wisps of steam that gave no indication of the maddening pace and intoxicating symphony of steel on steel over the last 4 hours and 30 minutes from Gomoh, with just a single stop at Asansol to catch my breath and quench my thirst?

Photos: *Courtesy East Central Railway*

Rail Memorabilia

Vintage Passes

Duty Pass

Since railway men need to travel frequently by rail, they are issued Duty Passes that entitle them to travel by train without having to buy a ticket each time or carry an authority to board the train. Seen alongside is such a Duty Pass issued by the Bengal Nagpur Railway to its Chief Draughtsman of the Loco Department, A E. Morden. Issued by the Chief Mechanical Engineer in 1944, the pass allows him to travel by First Class, which was the highest class of travel in those days.


Bengal-Nagpur Railway Co., Ltd.
(Incorporated in England.)
NOT TRANSFERABLE
No. 0522 Loco Dept.
FIRST CLASS DUTY PASS
available between ANY STATION and ANY STATION.
Issued to Mr. A.E. Morden,
Designation Chief Draftsman
Issued on 26.4. 1944
This Pass entitles the holder to take with him 3 maunds of Luggage, 3 Servants in the 3rd Class, 1 Bicycle and 1 Dog. Available by Goods Brake Vans also.
26.4.44
Chief Mechanical Engineer,
Issuing Officer.
B.N. Ry. Khargpur.

The interesting thing about the pass is that it entitled the holder to carry 3 Maunds of luggage, 3 servants in Third Class, 1 bicycle and 1 dog. The pass was also valid by the brake van of a goods train. Today, the terms 'Maund' and 'Third Class' do not exist but were standard till the 1950s and 1970s respectively. A Maund was a unit of weight equal to 40 seers, which would be around 37 kg in today's terminology. With regard to class of travel, the Indian Railways earlier had the First, Second and Third Classes as the main classes of travel. In the 1970s, the Second Class was removed so that you had only the First and Second Classes. Of course, with the introduction of air-conditioning, sleepers and chair cars, we have a whole range of classes today.

Silver Passes and Medals

Today, for officers of the Indian Railways, metal passes are issued depending on the post you hold (Please see article, "Vintage Gold Passes", in Vol 1, No. 1 of **The Rail Enthusiast**). At the topmost levels, officers are issued gold passes, silver passes at the middle managerial levels and bronze passes for the rest. This practice was started by the company railways during the colonial era itself. On this page, you can see two silver passes that had been issued by the Great Indian Peninsula Railway and the Bengal Nagpur Railway respectively.

On the next page is the picture of a medal that had been issued to commemorate the first train of the East Indian Railway from Howrah to Rajmahal via Khana (presently known as the Sahibganj Loop) on 4 July 1860. The Loop was completed from Khana Junction to Kiul Junction via Jamalpur, including the Monghyr (now Munger) branch, in February 1862. While the medal has Queen Victoria on one side, sadly, the inscription on the reverse is not fully decipherable.

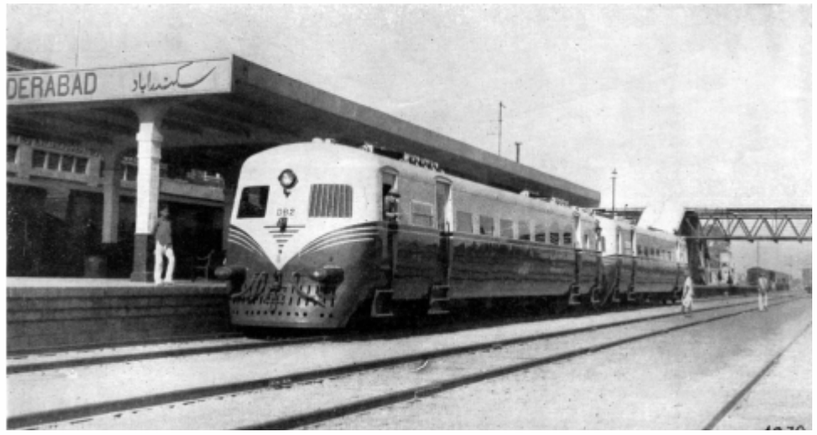
The GIP pass is interesting. It has the intricate GIP logo on it along with the GIP motto, ARTE NON ENSE, in Latin. These words mean: Art, not War, an interesting motto to have coined. It is for rail historians to decipher whether GIP lived up to their motto or not.

BNR Pass: Courtesy Abhimanyu Shaunik

Silver coins and Medal: Courtesy Arvind Chandra

Nizam State Railway Railcar

The picture alongside of a railcar has been contributed by Abdul Ghaffer, a railway enthusiast. This railcar used to ply initially on the Nizam State Railway and subsequently on the Central Railway (Secunderabad Division). In the early 1960s, it was transferred to New Katni Junction as a staff shuttle. This was when a new diesel locomotive shed was set up at New Katni in 1962. Secunderabad Division was then part of Central Railway; it was only on 2nd October 1966 that it was transferred to the newly created South Central Railway.



The Railcar was maintained by Central Railway staff who had opted to join the new diesel shed. The trips were like a family affair. Bardsley Mission School, where the children of diesel shed employees went, was a ten-minute walk from Katni Murwara Railway station. The driver (motorman) was C M Katare, who would herd all the children and escort them to the school. At closing time, he would collect the children, see that they were safely seated, and bring them back up to the level crossing near the area office at New Katni Junction.

One of the earliest supervisors was Ghanti Anjaneyalu Sarma (GAS, for short). He knew the railcar inside out. By the late 1970s, the railcar, imported from UK, had been scrapped. It had a Gardner 6 LW engine delivering 94 HP at 1500 rpm. The transmission was probably a Wilson Epicyclic Gear Box with a fluid coupling.

Contributed by V. Anand, ex-GM, Southern Railway

Rail cuisine

The Maddurvada

Vikas Singh

All old-timers miss the days of the steam locomotive. By its very nature, these locos needed to be watered every 70-80 kms and coaled after about 400 kms. Thus, there had to be halts for at least 10 to 15 minutes for filling water in the locomotive tender. At these stations, passengers had the time to get off the train, replenish their water bottles, or have a snack. The watering stations became active with a lot of vendors selling their wares. In India, there were very few stations where the locomotive was coaled at the station itself through hoppers or other means. In virtually all cases, the locomotive was changed, so that the old locomotive could be coaled at the loco shed and the new fully coaled loco attached to the train. Changing the loco took at least half an hour. A lot of activity was thus possible at the station in this time. Since no train served food like the Rajdhanis and Shatabdis do today, these were

The famed Maddurvada

Maddur station

Entry to the Vegetarian Refreshment Room. It was called the Vegetarian Tiffin Room earlier

the stations where passengers had their meals. Whether the meal was provided on the train itself or you bought it at the station, this was where the action was. A number of stations developed their own special cuisine or specific items that became well-known. One such item was the *Maddurvada* at Maddur station.

Maddur is a sleepy town some 80 kms from Bengaluru and it was in April 1917 that its famous vada first appeared in the Vegetarian Tiffin Room (VTR) in Maddur's only railway station. In the early 20th century, metre gauge trains hauled by steam engines stopped at Maddur for 20 to 30 minutes just to fill up their water tanks. As soon as the train stopped, local folklore has it that on a particularly busy day, Ramchandra Budhya from Kundapura, just mixed up some ingredients and instead of making them in the shape of *pakoras*, which would take longer to cook, he flattened the mixture into discs and fried them. The result was a new snack that quickly became popular as *Maddurvada*. Budhya started working VTR in 1917 to sell his legendary *vada*. Sadly in 2017, after a hundred years, VTR shut down due to declining sales and the famed *vada* was consigned to history.

Photos: *Courtesy the author'*

Muddur station platform from where you entered the Vegetarian Refreshment Room

Indian Railways beyond Crowds

When one thinks of the Indian Railways, the abiding image is that of crowds, hordes, throngs – in other words, a mass of people. In its long and delightful 167-year history, the railway has come to a halt on only two occasions: on the 2nd day of February in 1901, the date of Queen Victoria's funeral and the 31st of January 1948, the day the father of our nation, Mahatma Gandhi, was cremated.

Crowds thronging the myriads of trains of the Indian Railways, occupying the multitude of platforms of its stations or striding across its foot overbridges or concourses, disappeared once again following the 25th of March 2020, when the Government of India declared a country-wide lockdown and all passenger trains were cancelled. The two pictures on this page bring this out very effectively. The first picture below is an aerial view of Basin Bridge Yard at Chennai. With all trains stationary, you seldom saw so many rakes in the yard at the same time. The photograph below is a foot overbridge at the Lokmanya Tilak Terminus (the erstwhile Kurla) at Mumbai. There is perhaps no instance even in the dead of night when this overbridge is totally devoid of people as it is in this picture

Basin Bridge yard

LTT

THE RAIL enthusiast

ENTHUSIAST

HISTORY
The Sutlej Bridge

TRIP REPORT
PAST PATALPANI WATERFALLS

PHOTO FEATURE!
Shindawane Ghat

A Magazine
of the Rail Enthusiast,
by the Rail Enthusiast &
for the Rail Enthusiast

A Peek into the Past

A significant number of our readers and members have joined us only in the last two years or so. They would have thus missed the first lot of magazines that we published. Therefore, from time to time, we will bring you reproductions of some interesting write-ups and captivating articles that have appeared earlier in the pages of our magazine. In these days of forced lockdowns, even those of you who have read these features and compositions earlier, can relish them once again. On this page, you will find the "Musings of the Editor" that were recorded in the very first inaugural issue of the magazine, way back in August 2016. They give you a background of the genesis of the magazine, that is now in its 4th year. We endeavour to make this 4th year the 5th, 6th and so on till we are at least 50th. With your support, we are confident that we will do so.

Read on...

Released on 06-08-2016

Designed & Printed by:
BASIC-4 Advertising Pvt. Ltd.

Musings of the Editor...

Joydeep Dutta is the quintessential rail enthusiast. I met him in 2014 when I was compiling and editing the coffee table book, ***"Indian Railways – More Miles...More Smiles".*** *It was this meeting that converted me from a run-of-the-mill retired railwayman to an active and ardent aficionado of the railway. When not pursuing his career of teaching young minds the intricacies of mathematical economics and operations research at the Indian Institute of Technology at Kanpur, Joydeep thinks, breathes and talks railways. His passion and fervour for the railways are so infectious, so contagious, that the first brief interaction with him was sufficient to put me firmly on the road leading to the satisfying destination of rail enthusiasm.*

The book that inspired the launching of this magazine

Joydeep is not only a rail enthusiast himself but also champions the concept and would like it to grow into something relevant and not be relegated to exist only among a few rail die-hards. In the coffee table book, ***"Indian Railways – More Miles...More Smiles",*** *released by the Honourable Minister for Railways, Shri Suresh Prabhu, in December 2014, he has penned his thoughts on the subject and made an impassioned plea for giving recognition to this strange tribe of rail lovers and bringing railways back to the minds of today's youngsters. An extract from his article,* ***"The Hidden Face of the Rail Enthusiast",*** *is reproduced below:*

In spite of this love for the railways in India, the words "RAIL ENTHUSIAST" seeped into the broader railway culture quite late in India. Though the enthusiasts existed for many years and silently went about their passion, their existence was neither noted nor recognised. An important step in this direction was the formation of the "Friends of the National Railway Museum" which later became the "Indian Steam Railway Society". However, a bigger railway enthusiast movement came through the formation of the IRFCA (Indian Railway Fan Club). Though started in USA by a few Indian students, it caught on like fire in India and now boasts a website with the URL: "www.irfca.org". This website is filled with thousands of photographs of the Indian Railways and a huge amount of technical information and a large number of articles. This is a true treasure trove for the Indian rail enthusiast and even many railway officers take a look at the site. Now there is a tacit acceptance of this strange breed of men and women coming from

very different walks of life with one common interest—their passion for the Indian Railways...

Although the hardcore enthusiast is now known and accepted, it pains me that the current generation is brought up on a heavy dose of automobiles. Magazines about cars and even models of cars are found in every city but, unfortunately, there is little about the railways. The Indian Railways do publish some nice books but one can never find them in normal bookshops and even in e-bookshops. There is no railway magazine in India that can compete with auto magazines. This situation needs to be corrected or else railways would be completely absent from the mind of young Indians who would view it as a transport system which rolls out slow and dirty trains. There are thousands of railway enthusiasts in this country but gradually, if no corrective measures are taken, their number will dwindle. I sincerely hope that the railways, along with the enthusiasts, would jointly do something to bring back railways to the minds of our people.

It was the second paragraph that set me and a group of likeminded persons thinking: what can we do to promote the idea of the railways in the general, particularly the automobile-raised, population and give the iron road its place in the minds of our people? One of the answers we came up with is the bringing out of this magazine that you are now holding in your hands. We hope that through this magazine, we will be able to give a common platform to the rail lover to indulge in his passion and in the process instil an interest, if not love, for the railways in the hearts of the general public.

This is our first issue. Your comments, ideas, feedback are not only expected but will be highly appreciated and welcomed. While we expect this magazine to cater to the interest in the railways a professional railwayman or woman has, we are keener to bring into its fold, all those who not only use the railways for travelling but simply love the sound of a train thundering past or any of the other myriad past and present sights and idiosyncrasies of the railway.

*The first action we took was the formation of a Society, aptly named **"Rail Enthusiasts' Society"**. While bringing out this magazine every quarter is our primary task, our broader vision is to act as a catalyst for all rail buffs, train lovers, hobbyists and fans to get together and actively promote the concept of rail enthusiasm in all of its many hues. With your help, participation and co-operation, we are confident that we will succeed.*

To know more about the aims and objectives of the Society and its activities, please visit our website www.railenthusiastindia.org.in that we are launching along with the magazine.

No endeavour is the outcome of the inputs of one person only. Many have gone out of the way with their help, suggestions, ideas and active participation. While I can certainly not thank each of them in this short write-up, I would like to particularly thank Vinoo Mathur, a retired railwayman like me, but today a rail researcher and historian; Joydeep Dutta, a mathematician and rail enthusiast; Vikas Singh, another rail fan and with the media; Abhimanyu Shaunik, in business for making a living but at heart a rail lover and rail modeller; Apurva Bahadur, a technical writer, whose hobby is photographing trains against picturesque backgrounds; Ajay Singh and Mayank Tewari, working railwaymen (I would like to mention that few working railwaymen or women are rail enthusiasts; Ajay and Mayank are the exceptions that prove the rule); and Mathai Samuel, the designer and printer of this magazine. I would also like to place on record, my thanks to all the contributors of articles and write-ups, of photographs and pictures, ideas and suggestions. Among them, special mention must be made of Vikas Chander, Lalam Mandavkar and Ashish Kuvelkar.

I would also like to thank rail enthusiasts who have already enrolled as members of The Rail Enthusiasts' Society and others for whom this magazine has been created.

Last but not the least: I would like to thank the advertisers without whom it would be difficult to make ends meet.

This is a hard copy of the magazine. We shall be downloading the magazine on our website also. However, for future issues, we intend bringing out an e-Copy separately.

Happy reading!

J L Singh
Editor

TRAIN TO PATALPANI

Vikas Chander

Is it possible to combine rail modeling, photography, historiography, aesthetics with a successful business? The answer "No" is likely to come to your mind. But, Vikas Chander proves you wrong. Combining business acumen with his love for the railways, Vikas is perhaps the country's leading rail modeller. Added to that, he has an excellent sense of history and presenting it in a film. His account of a rail fan trip to the Patalpani line is sure to be an inspiration to all budding rail fans…

The waterfalls at Patalpani (literally "Water of Hell" in the Hindi language) have fascinated and intrigued many over the years. Be that as it may, that is not what took us there but the fact that running right past and within touching distance of the falls is one of the few remaining though fast disappearing Meter Gauge (MG) lines of India. Patalpani falls on the Mhow-Akola rail line in Central India, once part of an extensive MG network but today looking ahead to an early demise in the not too distant future.

In 1870, His Highness the Maharajah of Indore, Sawai Tukojirao Holkar the Second, offered a loan of £10 million sterling for the construction of a railway line to his capital city of Indore. A quick survey was made and Khandwa on the Great Indian Peninsula Railway main line was chosen as the junction point. The alignment was to pass through Sanawad and Kheree Ghat on the Narmada and then by way of the Choral Valley up the slopes of the Vindhyas to Indore.

145 years later, in September 2015, Shashank, Rajit and myself spent a week on the line between Mhow and Dhulghat on the Mhow-Akola section. As the map alongside shows, this section is

now an isolated MG line surrounded by an abundance of Broad Gauge (BG).

Mhow stands for Military Headquarters Of War, an acronym that survives from the days of the British Raj. This is an ideal place to start our explorations of the line as it is the northern terminus of the MG

route from Mhow to Akola. Mhow was once a busy station along the MG route from Ajmer to Akola via Khandwa and its three platforms catered to the many trains serving the line. Today, a single platform caters to the remaining traffic whilst the other platforms are undergoing re-construction, waiting for the imminent arrival of the BG trains from Indore. Till the decision for uni-gauge was taken in the early 1990s, the entire line from Ajmer to Khandwa as well as the Delhi to Ahmedabad line via Ajmer were MG.

To the south of the station is an extensive carriage yard as well as a diesel loco shed which is home to 18 YDM4 locomotives. Since this is an isolated MG line, the shed is expected to carry out running repairs as well as periodic overhauls on the locomotives. In its heydays, the shed had an allocation of over 100 steam locomotives before steam services were withdrawn in 1998. Three rusting YP locomotives can still be seen lying abandoned in the shed, a standing testimony to the glorious days of steam.

The next station on the line after Mhow is Patalpani,

▲ *The single surviving platform at Mhow*

Photos courtesy: Vikas Chander Shashanka Nanda, Rajit Kumar & Roni Kapell

Mhow in the earlier days when three platforms were in use ▶

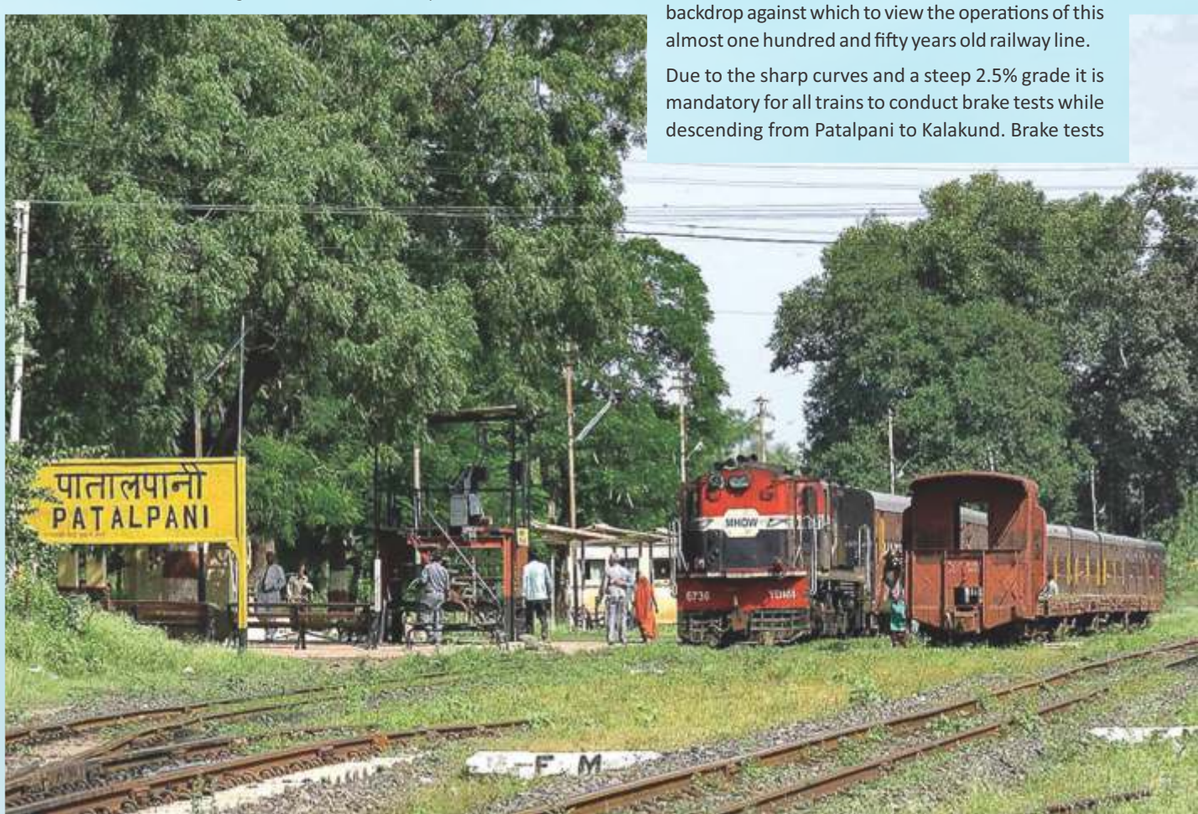
▲ *Gangman inspecting track inside a tunnel*

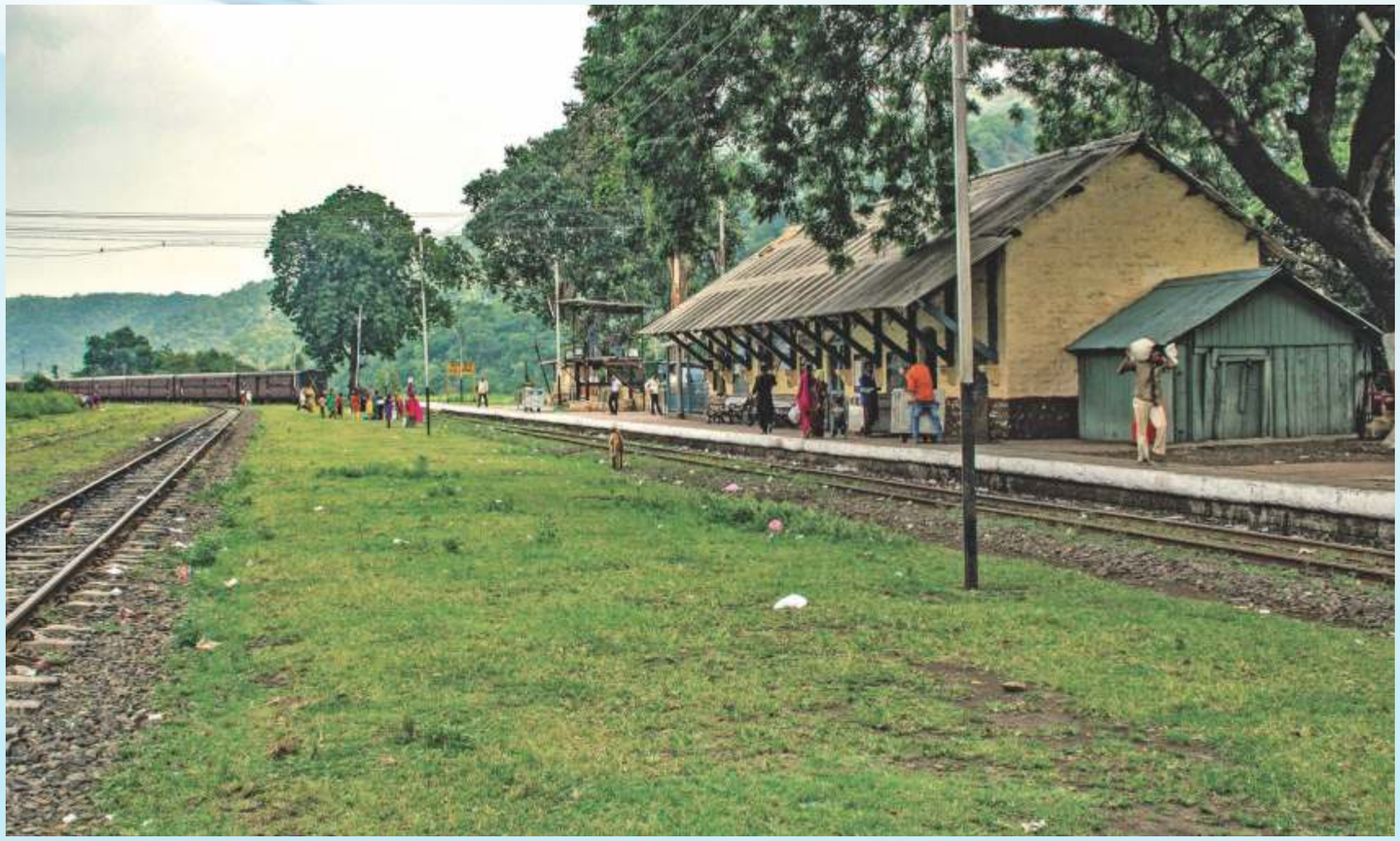
significant in its importance as it is the start of the descent through the Choral valley. Tourists visiting the nearby Patalpani waterfalls also disembark here as the falls are only a short walk from the station. Even though we see some flat cars and tankers stabled here, barring some departmental trains, freight no longer runs on the line and the only traffic the route sees are the six passenger trains in each direction. The rail fan can also see the age-old but tried and tested system of mechanical inter-locking between points and signals. Safety is important on the line and this arrangement of mechanical interlocks ensures this.

The section between Patalpani and Kalakund, running along the Choral river with its numerous bridges, viaducts and tunnels, forms a fascinating backdrop against which to view the operations of this almost one hundred and fifty years old railway line.

Due to the sharp curves and a steep 2.5% grade it is mandatory for all trains to conduct brake tests while descending from Patalpani to Kalakund. Brake tests

▼ *Train 52975 awaits a crossing with train 52992 at Patalpani*





▲ *The idyllic station of Kalakund*

▲ *Pedestrians using the line as a roadway*

second locomotive is also seen. The other locomotive is actually a banker attached behind the lead loco. The banker is shunted out at Kalakund and later helps other trains uphill from Kalakund to Patalpani.

The route does not see the heavy passenger loads as on most of the other sections of Indian Railways but is sufficient enough to require the six pairs of daily trains. The railway runs through the densely forested areas of the Choral valley and in the absence of any roads the line serves as a roadway of sorts for the locals.

Constant maintenance of the line is required to keep it running smoothly and a sizable workforce is employed by the railways for its upkeep. A burning

▲ *A gangman inspects the line on Ravine viaduct No. 1*

are conducted at 4 designated locations along the line. It is a simple procedure which involves bringing the train to a complete halt and checking the brake pressure before proceeding again. A red and white board along with a "T. P." – Test Point – sign marks the spot where the brake tests are conducted.

One of the features that one must see on this section is Ravine Viaducts No. 1 and 2. The latter is 120 meters long and rises about 50 meters from the valley floor making it the highest bridge on the line. It was built in 1876 as a viaduct with 2 stone pillars, the demolished remains of which can still be seen. In 1974, the alignment was changed and in its place stands today a five span steel structure .

On the other hand, the 100 meter long Ravine Viaduct No. 1, also built in 1876, still stands on its original stone pillars, a testimony to the skill and durability of the railway builders of their time. Trains are not double-headed in this section but often a

▲ *Train No. 52988 crosses Choral bridge No. 2*

◀ *The alignment of Ravine viaduct No. 2 was changed in 1974*

incense is mandatory for the workers on the line to invoke the blessings of the Gods and guarantee that work flows smoothly and safely. Gangmen patrol the line constantly and ensure that it is in good condition and safe. The permanent way inspector conducts routine inspections on his trolley and makes sure that there are no unauthorized or unsavory characters about the line.

Two bridges span the Choral River, aptly named Choral bridge No.1 and Choral bridge No.2. The latter is numbered 666, the devil's number, but the bridge has thankfully not witnessed any untoward incident!

The sleepy station of Kalakund lies at the bottom of the gradient of the Choral valley. But, it is an important station on the line due to the fact that bankers are attached here to all uphill trains heading for Patalpani and Mhow. Bankers are mandatory for all uphill trains and protect the trains from rolling back downhill in case of a coupler failure. One of the pointsman, Laxmi Narayan, who has been working

▲ *From the window of a train on the Omkareshwar bridge*

on the line for 20 years, mentioned that normally, the 220-tonne load of the train could be handled by one locomotive but for the safety of the passengers, bankers are mandatory.

Back in the days of steam, an uphill train to Mhow, banked by another steam locomotive, must have been a treat for the senses!

At a maximum permissible speed of 25 kmph, a train conquers the 1 in 40 grade from Kalakund to Patalpani in 30 minutes, a distance of 10 kms. between the two stations. Bankers are sometimes attached to downhill trains as well. This is done to save time if another Mhow-bound train is already at Kalakund. If one would have waited to release the banker after a train had left Patalpani, it would have resulted in a delay for the train already waiting at Kalakund, for the banker could only proceed from Patalpani once the single block between Patalpani and Kalakund was cleared.

▲ *Passenger train crossing the Dhulghat spiral*

Today the diesel loco drivers have it easy and let technology do the hard work. In the steam days it was back breaking work, especially for the firemen.

About 1 km. downhill of Patalpani is a catch siding known by the locals as Tantia mama. Tantia mama was the local Robin Hood who took on the might of the British in the 1880s. A shrine is built here in his remembrance and tradition requires that downhill trains passing by seek his blessings for a safe passage.

After Kalakund, you head South East towards the Narmada and the holy town of Omkareshwar. Omkareshwar is home to one of the 12 jyotirling shrines holy to the Hindus. But that is not what draws us here. It is the 850-meter long railway bridge spanning the Narmada at Omkareshwar. This bridge has also been around since the last 140 years.

Driving further South by road, we head towards Dhulghat. Dhulghat lies in the Melghat Tiger Reserve in Amravati District of Maharashtra. About 2 kms. South East of the station lies a spiral which the locals refer to as *Char ka Aankda,* or the figure of 4. This is because the track plan of the spiral roughly represents the figure of 4 when written in Hindi or the Devnagri script. The station itself lies in an isolated part of the forest and sees only 3 trains during daylight hours.

However, the spiral will interest any rail fan. It consists of a 16-span, 193 meter long steel viaduct which spans a shallow valley. Trains coming from

▲ *Train 52988 on the Omkareshwar bridge*

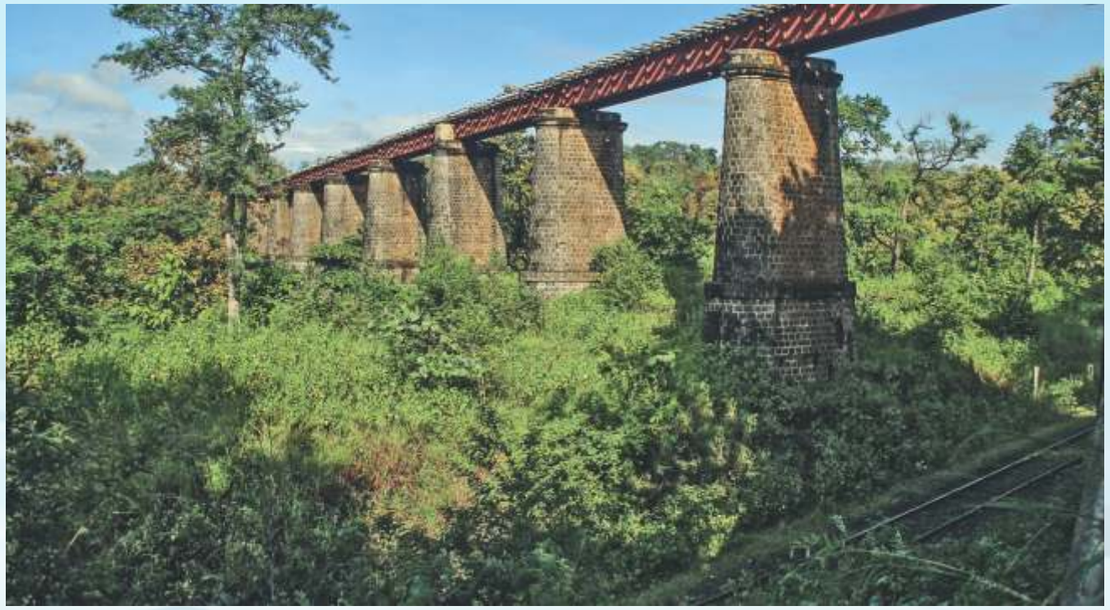
Akola cross the viaduct and after completing a near 270 degree turn in about four minutes pass below the first span of the viaduct before going on to Dhulghat.

With Broad Gauge conversion around the corner one is resigned to the fact that the *Char ka Aankda* spiral will soon be abandoned altogether, becoming just another chapter in a history book. The ghat section between Patalpani and Kalakund with its one and a half century old history would also form a prominent part of that chapter.

The spiral brought to an end a most memorable rail fan trip for Shashanka, Rajit and myself and we hope other rail fans would visit the line before its imminent demise...

A video of this trip can be seen at:
https://www.youtube.com/watch?v=Qt-VqYX3rSM

▼ *The Dhulghat spiral viaduct viewed from below*



From our Archives-3

Jubilee Bridge
History Re-installed

Sanjoy Mookerjee

A historical picture of the Jubilee Bridge

Within a kilometre of the oldest Portuguese Church of Eastern India, built in 1599 AD, and only two hundred metres from the classic Imambara at Hooghly, stands the "Jubilee" Railway Bridge, opened by Lord Dufferin, Viceroy and Governor General of India, in 1887, during the Golden Jubilee year of the reign of Queen Victoria, then the Empress of India. Alas, though lakhs of tourists and pilgrims visit the town of Bandel every year, just thirty five kilometres North of Kolkata, very few pause to notice the engineering splendour of this iconic railway bridge, the first over the River Hooghly, between Bandel Jn. on the West to Naihati Station on the East bank. Commissioning of this bridge made it possible to connect North and West India to Bengal, Assam and the North East of the subcontinent by rail transport for the first time in history.

It has always been a wonder as to why the railway pioneers of the 19th century chose this particularly difficult site to ford the river, since at this location, the mighty Hooghly boasts of a perennial water flow of 27 metres depth. Being near the Bay of Bengal, the bridge substructure regularly suffers from the stresses emanating from repeated tidal movement. There is a belief that the railway engineers of yore wanted to present their beloved Monarch a gift of unparalleled engineering accomplishment in the Golden Jubilee year of her reign as a befitting salute from her loyal subjects.

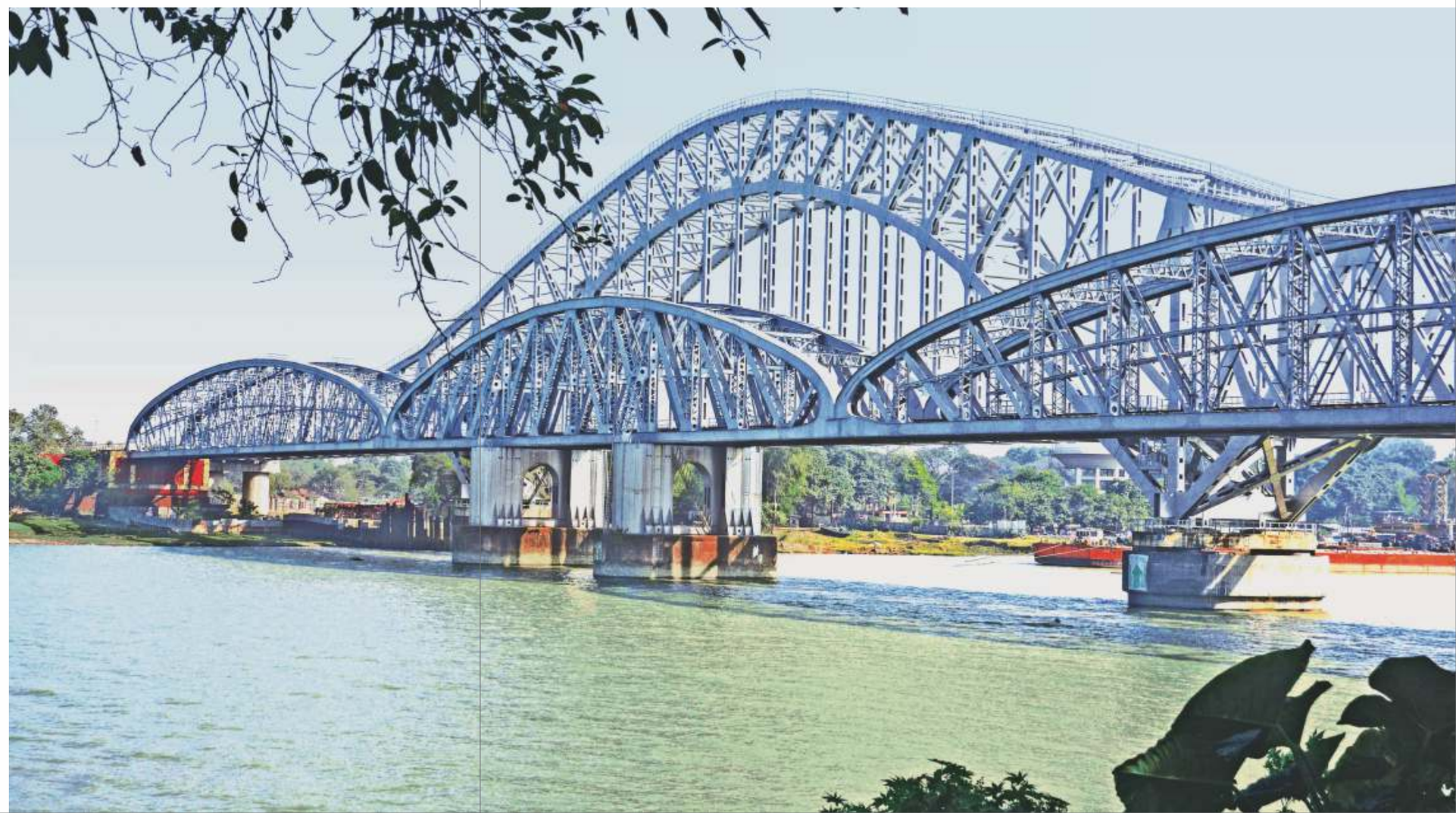
The original Jubilee Bridge has a cantilever truss structure, constructed exclusively by riveting. It is designed for the end girders to rest on overhangs of the central girder. Its unique construction also includes pendulum bearings, which perhaps are not seen in any other bridge in the country. The bridge abutments are made of brick masonry whereas the piers are partly of steel.

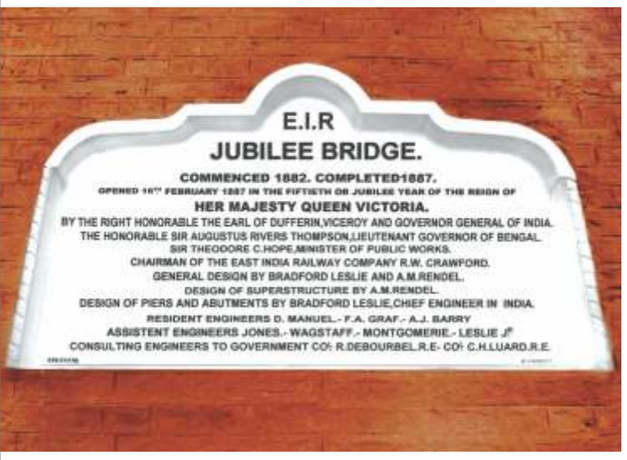
Opened to traffic on 16th February 1887, the bridge was designed by Bradford Leslie and A. M. Rendel. Fabrication and erection was completed within a record period of five years. The bridge has a central span of 360 feet length and two side spans of 420 feet each. In 1910, gauntleted track was laid on the bridge to allow wider rolling stock. The East Indian Railway engineers of the 19th century had the vision and foresight to build the substructure for this and other bridges in the region for double line. The bridge thus continued to serve the needs of the railway for more than a century in spite of the enormous increase in traffic and axle loads.

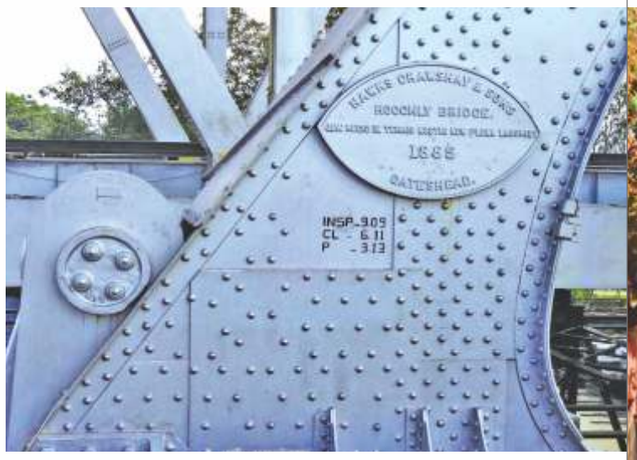
In 1999, after 112 years, the need for replacement of the Jubilee Bridge was acutely felt by the Indian Railways. Therefore, during 1999-2000, a new double line bridge was sanctioned to be built. Named *Sampreeti Setu,* this bridge is located by the side of the old bridge. With a Double-D well foundation, it comprises of two end spans of 132.5 metres each and a central span of 150 metres.

Inspired by the world renowned Sydney Harbour Bridge in Australia, *Sampreeti Setu* has been designed with a continuous steel bow-string superstructure, with open web girder of 417 metres length and height of 45 metres. A span arrangement of such dimensions has not been successfully accomplished in the Indian Railways or elsewhere in India before. Another landmark achievement of the new bridge is of the use, for the first time in the Indian Railways, of spherical bearings. This has been done keeping in mind the vagaries of this location.

The old Jubilee Bridge seen in front of the new bridge







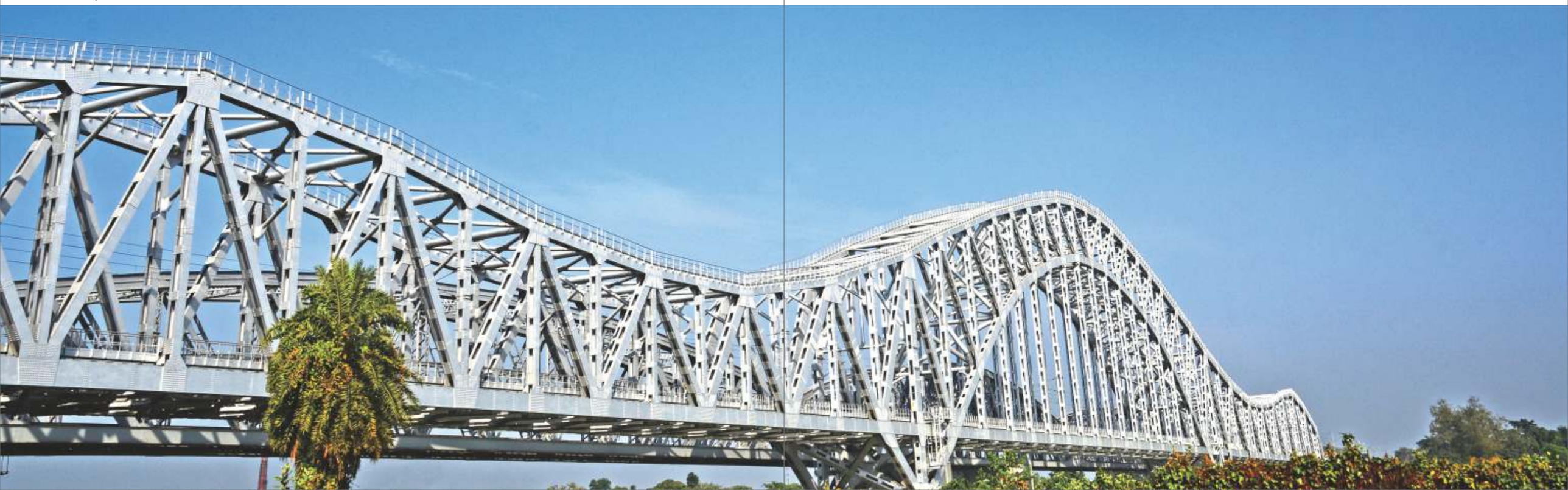
As the sun was on its way down on 17th April 2016, 13141 Up Teesta-Torsa Express became the last passenger carrying train to cross the Hooghly over the historic Jubilee Bridge at 15.10 hours. With this, the curtain came down upon this great saga of railway engineering. The same afternoon, one of the most aesthetic bridges of modern India, the *Sampreeti Setu,* was put into operation simultaneously with the passing of the Bandel-Naihati Down EMU at 14.00 hours, the first passenger train to pass over it.

But, the ballad of the Jubilee Bridge has not yet ended. While it had been committed that the old bridge will need to be dismantled to facilitate free flow of river traffic, yet, as a result of requests from **Rail Enthusiasts' Society** and other rail enthusiasts, the Indian Railway Board has taken a historic decision to ***"develop an open air bridge museum for relocation and preservation of at least one span/girder of the iconic bridge and other unique items like the bridge plates, pendulum bearings, etc. for public display of this engineering marvel as well as for educating engineering students in India"***. Such a railway bridge museum shall be the first of its kind in the country. The museum will be located on the banks of the Hooghly very close to the present site of the bridge.

Indeed, we look forward to this promise in the near future!

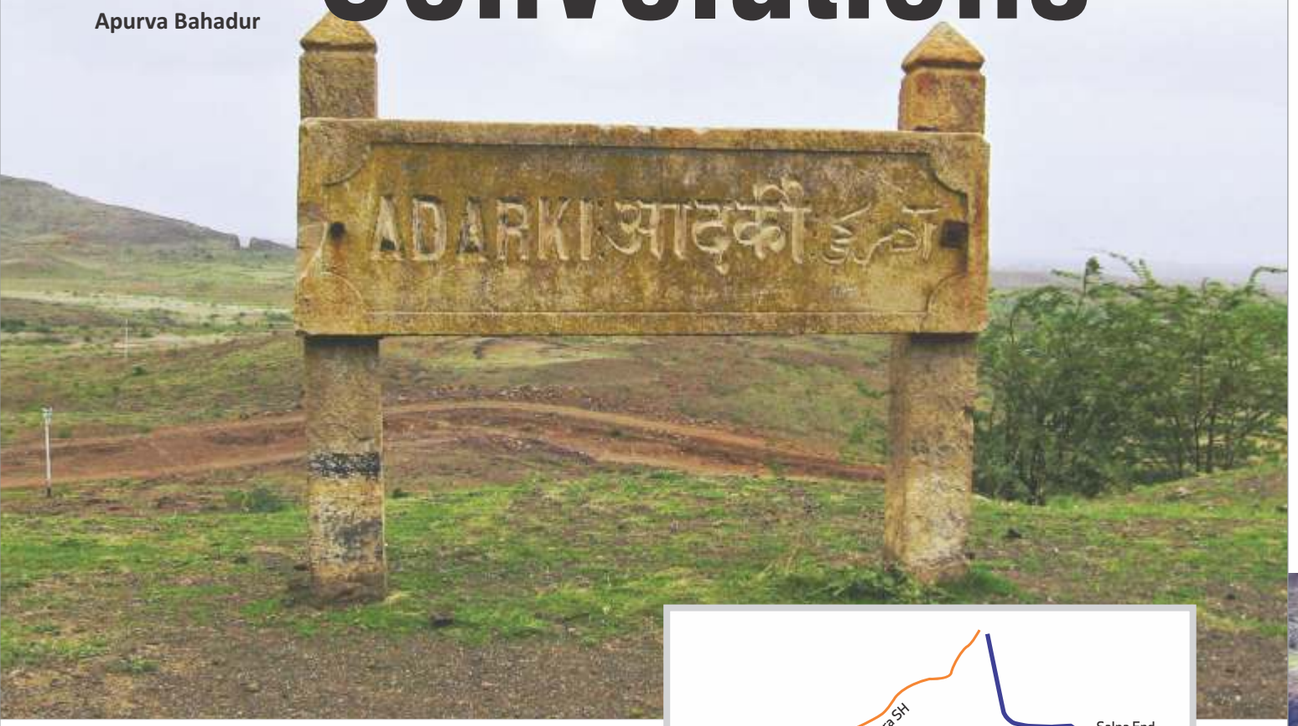
Photos: Courtesy the author

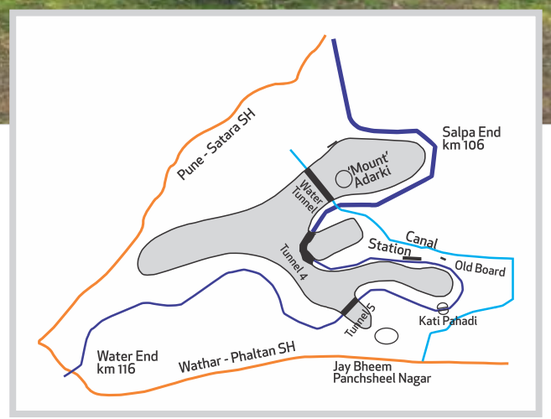
Between the old and the new



A Paradise of Convolutions

Apurva Bahadur





Adarki is a tiny station, about 109 kms. from Pune on the line to Miraj. For railfans, this is a haven of premium quality single-track diesel hauled main-line action, set amongst memorable curves, guarded by tall mountains and passing through breathtakingly deep rock cuttings. The location's main claim to fame is the spectacular horseshoe curve that is visible from behind the station platform. If you climb the mountains in front of the station, it is apparent that there is yet another reversal of tracks in the other direction. However, I hesitate to call that curve as a horseshoe, as it is visible only at an elevation and not at ground level.

Adarki does not have much passenger volumes. Only 2 passenger trains stop here in each direction during a 24-hour period. About 7 daily trains and about 10 freight trains roll through in each direction in the same 24 hours. Through the week, around 15 non-daily passenger trains also pass through. As the Pune-Miraj-Hubli-Bangalore route was meter gauge prior to the 1970s, Adarki too has its share of MG artifacts. These include the old alignment with sharper angles of curvature on embankments or through cuttings. You can also see stone arch viaducts and an engraved stone station nameplate that is located some distance away from the present day platform.

A deep sense of tranquility rules this place. Apart from the bells tinkling around the necks of grazing cattle, the lack of sound actually hurts your city-bred ears. Yet, gusts of unexpected intense wind will buffet you around. In the appropriate season, bursts of sudden rain will drench you at regular intervals. But the quintessential Adarki experience: the gentle excitement of detecting a faint mournful sound of the distant horns, peaking to a frenzy several tens of minutes later, when the train will do that curve before it thunders through, right in front of you.

Apart from these curves, the location boasts of two tunnels, # 4 and # 5, that permit movement of trains through the mountains. Another notable feature is a small hill that is split right down the middle to pass the tracks: this is the so-called 'Kati Pahadi' of Adarki.

When I started railfanning, more than two decades ago, the remotely located Adarki station did not have any source of water, potable or otherwise. To meet the needs of the station staff, the railways attached a converted eight-wheeler milk tanker to carry potable water. The 315 Down Pune-Kolhapur passenger hauled this tanker on alternate days. During the passenger's halt at Adarki, the station staff would top-up the ground storage tanks, as the train waited.

When the vacuum braked 315 Down evolved into an air-braked rake, now renumbered as the 1609 passenger, the older 8-wheeler vacuum-braked tanker could not run anymore with this rake. The water carrying duty was performed by a large plastic moulded tank, fitted in the luggage area of the front brake van. Simultaneously, a major construction project was underway in the area. This was the Salpa irrigation canal, which bisected the horseshoe curve and passed below the railway line into the surrounding mountain through its own water-carrying tunnel!

The canal helped bring much needed ground water in this area. Around the same time, the station got a potable water pipeline and the latest avatar of the passenger trains, the 51409/10 (5-digit renumbered version of the 1609/10), do not carry any cache of potable water for Adarki station.

Will Adarki remain a raifan's paradise? Track realignment, doubling, and the eventual electrification are all in the pipeline. So, enjoy the beauty and splendour of this amazing location before "modernization" will eventually rob it of the rustic charm and raw sensuality. Through images on this and the following pages, I invite you for a virtual tour of Adarki and hope that it will generate adequate interest for an actual visit to this idyllic location in the near future.


सामान
LUGGAGE
मध्य
C.R

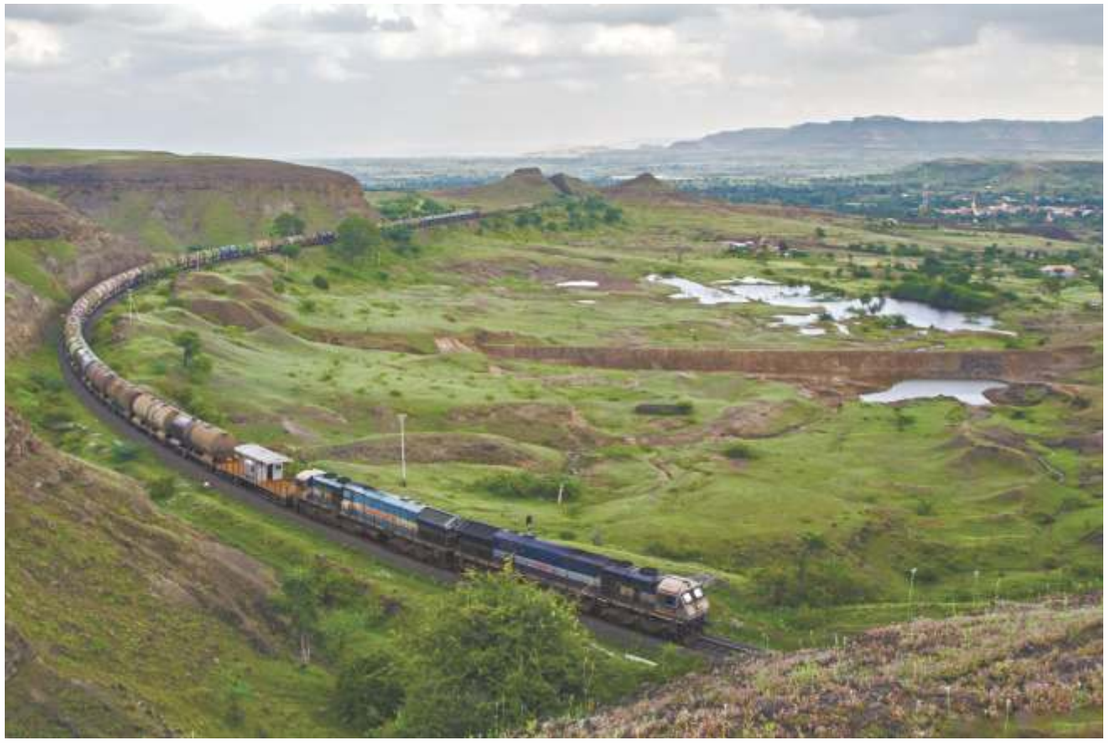


Photo Captions

Page 22	*The ancient station board from the meter gauge era*
Page 23	*Near side portal of tunnel No. 4*
Pages 24 & 25	*Evening ambience at Adarki*
Page 26 (Top)	*A southbound BCNHL rake from Salpa end, on one of the arms of the horseshoe curve*
Page 26 (Middle)	*Same southbound BCNHL rake visible on the other arm of horseshoe curve*
Page 26 (Bottom)	*Potable water for Adarki by passenger train*
Page 27 (Top)	*A view of the water carrying tunnel for the Salpa canal*
Pages 26 & 27 (Bottom)	*Adarki is more used to cross trains on a single line section than serve passengers*
Pages 28 & 29	*A BCNHL threads through the 'Kati Pahadi'*
Page 30 (Top)	*A BTPN rake approaches tunnel No. 5*
Page 30 (Bottom)	*Looking over the far side portal of tunnel No. 5*
Page 31	*Leaving the near side portal of tunnel No. 5*
Page 32 (Top Left)	*Deep cuttings that line the track towards Wathar*
Page 32 (Top Rt.)	*At the end of Adarki embankment*
Page 33 (Top Left)	*The embankment towards Adarki has memorable curves*
Page 33 (Top Rt.)	*On the embankment approaching the cuttings of Adarki*
Pages 32 & 33 (Bottom)	*Adarki station, near side tracks, Salpa canal and the tracks at the opposite side of the horseshoe curve*
Page 34	*A southbound train emerging from tunnel No. 5*
Back Cover	*Train 315 passenger departs Adarki*

THE FIRST INDEPENDENCE DAY 15TH AUGUST 1947

There were several noteworthy features connected with the celebrations arranged by the Bengal Nagpur Railway (BNR) in connection with the inauguration of the new Indian Dominion at Garden Reach on the morning of 15th August 1947. The number of persons present on that memorable occasion was in the region of 1,650. The Committee responsible for making these arrangements was presided over by an Indian officer in the person of our Commercial Traffic Manager, Mr. S. N. Gupta. The Flag Hoisting and Salutation Ceremony was performed by a Senior European Officer, Mr. T. H. Morris, OBE, MC, General Manager of the Railway. Moreover, a total of 850 children, including the children of staff posted at Headquarters, were entertained as part of the Celebration Programme. Perhaps the most outstanding feature of all was the opportunity given to Mr. N. Sircar, General Secretary, B.N.R. Employees' Union to address this large gathering. It is understood that this was a happy thought on the part of Mr. S. N. Gupta in his capacity as Chairman of the Committee responsible for organising the celebrations.

The celebrations opened with the singing of *Bande Matram* after the assembly present there had been seated in the large pandal specially erected for the purpose. A notable opening speech was then rendered in Hindi by Mr. Sircar of the Staff Union, which is in part as follows in English:

'It is proud privilege of mine to have an opportunity to speak to you first on this solemn occasion of the celebration of the inauguration of Indian Dominion today, the 15th August 1947. The celebration is to be made by unfurling the National Flag and the dignity of the Ceremony is enhanced as the head of the administration is going to do it. ... '

Mr. S. N. Gupta, Commercial Traffic Manager, in his capacity as Chairman of the Celebrations Committee then addressed the gathering. '...At last, Ladies and Gentlemen, I have much pleasure in now requesting Mr. Morris, our General Manager, to unfurl our National Flag.'

The next item on the programme was the Flag Hoisting and Salutation Ceremony. It was a very happy thought on some body's part that this pleasant task should have been entrusted to the Head of the Bengal Nagpur Railway Administration.

Before performing the Flag Hoisting Ceremony, Mr. T. H. Morris, OBE, MC, General Manager, delivered the following address:

'This moment, at which I am about to have the honour and privilege of hoisting the tricolour Flag of India is a proud and happy one for us all. Myself, an Englishman and not a son of India, I am more happy to tell you my friends and colleagues present here on this memorable occasion, that my countrymen and I will honour this Flag in the same way as we do our own, the Union Jack.

'A man should cherish and uphold the honour of the country in which he lives and works, even though that country may not be his own. Now standing before the Flag, let us one and all resolve that we shall work in a spirit of close cooperation for the benefit of the nation that is born today forgetting all that is past and forgetting any bitterness that ever existed.

'Let us make our Railways and, in particular, the Bengal Nagpur Railway, a proud possession of a great nation that is now on a victorious march. Let a new spirit of doing and discipline now prevail upon us and make India great and glorious.

'Let us salute in all reverence and respect this Flag of a brave and resolute nation, NEW INDIA.

'LONG LIVE INDIA -- JAI HIND!'

While Mr. Morris was engaged in hoisting the new nation's Flag, which he subsequently saluted, the assembly present remained standing. This impressive ceremony was brought to a close by the distribution of bags of sweets and miniature National Flags to a total of no less than 850 children. Thus concluded a most impressive function, which will long be remembered by all who were privileged to take part in it.

From the archives of B M S Bhist, who had extracted the article from the Bengal Nagpur Railway magazine

Recreating the Raj Railway in Miniature

Ranjeev C Dubey

Stopping Time (the Prequal!)

There are at least three ways to experience history outside the pages of a book. You can visit a monument to get a sense of the scene where history has unfolded, as for instance the Qutab Minar. You can experience living history, visiting Jaisalmer fort for instance to see how people prospered within its walls. You can also experience recreated history, as in period theatre, or in viewing the exhibits of a museum. I like to reproduce history in miniature in 3D. In my hobby room in Gurgaon, I have a model of the Kalka Shimla Railway (KSR) as it existed on September 14th 1971. It may be a scale model, but I have tried to make it as true-to-prototype as I cared. So far, as of September 2016, I have built five stations: Dharampur, Barog, Solan, Solan Brewery and Taradevi. All that remains on my bucket list of planned eight stations are Kalka, Summerhill and Shimla. Whether I succumb to temptation and build two more stations beyond my bucketlist – Kandaghat and Kaithleeghat seem like good subjects – depends on how many modelling years I really have left!

As the layout stands today, the journey begins at an unnamed train staging yard somewhere in the plains from which a single line climbs up a succession of punishing loops till it arrives at the lovely hillside station of Dharampur. Dharampur has two passing sidings, a small turntable and a trolley shed. It could well have been my lower terminus, but why do what the railway doesn't? I have accurately modeled Dharampur's evocative station building, signal cabin, *chai* shack and pump house, as also its trolley shed and turntable. On the prototype, Dharampur lost its goods shed and siding sometimes in the mid-1990s, twenty years after my chosen model date. I

A view of Taradevi station

have also tried to model as much of Dharampur in the background as space allowed, which is as always way too little. You can spot the little temple in the back, as you can the first line of houses by the road curving around the north end of the station. Space is a railway modeler's greatest enemy, and I have my share of miseries!

From Dharampur, the climb continues. The line snakes up the pine forests and through KSR's longest tunnel to Barog station. Barog has long been the half-way refreshment stop for passenger expresses running up to Shimla. I have accurately modelled every building there is in Barog, including especially the Railway Refreshment Room. Barog as built is lush, moody and a bit claustrophobic, exactly as the prototype is. If you shut your eyes and breathe

RMC No. 6 on Dharampur loop

Solan Brewery - South view

deeply, you can still smell the omlette-butter toast being served there.

On the prototype, Barog is the highest point on the line thus far, after which the line slowly drifts down into Solan. Not for me, it doesn't. Because of the nature of my track plan, the line begins another long climb, the longest on my railway, to the south tunnel of Solan. I did not have the space to model the extensive town buildings behind the station, but those that I could represent in my limited station areas have been accurately modelled as they existed in 1971. Solan lost its goods siding about 1989, so don't be surprised if the model doesn't look like the station if you visit it today.

Past Solan, the line continues its climb till it reaches Solan Brewery. Solan Distilleries paid for the construction and maintenance of this evocative little gem, but it still bears the indelible mark of a KSR design. It featured a passing loop. A third goods loop permitted direct loading of Old Monk Rum, Solan No. 1 and Golden Eagle Beer from the brewery store. When trucks became more efficient as a means of transportation, the station fell into disuse till the railways shut it down some years back. The extra tracks were removed and the station building sealed. I was last there about 2005 and photographed the station while it still functioned. My model is a good representation of the station area, but I really do need to replace the viaduct at the northern end of the station: it is too basic and not of a standard I can accept. That said, the station building is almost as pretty as the original!

Our journey up my railway now takes us to the northernmost station on the route yet built: Taradevi. This beautiful S-shaped station hangs on a narrow

Taradevi temple

ZDM3 No. 155 and KC No. 520 at Solan

ZDM3 No. 155 exits Barog tunnel

ledge above a stiff slope, within sight of Shimla. I have modelled not just the main station area, but the staff quarters as well. I had to relocate the temple to a spot above the station because of space constraints, but the *Devi* still reigns on the top of that hill! Taradevi is just as green and overgrown, exactly as the prototype.

Our journey continues north thereafter, but not too far. Summer Hill awaits creation, after which the tracks will reach Shimla. I expect the railway will be completed as planned by the end of 2020.

In the meantime, stock and locos have been more or less accurately modelled. Most of the 'power' is done: two each of the endemic KC class and ZF-1 class steam locomotives, two each ZDM1 and ZDM3 diesel locomotives and one ZDM2 as well. I even have a derelict Class TJ 2-6-2+2-6-2T rusting in a

ZDM-1 No. 743 passes a bunch of climbers

Miniature train switching lines

siding, which unlike the prototype, never got shipped to Pakistan after partition! Of the railcars, the line already has No 2, 5, 6, 11, 12 and 14. In addition, a variety of accurately modelled four-wheel and bogie wagon stock – open flats, box wagons, gondolas and tank wagons – ply these tracks.

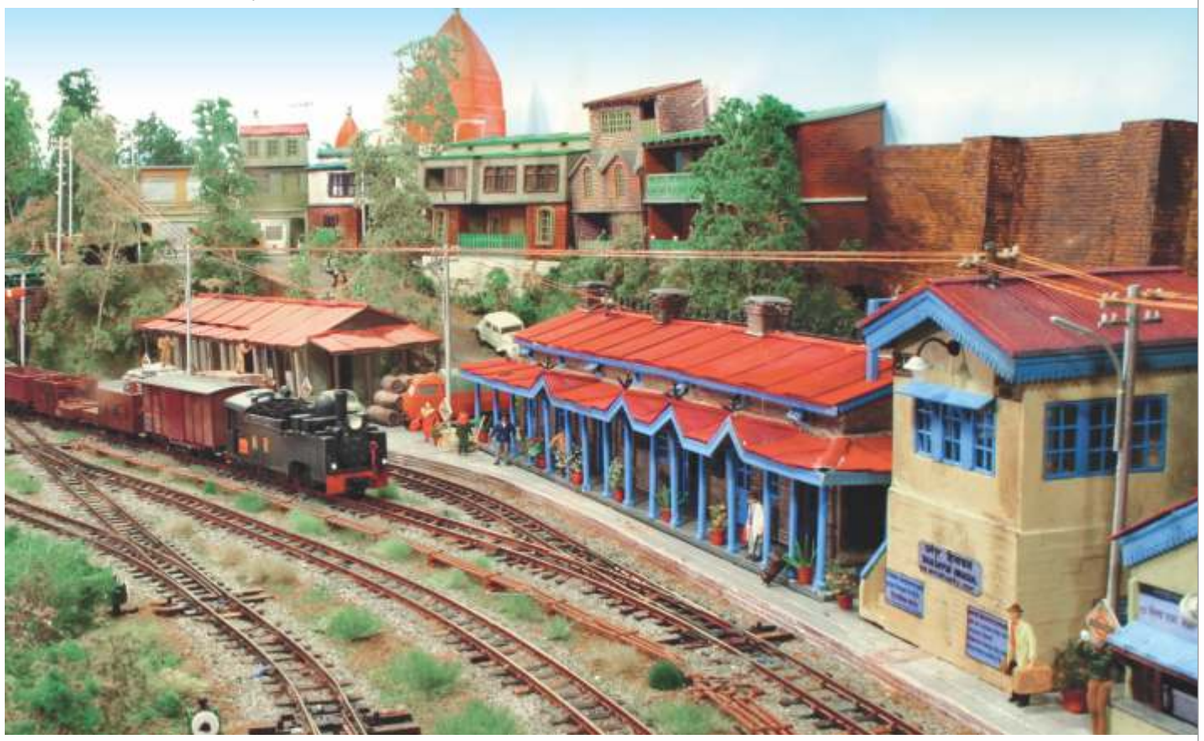
The KSR has long been my lifetime railway project. I have dreamt of building it since at least the mid-1980s. In 2009, I finally acquired the resources to start planning the build. The railway has been six years in the actual building. Given that almost everything is scratch built, five stations in six years, I am sure, classifies as a pretty steady trot! Which leaves open the question: how on earth have I gotten here? I mean, for a first generation migrant from Jammu to arrive in Delhi to practice law in the killing fields of Tees Hazari courts, build himself a home in Gurgaon and then proceed to build a model of a Himalayan Railway line which exists in Himachal Pradesh is not your everyday plot. The story is worth telling, I hope, but it will have to wait for now! What may deserve more immediate telling are the techniques employed in building such a model.

In truth, it's really very simple. This above all remains a universal reality: if you take any problem and break it down into its components, the solution

Solan station on a curve

to the problem becomes completely obvious. And so it is with building model trians. If you build a model railroad, what do you use for a base? You can use a wooden base, or you can use a plastic base. I use plastic: not your normal hard plastic but very light weight blue foam normally used for insulation in the construction industry, procured from a wholesaler in Raja Garden. Onto the foam, I attach 3mm cork sheet from the gasket manufacturing industry using white wood glue, a.k.a. Fevicol. My stocks of cork sheet come from Kashmiri Gate. This allows me to now lay down the track.

ZF-1 No. 119 coasts into Dharampur



Another view of Dharampur station

KC No. 520 awaits the north start signal at Barog

Dharampur station receives RMC No. 14

Road along the track

To lay down any track at all, we need to decide the 'scale' in which the railway is to be built. The Kalka Shimla Railway is narrow gauge with a track width of 2.5 feet. I settled on 3.5mm to the foot scale on a track gauge 9mm wide, a popular scale gauge combination, commonly called HOe in Europe and 'HOn2½' in America. A variety of English, American, German and Austrian manufacturers offer track in this size. My track is stuck down with white glue, after which the sleepers and rail sides are painted using Acrylic paints to increase the realism. I use river sand to represent ballast used to hold down track on the prototype. How do I plan each station? I have hundreds of pictures of KSR stations taken over the years. I merely follow the prototype, eliminating the need for imagination! If the station is built on a curve, space permitting, I build mine on a curve too, and place the turnouts where KSR's management did. Once the track is down, it has to be electrified, and this requires soldering, at which skill, despite 40 years of hard labour, I am still remarkably bad. These days, locomotives have chips inside them which control systems directly address, so there isn't that much rail electrification to be done. At this stage, the layout can be tested thoroughly, using scale model locomotives and off-the-shelf wagons and coaches.

Once you get past the stage where everything works electrically, the fun part begins. This is where the engineer in your heart yields to the artist. All my builds are patterned after those actually found along the line. I have taken measurements where I could, and where I could not, I have made intelligent

Repairing Dharampur road bridge

A general view of Barog station

guesses. Once you know that a brick is 9 inches long and 3 inches high, all you have to do is count the number of bricks to know the length and height of a building. I build my buildings out of HIP sheet procured from Paharganj, though I may occasionally use readymade plastic window castings from European manufacturers if I can find them. I do the same with locomotives and wagons. Manufacturers offer a variety of locomotives and stock that run on 9mm gauge. My data base has leading dimensions of all of KSR's stock and power. All I have to do is find a suitably sized underframe, buy it, throw away the body, and build a new KSR body to represent an endemic loco.

That leaves only the scenery, but this is a secret I will share with you if you write to me and tell me that you enjoyed the story so far. Try **rcd@nsouthlaw.com** or **ranjeevdubey@hotmail.com.**

Photos: Courtesy the author

Dharampur station receives RMC No. 11

The Dibru-Sadiya Railway

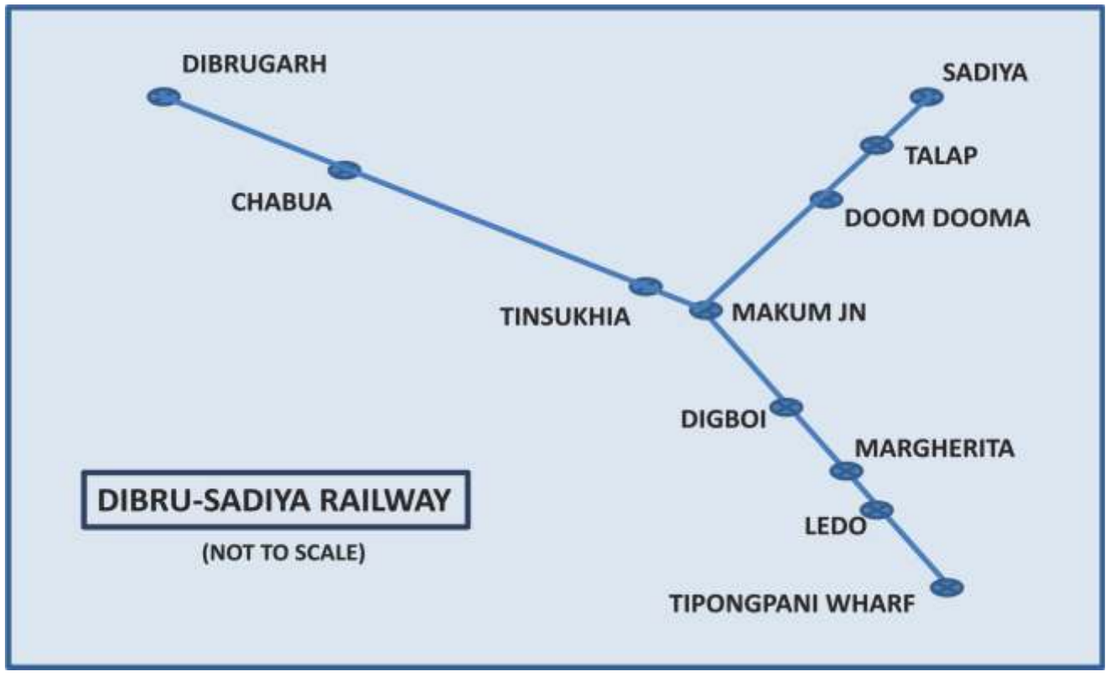
Ranjit Mathur

South of the mighty Brahmaputra in the extreme North-East of India, 19th century Survey of India maps show a railway line that looks like a small reclining 'Y'. It carries the title Dibru-Sadiya Railway (DSR). The cause and construction of this totally isolated little railway is illustrative of the zeal of our pioneering forebears and is an early example of user initiative in project-specific rail connectivity.

Until 200 years ago, Assam was an independent kingdom, ruled by the royal house of the Ahoms, of Shan origin, who had settled in the Brahmaputra valley in the early 13th century. By the end of the 17th century, the Ahoms were the dominant power in Upper Assam. In the 18th century, however, the kingdom was greatly weakened by internal jealousies and dissensions. This resulted in one crisis after another, in spite of British intervention, leading to a Burmese army entering the area in 1817 and the Burmese establishing themselves in Assam, Cachar and Manipur. In 1824, their defiant seizure of a British outpost compelled Lord Amherst to declare war. After defeating the Burmese, the British tried various solutions in the area but ultimately, by 1842, the whole of the Assam Valley was under British officers. Thus, the far North-East of India came under British control.

British interest in Assam had been awakened earlier. A Committee set up in 1834 to explore the possibility of growing tea in India had found that the tea plant was indigenous in Assam. The Assam Tea Company (which still exists) was set up in 1839 with tea gardens in Doom Dooma and towards Sadiya in Upper Assam. The middle of the century saw the pioneer planters laying the foundations of the great tea industry of the region.

But serious difficulties were crippling the infant tea industry. Foremost of these was the condition of the Sadiya Road that connected the tea gardens to the steamer ghat at Dibrugarh and was thus vital to Upper Assam's tea industry to reach Assam's great natural highway, the Brahmaputra.



Built in 1865, this 100-kilometer stretch of road was an unmetalled cart-track. In the rainy season it was “a perfect slough of despond, strewn with broken carts, burst rice bags and damaged tea boxes”. During the rainy season of 1878, the Civil Surgeon, Dr John Berry White (founder and benefactor of the Berry White Medical School at Dibrugarh), himself the owner of a tea garden on the Sadiya Road, represented to the Chief Commissioner, Sir Stuart Bayley, the shocking state to which the road had been reduced by heavy traffic and lack of timely repairs. He expressed the planters' fear that communication between the tea factories and the Dibrugarh ghat might cease altogether.

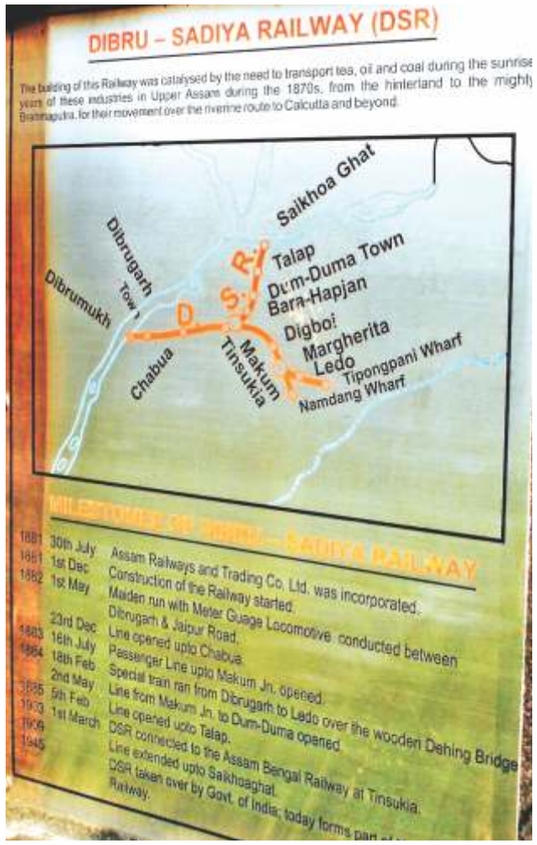
The estimated cost of putting the road back into a serviceable condition was greater than the entire annual budget of the Assam state PWD.

The outcome of the discussion was a letter from Shillong to the Finance Department of the Government of India.

“I am directed to report, for the approval of the Government of India, the following proposals….with a view to construction of a light railway on the Dibrugarh and Sadiya Road. ….During the last few years there has been an extraordinary development of the tea industry in this part of the district…The existing road is unmetalled; and Dibrugarh being the furthest point on the Brahmaputra to which commercial steamers ordinarily ply, these gardens have to depend mainly on this unmetalled road for the conveyance of their traffic of all kinds. The recent opening out of numerous gardens has been accompanied by a large development of cart traffic, and the unmetalled road, under the burthen of this traffic, becomes hopelessly and absolutely impassable during the rains…”

The letter contained a summary of the proposals, the chief being the construction of a metre-gauge railway from Dibrugarh along the Sadiya Road, on the express condition that the Government would guarantee an annual subsidy for a number of years. The Chief Commissioner's views were added:

“Compared with the cost of metalling the road, Sir Stuart considers that the sum is one which the province may fairly spend. He is the more inclined to encourage the present scheme, because, whilst he considers it not commercially unsound, it is the first instance of a united endevour on the part of an influential community to help themselves, and if successful, it will be the parent of many similar projects, and will thus tend to relieve the Administration of an onerous burthen in the way of providing means of communication – a burthen, I may add, which it is difficult to repudiate, and which, financially, the province is unable to bear.”



Information board at Rail Heritage Park, Tinsukhia

Government having agreed to a conditional grant of ₹ One lakh, a prospectus was issued on December 4th 1879 in London by Dr Berry White and his friends, inviting applications for shares in the Assam Railway Company Limited.

Initial response was poor and it appeared the scheme would languish indefinitely. This was partly due to the difficulties faced by any pioneering company in the region. These included the peculiarly isolated nature of the work; the entire absence of all local labour and assistance; the necessity of creating a manufacturing centre and workshop, stocked with all needful mechanical appliances, and skilled labour, in a place hitherto considered as almost to be beyond the confines of civilization, and of importing absolutely everything.

There was another difficulty: there was no organised source of motive power to maintain the working of the factories, although the existence of coal deposits in Assam had been known for many years. One of the earliest discoveries was near Safrai, where some coal was extracted in 1828. The Makum field was also scratched in 1865 but the dense jungle and the Dehing river rendered these fields inaccessible. In 1880, the Doom Dooma tea factory imported 3,000 maunds* of coal from Raniganj (near Calcutta), which, arriving at Dibrugarh by river steamer, had to be transshipped and brought in small boats at least 50 miles up the Dibru river, and landed, after a total journey of about 1,000 miles to a point within 25 miles of the Makum coalfield. The existence of oil deposits had also been known. Oil was struck in 1867 south of the Dehing river by Mr. Goodenough. It was only later that Digboi attracted attention.

Fortunately, the rail project found a savior. Towards the end of 1880, the project came to the notice in England of Benjamin Piercy, an engineer with experience in railway construction in England and elsewhere. He agreed to support the scheme, which was widened on his advice to include the opening of the Makum coalfield in addition to timber and petroleum rights. But he wanted the facts verified. His brother, Robert, went with JE Wilson to Assam in January 1881. They returned a few months later to report that the scheme promised a most remunerative investment. On July 30th 1881 the Assam Railway and Trading Company was incorporated in London and soon its Bankers received applications amounting to 28% in excess of the required capital. One of the founder Directors was John Berry White of the Bengal Medical Service, who had also been a director of the old Assam Railway Company.

So great was Benjamin Piercy's faith in the project that he became the largest share holder and was appointed Director in 1887. Perhaps he was also attracted by the vast virgin forests of true Indian type with their variety of flora and fauna, including timber.

The Company set itself three immediate tasks, whose aims and objects were interdependent:

- Construction of the railway
- Development of the Makum coalfield
- Establishment of a steamer service

Thus, the Assam Railway and Trading Company (ARTC), with its conglomerate interests in tea, the rail project, timber, coal and oil played a great role in opening up the North East corner of India at a time when others “feared to tread” the jungles.

Benjamin Piercy quickly assembled a trust-worthy team: his brother Robert and three Italian engineers, Chevalier Roberto Paganini and two others, also named Paganini. All had worked together in Benjamin's last construction – a railway in the Mediterranean island of Sardinia.

In 1881, the nearest approach to Assam by rail was from Calcutta by the East Bengal Railway from Sealdah via

**The 'maund' was an old unit of weight in India equal to about 37 Kgs.*

Incumbency board at Dibrugarh Workshop

Ranaghat, Porada, Ishurdi, Santahar and Parbatipur to Kaunia on the Teesta river or Goalundo on the Padma river. From each of the two river-cum-railheads it took a fortnight to reach Dibrugarh. Dividing themselves into two batches to inspect both routes, the team reached Dibrugarh on 1st December 1881, while Benjamin Piercy remained in England to procure and send rails, locomotives and construction material. He had, however, instructed the teams to ensure that the route should approach the coalfields as well as any future oil wells.

Construction work could only start in January 1882, after surveying the line from the steamer ghat to and beyond Dibrugarh town and acquiring land for men, material and also a workshop where Robert Piercy established himself. Soon, the first consignment of rails, locomotives, etc. shipped from Britain arrived at Dibrugarh. The first few miles of track were laid and on May 1st 1882, the first metre-gauge locomotive in Assam passed over a section of line from the steamer ghat to a little beyond the town, giving birth to the Dibru-Sadiya Railway (DSR).

Rail construction was also commenced from the Dehing river-end. The site for crossing this river was fixed half way between the Makum fort and Kujugaon village, where in March 1882 Roberto Paganini established his quarters. From here he was to build a bridge across the Dehing, lay the tracks in the North and to the coalfields in the South beyond the river.

Since rivers were the major means of transportation in the area, the company planned to purchase its own riverine craft. Indeed, on his way to India, the senior Paganini had first visited Karachi to inspect river craft available there for immediate disposal and which might prove suitable for the construction work in Assam. These river craft, procured by the Scinde, Punjab and Delhi Railway for the rail-cum-river

project along the Indus, lay at Kotri, 100 miles up the Indus, surplus and abandoned. Arrangements were made for the long and hazardous journey of eight barges and five steamers to Calcutta. It took four months to reach Dibrugarh, with one steamer and two barges being lost en route.

The line first proposed in 1879 was to serve the tea gardens and therefore was to run along the Sadiya Road, which proceeds eastwards from Dibrugarh, swings in a North-Easterly direction after Tinsukia and runs due North from Doom Dooma. This was to be the "main line." But the march of events proved that the line to the coalfield (referred to in all earlier accounts as the "branch line") and with traffic already offering, was of greater importance than the Doom Dooma section through uninhabited country with no existing traffic. In fact, the urgency for coal prompted a change in construction priorities and in the rail alignment itself. Originally, the proposed location of the junction was to have been Doom Dooma. A timely decision was taken in 1881 to locate the junction nearer Dibrugarh, necessitating a change in direction of this line at Bogapani from Northward to Westward with the junction near Tinsukia. This location, 40 miles from the steamer ghat at Didugarh, was named Makum junction. For coal and oil traffic this not only reduced the distance to Dibrugarh but also saved reversal of trains. The line towards the coalfield has since come to be known as the "main line."

A site on the South bank of the Dehing River was chosen for the settlement for employees working on the coalfields and on the bridge and tracks. The site was named "Margherita," in honour of the Queen of Italy. Whether the Company's Directors so named the site as a graceful tribute to Chevalier Roberto Paganini – or it was Paganini himself, out of patriotism – is not clear. In either event, the result is the same – a lasting memorial to the Italian Engineer, who, having lived in the vicinity from the outset, founded the settlement and constructed the first bridge over the Dehing and the railway on both sides of the river.

The coal line was opened for goods traffic from Dibrugarh up to the Dinjan river (15 miles) on August 15th 1882; to Chabua on December 23rd 1882 and for passenger traffic to Makum junction on July 16th 1883. On Christmas Day, 1883 the lines converging from the Brahmaputra and the Dehing, having by then approached close to each other, the last rail was linked at Borbhil, in the heart of the forest, completing 61.5 miles of through rail communication.

The official opening of this line and the coalfield took place on February 18th 1884. A special train left Dibrugarh at 7 a.m. with some 400 people of all communities, including ladies, a detachment of the Lakhimpur Volunteers and the band of the 42nd Assam Light Infantry. The train left Makum Jn., at 10.30 after a short halt.

The Dehing bridge was reached at 12.30 pm. This was then of timber construction and not yet ready for passage of locomotives. The carriages were hand-shunted one by one across the bridge to the Margherita side of the river. Here the Volunteers paraded while the train was re-assembled. Another locomotive then continued the journey to the collieries at Ledo, where some of the party went into the incline to witness mining operations.

The train started back at 2.50 pm, and reached Margherita at 3.15 where the band played and the Volunteers paraded. The Chief Commissioner took the salute and gave an inaugural speech at lunch which was taken at 4.30 pm. The train finally reached Dibrugarh a little after mid-night.

In March 1900, Viceroy Lord Curzon visited the region and wrote: "As soon as my present tour of Assam was arranged, I wished from the first to include in it a visit to Margherita and the coal mines and oil wells and other industries which have been developed by the Company.....I find here a most interesting and enterprising corner of Her Majesty's Dominions."

The company-constructed line from Makum Jn. along the Sadiya road to Talap, including the Doom Dooma bridge, was still under construction. The first part (10 miles), as far as Doom Dooma, was opened to traffic on May 2nd 1884; and the next section on February 5th 1885. The 5.5 mile Margherita-Ledo Colliery line was opened on 17th February 1884. The 8.5 mile extension of the Company's railway from Talap to the Brahmaputra at Saikoaghat (across the river from Sadiya) was built in 1910 at the Government's request.

In all, the DSR had a route mileage of 91.25 miles. Of this, 32.38 miles were laid on 60 lb rails, the rest with 50 lb and 41.5 lb flat foot steel rails. Sleepers were of local *sal* and *ajhar*. The capital outlay was ₹ 1.23 crores. Government had given the land free and promised an annual subsidy for 20 years. This subsidy, amounting to ₹ 5,112, was terminated in 1903 in respect of the main line and in 1920 in respect of the Ledo Colliery line. The ARTC was free to fix fares and freight charges but Government could intervene after 5 years if profits (all of which accrued to the Company) exceeded 12% of the paid up capital. In 1922, the gross earnings of the line were ₹ 14 lakhs and the Operating Ratio under 65%.

The DSR was separated from the railway system of India for many years and by many hundreds of miles. It was only in 1903 that the Assam Bengal Railway (begun in 1891) was extended to provide a junction at Tinsukia with the Company's railway; access to the sea at Chittagong came in 1904. The East Bengal line to Amingaon was not completed until 1910. The line from Gauhati via Chapramukh reached the Assam Bengal Railway line at Lumding in 1920.

For maintenance of the locomotives and other rolling stock, workshops were built at Dibrugarh. The old Dibrugarh workshops were cramped for space and located inconveniently at a site where the river was eroding its banks. In 1911, thirty years after the first workshop was built, a new one was constructed further inland and included the Erecting Shop, Boiler Shop and Smithy, Foundry, Machine shop and the C & W Shop. New General Stores buildings were completed in 1919. The site of the original workshop is now under water.

Apart from the workshops, at most locations approaching the coalfields, 2-ft gauge tracks were laid for tubs to convey the coal from the tunnels of the mines to railway sidings, which had been constructed to reach out to the mines.

Having eased itself from other pioneering activity in the area (rail, coal, petroleum and timber) the Company finally retained interest only in tea – the original *raison d'etre* for coming to Assam.

In 1942, the Japanese advanced into Burma. It was decided that for operational purposes all railways in Assam should come under one management. Accordingly, in April 1942, the Government of India assumed responsibility for the Company's railway, paying a fixed rental. The Company staff remained in position locally.

After three years during which time increased facilities, including many new sidings and buildings, plant and machinery, locomotives and rolling stock, were furnished at Government expense to transport heavy military traffic, it was only to be expected that the Government of India decided to incorporate this busy little railway into its main line system. The Government and the Company having agreed to a suitable figure, the former then purchased the Dibru-Sadiya Railway and Colliery Lines in April 1945.

Thereafter, in 1946, sixty-five years after it was opened, the Assam Railway and Trading Company closed its Dibrugarh office.

Photos: Archives of the Rail Enthusiasts' Society

The train blows

Mickey Mouse popped out of my mind on to a drawing pad 20 years ago on a train ride from Manhattan to Hollywood at a time when business fortunes of my brother Roy and myself were at lowest ebb and disaster seemed right around the corner. Walt Disney. Stranger things have been known to happen on trains and out of it. Film makers seem to be one of the first to cotton on to it. Be it two young children running with a joyous wonder to catch sight of a train in Pather Panchali, or a die hard fan, the mother of a teenage girl in Nayak, caringly putting an inebriated matinee idol in his bunk on board Rajdhani Express and in a final act of hero worship, not forgetting to gently push in his legs still shod in combination shoes. More instances can pour in. But what about the backdrop of these incidents in celluloid - the train itself. To bring those men who run the train, the various kinds of tracks and the different parts of the train which are essential for passenger safety into focus, The Rail Enthusiast has hit the stands. The name speaks for itself. In its recent issue it dwells on the runaway success of the Delhi Metro and the lack of it of Delhi Ring Railway. Yet Warren Miller, an Australian railway enthusiast, takes a ride on the ring railway and pens a captivating account of it. Shifting its sights far away from home, the recent issue of The Rail Enthusiast zeroes in on Moscow Metro we come to know of the grandeur of one of the largest metro networks worldwide. From a photo-feature on Adarki, a geared locomotives popular among the logging companies in North America. Utility of bridges, viaducts and more are on offer to all those who love to hear the train blow.

The Statesman Mon, 28 August 2017 epaper.thestatesman.com//c/22926088

RAIL ENTHUSIASTS' SOCIETY

(Registration No: S-E/792/Distt. South East/2015)

The Rail Enthusiasts' Society, incorporated on the 28th of December 2015, aims to provide a platform for rail enthusiasts to disseminate knowledge, air their views and exchange ideas regarding the railways in India or overseas. Its first activity was to publish a magazine whose 14th issue you have in your hands. Owing to the Covid-19 pandemic, this is our first issue that is an e-Copy in PDF format and is free of cost. Other than issue of the magazine, we have organised enthusiast's trips/hikes, visits to construction sites, debates and quizzes amongst school children on the need for preserving rail heritage.

On the next page, you will find details of how you can become a member of the society. There is a membership form on page 72. If interested in membership, please send this form, duly filled, to the Secretary. In case you are interested only in the magazine, the subscription rates are as follows:

Single copy	**₹ 150.00**
Annual subscription (4 copies)	**₹ 540.00**
5-year subscription (20 copies)	**₹ 2400.00**

Note:

1. For overseas subscribers wanting a hard copy of the magazine, the rate charged will be as follows (to cover packaging and postage):

a. Single copy	**USD 9.00**
b. Annual subscription	**USD 32.00**
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2. For countries that do not deal in the US Dollar, please email a request to the Secretary of the society and we shall give you the rate in other currencies like the Euro or GBP.
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4. Libraries will be given an additional 5% discount over rates for subscription to the magazine.
5. Bonafide students' rates for membership, valid as long as they remain students, will be 50% of the normal rates. Such rates would not apply to Life membership.
6. For subscription to the magazine, please mail the completed form below to: The Editor, Rail Enthusiasts' Society, C-494, Defence Colony, New Delhi-110024 (India). A scanned copy can be sent by e-mail to **railenthusiast2015@gmail.com**

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RAIL ENTHUSIASTS' SOCIETY

(Registration No: S-E/792/Distt. South East/2015)

Membership of the Society

Membership of the society is open to individuals as well as Corporates. While individuals have the choice of three types of membership, for Corporates we have only membership for life.

Corporate Membership

This entails a one-time payment of ₹ 200,000/-. Membership gives the following to the Corporate:

- **Five copies of all magazines or supplements to the magazine that are published**
- **Concessional rates for any item such as artefacts, books or memorabilia on sale**
- **Invitation to 5 members of the organisation nominated by the corporation for any event or activity the society may organise**
- **Other benefits will be added in due course as and when more activities are added**

Rate for Corporate membership for foreign organisations will be US Dollars 4,000/-.

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- **Ordinary member : This gives you membership for five years. Subscription: ₹ 2000/-**
- **Life membership : This gives you membership for life with a one-time payment: ₹ 10,000/-**

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- **Associate member : Subscription: USD 10/-**
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Please see the note on the previous page for overseas members wanting hard copies of the magazine.

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Payment is acceptable by cheque, demand draft or cash. You can also do a direct bank transfer. All cheques and demand drafts should be payable to "Rail Enthusiasts' Society". For direct transfer to our bank, details are as follows:

- **Name of bank : State Bank of India**
- **Branch : Personal Banking Branch, New Delhi**
- **Address of the bank : E-4, Defence Colony, New Delhi-110024 (India)**
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For enrolling as a corporate or individual member, all you need to do is send an email or a letter to the Secretary of the society. The address is: **C-494, Defence Colony, New Delhi-110024 (India)**, while the email id is **railenthusiast2015@gmail.com.** You can also reach the Secretary at +91-8130111589.

Visit our website : **www.railenthusiastindia.org.in**

RAIL ENTHUSIASTS' SOCIETY

(Registration No: S-E/792/Distt. South East/2015)

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TO BE FILLED BY APPLICANT

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Salogra Station

The sixth of twelve rail stations on the Kalka-Shimla rail route, Salogra is a quaint attractive location to forget the hustle and bustle of the urban madness in which we all live. A rail enthusiast will be further rewarded by seeing, *inter alia*, the 1905-commissioned station building; a heritage British parcel weighing machine of 1914; a vintage ten-lever frame signal lever hut. The most amazing heritage items are the rails as old as 1892 and 1903, which are still in working condition in the station yard! These could well be the oldest functioning railway tracks in the world!

Inputs and photographs: Courtesy Sanjoy Mookerjee