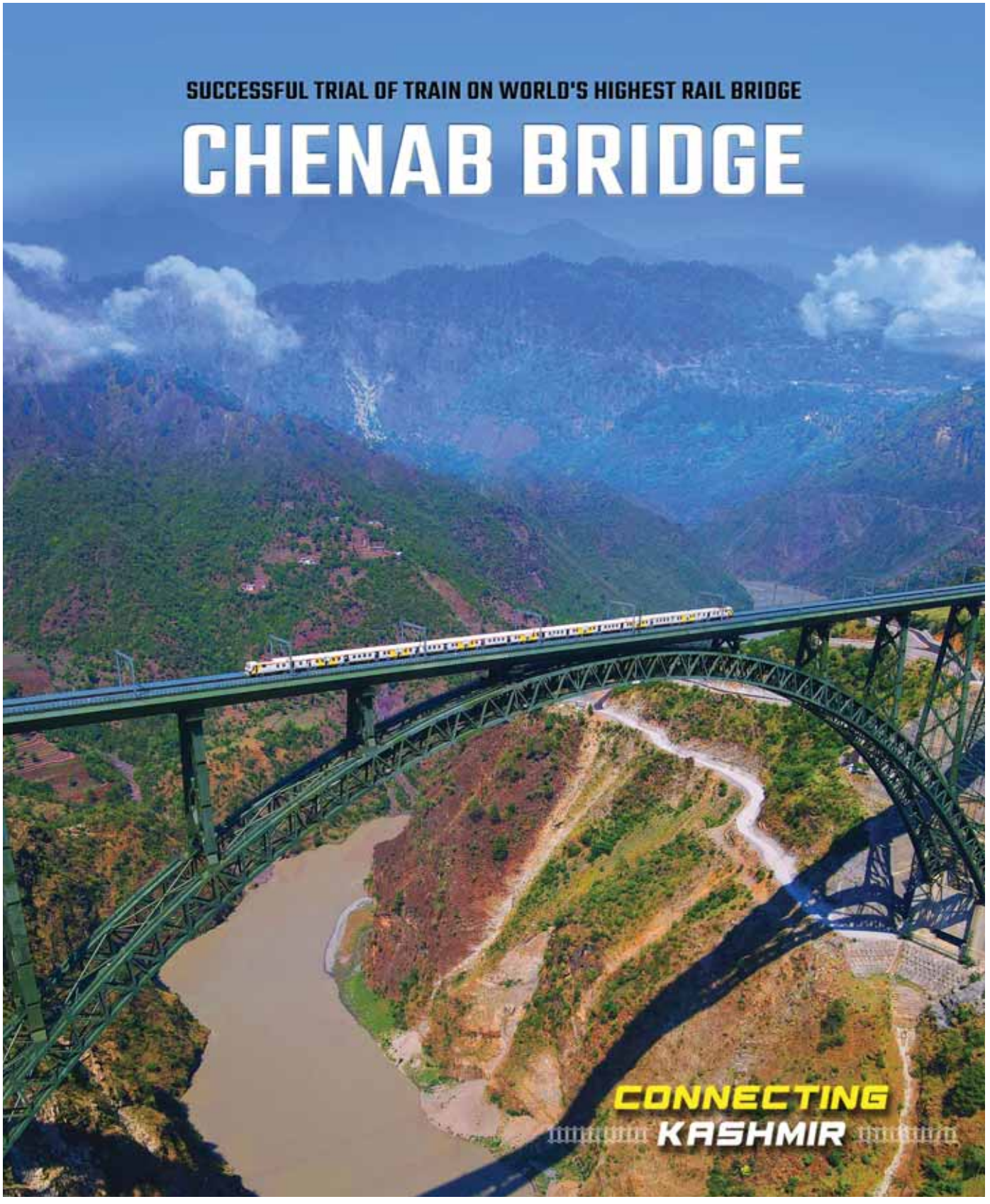
INDIAN RAILWAYS

JULY 2024

PRICE ₹ 20





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10 gm - 24 Ct Gold Coin



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- → Accident Insurance Scheme
- → Distress Relief Fund
- → Education Award

❖ **Personal Accident Coverage Increased to Rs. 10 Lakhs :** With effect from 04-09-2023, in the event of loss of life, due to an accident, member's family will be paid Rs.10 Lakhs.

❖ In the event of loss of organs, arising out of an accident, then compensation ranging from Rs.10 Thousand to Rs.10 Lakhs will be paid, depending upon the loss of organs and or earning capacity, as per the Rules of the Insurance Company.

❖ All Welfare Schemes are subject to the Rules and Regulations applicable for each such Scheme/s, Bye Laws of the Society, as per MSCS Act 2002 and its rules.

❖ Suicide and Accident due to Drunken Driving, etc., are not covered under any of the Welfare Schemes.

Under the 4 Welfare Schemes, as on 29.03.2024

Rs. 161.67 Crores

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- Loan amount transfered to Bank Account details with RBI UTR No.

All our Branches are Computerised, Loan Applications received upto 12.00 noon at the branches will be processed and the payment will be arranged on the following day itself, subject to eligibility. All loans, Schemes etc., are as per the rules, regulations, Byelaws and MSCS Act 2002.

For the benefit of our Members, the Society has made arrangements for using *"WhatsApp"*. Add the following Numbers, 9344877273, 7824820162, in your Contact List, so that, *"WhatsApp Groups"* of our Members, can be created and information from the Society, is directly passed on to you. Facility also exists for the Members, to directly contact the Headquarters of the Society, through *"Zoom App"*. Hence, it is suggested that, the *"Zoom App"* may be downloaded, in your Mobile Phone, so that the Society can send a Link, for direct Video Call, as and when required.

For enquiry Contact

08148387240, 08148387241, 08148387242, 07418148957

N. MANIVANNAN
Chief Executive

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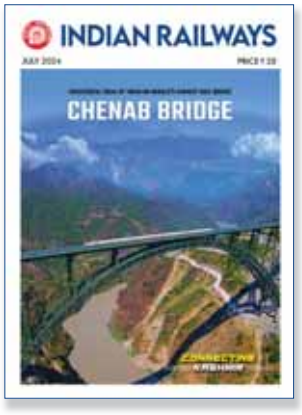
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Editorial



Get ready for an exciting and unforgettable journey....

Now the day is not far when the movement of passenger trains will officially start on the world's highest railway bridge – 'Chenab Bridge'. Surely this journey will remain exciting and unforgettable for the people forever. This bridge is located on the Katra-Banihal section of the Udhampur-Srinagar-Baramulla Rail Link (USBRL) project. Chenab Bridge in itself is no less than a miracle in the field of engineering. Recently, a trial run of the train operation was conducted on the Chenab Bridge, designed keeping in mind natural disasters and terrorist incidents. Soon, after necessary action, regular movement of passenger trains will start. Plans are being made to start Vande Bharat Express and Vande Bharat Metro service between Jammu-Srinagar on this bridge.

USBRL project was started with the objective of providing an alternative, reliable, and all-weather rail transport system to Jammu and Kashmir. The construction work of the bridge and tunnel here was not easy due to earthquakes, strong winds and adverse geographical conditions, but our engineers have taken this project to the final stage through their skill, confidence and technology. 2487 specially designed steel sleepers have been laid on the 1315 meter long track of Chenab Bridge. Trains can operate at a speed of 100 km per hour on this track. With a length of 1315 meters and a central arch span of 467 meters, this iconic bridge over the Chenab River is built at a height of 359 meters (higher than the Qutub Minar – 72 meters height and the Eiffel Tower--324 meters height) above sea level.

For the first time since independence, USBRL will provide all-weather rail connectivity to Kashmir Valley. Given the importance of the 272 km long USBRL project in providing seamless and hassle-free connectivity to Kashmir, it was declared a 'National Project' in the year 2002.

Out of the total 272 km long USBRL project, 161 km railway track has been commissioned in 3 phases, in which the first phase of 118 km Baramulla-Qazigund was commissioned in 2009, and the second phase of 18 km Qazigund-Banihal was commissioned in 2013 which is the longest operational transportation tunnel. In India, the third phase of 11.2 km and 25 km Udhampur-Katra started in 2014.

Recently the new Union Cabinet was formed. In this, again the responsibility of the post of Minister of Railways has been given to Shri Ashwini Vaishnaw. During his first tenure, the efforts he made to make Indian Railways world-class with his foresight and wisdom were praised all around. Certainly, Indian Railways will prove its new dimensions in the second term. On 11th June, 2024, Shri V. Somanna and Shri Ravneet Singh took charge as Ministers of State for Railways along with Minister of Railways Shri Ashwini Vaishnaw. On behalf of the team of Bhartiya Rail and Indian Railways Magazines, heartiest greetings to the Minister of Railways and both the Ministers of State for Railways.

Please let us know how you like our issue.

Hon'ble PM Dedicated and Inaugurated Various Railway Projects

The hon'ble Prime Minister, Shri Narendra Modi flagged off various new trains including 10 Vande Bharat trains and dedicated and inaugurated various railway projects in Bihar, Jharkhand, West Bengal, Odisha, Uttar Pradesh, Assam, Gujarat and Telangana States in the month of March, 2024.



Hon'ble Prime Minister flagged off 10 Vande Bharat trains on 12th March, 2024 in Ahmedabad. Hon'ble Governor of Gujarat, Shri Acharya Devvrat, Chief Minister of Gujarat, Shri Bhupendra Patel and Minister of Railways, Shri Ashwini Vaishnaw were also present on the occasion.

The hon'ble Prime Minister, Shri Narendra Modi dedicated to the nation and laid the foundation stone of various developmental projects at Dedicated Freight Corridor's Operation Control Centre in Ahmedabad, Gujarat on 12th March, 2024. He also flagged off 10 new Vande Bharat trains between Ahmedabad-Mumbai Central, Secunderabad-Visakhapatnam, Mysuru-Dr. MGR Central (Chennai), Patna-Lucknow, New Jalpaiguri-Patna, Puri-Visakhapatnam, Lucknow-Dehradun, Kalaburagi–Sir M Visvesvaraya Terminal Bengaluru, Ranchi-Varanasi, Khajuraho-Delhi (Nizamuddin).

The hon'ble Prime Minister also flagged off the extension of four Vande Bharat trains. Ahmedabad-Jamnagar Vande Bharat is being extended till Dwarka, Ajmer- Delhi Sarai Rohilla Vande Bharat is being extended till Chandigarh, Gorakhpur-Lucknow Vande Bharat is being extended till Prayagraj and Thiruvananthapuram-Kasargod Vande Bharat is being extended till Mangaluru, and two new passenger trains between Asansol and Hatia and Tirupati and Kollam stations. He flagged off freight trains on Dedicated Freight Corridor from various locations-New Khurja Jn., Sahnewal, New Rewari, New Kishangarh, New Gholvad, and New Makarpura.

The hon'ble Prime Minister laid the foundation stone of Railway Workshops, Loco Sheds, Pit lines/ Coaching Depots, Phaltan–Baramati New line, Electric Traction System upgradation work and dedicate to the Nation two new sections of Dedicated Freight Corridor between New Khurja to Sahnewal (401 Rkm) section of Eastern DFC and New Makarpura to New Gholvad section (244 Rkm) of Western DFC, Western DFC's Operation Control Center (OCC), Ahmedabad.

The hon'ble Prime Minister dedicated to the Nation 50 Pradhan Mantri Bhartiya Janaushadhi Kendras at Railway Stations, 51 Gati Shakti Multi-Modal



Cargo Terminals, 35 Rail Coach Restaurants. He also dedicated to the Nation 1045 Rkm of Automatic Signaling in 80 sections. This upgrade will enhance safety and efficiency of train operations. The hon'ble Prime Minister also dedicated to the Nation Digital Controlling of Railway stations at 2,646 stations. This will improve operational efficiency and safety of the trains.

The hon'ble Prime Minister dedicated more than 1,500 One Station One Product Stalls to the nation spread across the country. These stalls will promote local products and generate income for local artisans and businesses. He also dedicated to the nation Solar Powered stations/buildings at 975 locations. This initiative will contribute to India's renewable energy goals and reduce the railways carbon footprint.

Various other projects like dedication of newly electrified sections, doubling/multi-tracking of tracks, developments of railways Goods sheds, Workshops, Loco Sheds, Pit lines/Coaching Depots, among others, was also done by the hon'ble Prime Minister. These projects are a testament to the Government's dedication to building a modern and robust railway network. This investment will not only improve connectivity but also boost economic growth and create new employment opportunities.

JHARKHAND

Hon'ble PM on 1st March, 2024 dedicated and laid the foundation stone for several rail projects worth more than ₹17,600 crore in Jharkhand. The projects include 3rd and 4th Lines connecting Sone Nagar-Andal, Tori-Shivpur first and second and Biratoli-Shivpur third railway line (part of Tori-Shivpur Project), Mohanpur-Hansdiha new rail line, Dhanbad-Chandrapura rail line, among others. The hon'ble Prime Minister also flagged off three trains i.e. Deoghar-Dibrugarh train service, MEMU Train Service between Tatanagar and Badampahar (Daily) and long-haul freight train from Shivpur station.

BIHAR

The hon'ble PM on 2nd March, 2024, dedicated to the nation three railway projects in Bihar including the project for doubling of Patliputra to Pahleza railway line, 26 km long new rail line between Bandhua–Paimar and a MEMU Shed in Gaya. He also laid the foundation stone of the Ara Bye Pass rail line. The hon'ble PM also inaugurated and laid the foundation stone of several railway projects worth about ₹3,917 crore These include the project for Raghopur–Forbesganj Gauge Conversion, doubling of Mukuria-Katihar-Kumedpur rail line, project for Barauni-Bachhwara 3rd and 4th line and Electrification of Katihar-Jogbani rail section among others. The hon'ble PM flagged off four trains also including Danapur-Jogbani Express, Jogbani-Saharsa Express, Sonpur-Vaishali Express and Jogbani-Siliguri Express.

The hon'ble Prime Minister on 6th March, 2024 in Bettiah, Bihar. He dedicated to the nation, doubling of 62 km rail line from Bapudham Motihari-Piprahan and Narkatiaganj-Gaunaha Gauge Conversion among others. He laid the foundation stone for doubling and electrification of 96 km long Gorakhpur Cantt–Valmiki Nagar rail line and redevelopment of Bettiah railway station. The hon'ble PM also flagged off two new train services between Narkatiaganj-Gaunaha and Raxaul -Jogbani.

WEST BENGAL

The hon'ble Prime Minister on 2nd March, 2024 dedicated to the nation four rail projects worth more than ₹940 cr. in West Bengal.

The hon'ble PM on 6th March, 2024 inaugurated and laid the foundation stone for multiple connectivity projects worth ₹15,400 cr. in Kolkata. The development projects catering to the urban mobility sector include Metro Rail and Regional Rapid Transit System (RRTS). He also dedicated to the nation on 9th March, 2024 multiple projects of electrification of rail lines.

The hon'ble Prime Minister dedicated other important railway projects including the project for doubling of railway line in Manigram-Nimtita section

and automatic block signaling in Ambari Falakata-Aluabari including electronic Interlocking in New Jalpaiguri. The hon'ble Prime Minister also flagged off a new passenger train service between Siliguri and Radhikapur.

METRO RAILWAY

Hon'ble Prime Minister inaugurated Howrah Maidan to Esplanade Stretch (4.8 km) of East-West Metro on 6th March, 2024 from the newly constructed Esplanade Metro station of this Corridor. Hon'ble Prime Minister also inaugurated Kavi Subhash–Hemanta Mukhopadhyay Stretch (5.4 km) of Orange Line and extended Taratala-Majerhat Stretch (1.25 km) of Purple Line. With these inaugurations, the traffic scenario of Kolkata and Howrah will be changed radically.

After the inauguration, hon'ble PM flagged off the first Metro services on these three routes. He also travelled in a Metro from Esplanade to Howrah and back. It is to be noted that a total of 11.45 kms has been added with Kolkata Metro network today at a cost of ₹6925 cr. Apart from this, hon'ble Prime Minister also inaugurated several Metro projects of Agra, Puna, Kochi and a part of Delhi-Meerut RRTS Section. He also flagged off the first metro services on these routes.



TELANGANA

The hon'ble Prime Minister on 4th March, 2024 dedicated the newly electrified Ambari-Adilabad-Pimpalkhuti rail line to the nation.

The hon'ble Prime Minister on 5th March, 2024 inaugurated the doubling and electrification of Sanathnagar-Moula Ali rail line along with six new station buildings. The hon'ble PM also flagged off the inaugural MMTS Train Service from Ghatkesar-Lingampalli via Moula Ali-Sanathnagar. This train service extends the popular suburban train service in the Hyderabad-Secunderabad twin city regions to new areas for the first time. It connects the new areas in the eastern part of the city like Cherlapalli and Moula Ali with the Western part of the twin city region.

ODISHA

The hon'ble Prime Minister laid the foundation stone and dedicated various railway projects in Odisha on 5th March, 2024.

He dedicated to the nation 162 km Bansapani-Daitari-Tomka-Jakhapura Rail Line. It will not only enhance the existing traffic facility's capacity but also facilitate efficient transportation of Iron and Manganese ore from Keonjhar District to the nearest ports and steel plants, significantly contributing to regional economic growth. The inauguration of CONCOR Container Depot in Kalinga Nagar was also done with an aim to boost domestic and international trade. The foundation stone was laid for the Electric Loco Periodical Overhauling Workshop at Narla, the Wagon Periodical Overhauling Workshop at Kantabanji and the upgradation and augmentation of maintenance facilities at Baghuapal.

ASSAM

The hon'ble Prime Minister on 9th March, 2024 laid the foundation stone for important railway projects worth more than ₹1300 cr. in Assam including Dhupdhara-Chhaygaon section (part of New Bongaigaon-Guwahati Via Goalpara Doubling Project) and New Bongaigaon-Sorbhog Section (part of New Bongaigaon-Agthori Doubling Project).

UTTAR PRADESH

The hon'ble Prime Minister on 10th March, 2024 inaugurated, dedicated and laid the foundation stone for multiple rail projects worth around ₹8,200 cr., which will strengthen the rail infrastructure in Uttar Pradesh. He dedicated doubling and electrification of multiple key rail sections. He also dedicated to the nation Bhatni-Peokol bypass line which will end the problem of engine reversal at Bhatni and will facilitate seamless trains operation. The hon'ble Prime Minister laid the foundation stone for gauge conversion of Bahraich-Nanpara-Nepalganj road rail section. The hon'ble Prime Minister also inaugurated a new rail line from Ghazipur City and Ghazipur Ghat to Tarighat including a rail bridge over river Ganga. The hon'ble Prime Minister also flagged off MEMU train service between Ghazipur City-Tarighat-Dildar Nagar Junction.■

Our New Minister of Railways and Ministers of State for Railways

On 11th June, 2024, Shri Ashwini Vaishnaw took charge as Minister of Railways and Shri Ravneet Singh and Shri V. Somanna took charge as Ministers of State for Railways at Rail Bhawan.



Shri Ashwini Vaishnaw, Minister of Railways Assumed Office

Shri Ashwini Vaishnaw, Minister of Railways assumed office at Rail Bhawan on 10th June, 2024. Smt. Jaya Varma Sinha, Chairman & CEO, Railway Board, along with senior Railway officials, welcomed him in Rail Bhawan. Housekeeping staff and other officials of Railways also greeted and congratulated the Minister for assumption of office.

Addressing the media, Shri Vaishnaw underlined his unwavering commitment to realise the long-term vision set by hon'ble Prime Minister Shri Narendra Modi. He stated, 'Hon'ble Prime Minister Modi has a special emotional connection with Railways, and he has entrusted me the responsibility to further his transformative vision to ensure that Indian Railways remains an affordable and a convenient mode of transport for the general public.'

Shri Vaishnaw, who first became the Railway Minister on July 8, 2021, has started his second term, bringing anticipation and optimism. During his previous tenure, he initiated and executed numerous transformative projects aligning with the visionary agenda set forth by Prime Minister Shri Narendra Modi. These initiatives encompassed the modernisation and revitalisation of the railway infrastructure, including station transformations, the introduction of new trains, comprehensive station redevelopment programmes, the commissioning of new rail lines, and widespread electrification efforts.

Shri Ashwini Vaishnaw (born in 1970) is a Member of Rajya Sabha from Odisha. He was former IAS officer and served the people of Sundergarh, Balasore, and Cuttack as District Collector. He earned Masters in Technology from IIT Kanpur and MBA from Wharton.

Shri V. Somanna Took Charge as Minister of State for Railways



Shri V. Somanna, Minister of State for Railways and Jal Shakti, assumed office on 11th June, 2024 in Rail Bhawan. Smt. Jaya Varma Sinha, Chairman & CEO, Railway Board, along with senior Railway officials welcomed him on his arrival at Rail Bhawan.

Addressing the media persons, Shri V. Somanna said, 'I am grateful to Hon'ble PM, Shri Narendra Modi for entrusting me with the ministerial responsibilities. In last 10 years, Railways has experienced significant growth under the leadership of hon'ble PM Shri Narendra Modi.'

Shri V. Somanna further said that we will maintain growth and momentum of Railways. 'Delighted to work under the able guidance of the Minister of Railways, Shri Ashwini Vaishnaw and contribute to the development of Railways and Viksit Bharat. Together, we will achieve the dream of a Viksit Bharat and we will work 24/7 for it', he added.

The Lok Sabha MP from Tumkur constituency, Karnataka has earlier held ministerial posts in the state.■

Shri Ravneet Singh Assumed Charge as Minister of State for Railways

Shri Ravneet Singh, Minister of State for Railways assumed office on 11th June, 2024 in Rail Bhawan. He has also been given additional charge as Minister of State in the Ministry of Food Processing Industries. Smt. Jaya Varma Sinha, Chairman & CEO, Railway Board, along with senior Railway officials, welcomed him on his arrival in Rail Bhawan.

Addressing the media persons, Shri Ravneet Singh said, 'Today I am assuming charge as MoS Railways. I am thankful to hon'ble Prime Minister Shri Narendra Modi, and Minister of Railways, Shri Ashwini Vaishnaw. We will work together with Railway officials. I also congratulate citizens of the country. Railway connects common people, it plays a huge role. Railways run continuously 24X7. We shall work as a team to take it forward under the guidance



of hon'ble Prime Minister Shri Narendra Modi and Minister of Railways Shri Ashwini Vaishnaw.■

List of Ministers of Railways and Ministers of State for Railways from 1946 to till date. See page no. 40

Minister of Railways Conducted a Performance Review Meeting at Southern Railway



Minister of Railways, Shri Ashwini Vaishnaw held a review meeting at Southern Railway Headquarters. Shri U. Subba Rao, GM/ICF also attended the meeting.

Shri Ashwini Vaishnaw, Minister of Railways, presided over a review meeting at Southern Railway Headquarters on 13th March, 2024. The meeting was attended by Shri U. Subba Rao, General Manager, Integral Coach Factory, Shri Kaushal Kishore, Additional General Manager, Southern Railway, and all the Principal heads of departments of the zone.

The Minister reviewed and deliberated on matters concerning safety, progress of infrastructural and station redevelopment projects under Amrit Bharat Scheme, speed enhancement works, timetabling of trains, maintenance of railway assets and enhancement of freight loading.

All the Principal heads of departments of the zone participated in the review meeting including the regional head of RVNL.

Shri Ashwini Vaishnaw, Minister of Railways on 14th March, 2024 announced that wheels using a forging process will be manufactured in Tamil Nadu and the construction work has already started and production will commence in 16-18 months. This manufacturing unit in Gummidipoondi, Tamill Nadu will have a huge production capacity of 2.5 lakhs per year. Of which, 80,000 will be consumed in India and remaining 1.7 lakhs will be exported. Minister of Railways pointed out that we have been importers of forged wheels for the last 60-70 years and now with this plant being set up, India will become an exporter of forged wheels.

The Minister of Railways also announced that Integral Coach Factory (ICF), Chennai will now develop standard gauge Vande Bharat as it is standard gauge which is used in Railway across the world. Presently, Broad gauge Vande Bharat is being manufactured in ICF for use in the Indian Railways network.■

Shri Ravneet Singh, MoSR Conducted Review Meeting with Board Members

Shri Ravneet Singh, Minister of State for Railways conducted a high level review meeting with Board Members on 11th June, 2024.

During the meeting, Board Members presented a brief overview of Railways and apprised the Minister about various ongoing activities across Indian Railways. Shri Ravneet Singh urged the officials to work collectively as a team to realize the vision of Hon'ble Prime Minister, Shri Narendra Modi and transform Indian Railways into one of the best Railways in the world. He also emphasized that Railways is a convenient mode of transport for the common people. Indian Railways should make all efforts to cater to all classes especially poor.■



Shri Ravneet Singh, Minister of State for Railways conducted a high level review meeting with Smt. Jaya Varma Sinha, Chairman & CEO and Board Members

Hon'ble Governor of Gujarat Visited BLW

On 3rd April, 2024, hon'ble Governor of Gujarat, Shri Acharya Devvrat visited Banaras Locomotive Works. Shri Acharya Devvrat obtained detailed information about the production activities of railway engines, manufacturing facilities and ongoing projects in BLW as well as the production process and other technical subjects. General Manager, Shri Basudev Panda was present on this occasion. Shri Acharya Devvrat was very happy to see the women workers working dedicatedly in the harness section of BLW Workshop.



RDSO Honoured with 'Raktdaan Seva Sammaan' by Hon'ble Governor of UP, Smt. Anandiben Patel



RDSO Hospital has been honored with 'Raktdaan Seva Sammaan' by Smt. Anandiben Patel, hon'ble Governor, Uttar Pradesh for its excellent work and exemplary contribution in the field of voluntary blood donation. In a special programme organised on the occasion of 'World Blood Donor Day' on 14th June, 2024 at KGMU, Lucknow, Dr. Kamal Kishore, Principal Chief Medical Officer and Dr. Meraj Ahmed, Sr. DMO jointly received this award on behalf of RDSO.■

Indian Railways Enters its Name into LIMCA BOOK OF RECORDS

Indian Railways has entered its name into prestigious LIMCA BOOK OF RECORDS for most people at a public service event at multiple venues.

Ministry of Railways organized an event on 26th February, 2024 which was attended by 40,19,516 people at 2,140 venues.

The event was organized for the inauguration of road over/road under railway bridges and for laying the foundation stones of railway stations by hon'ble Prime Minister Shri Narendra Modi.

The mammoth effort and mobilization of Indian Railways has been recognized and the same has entered into prestigious LIMCA BOOK OF WORLD RECORDS.■



INTERNATIONAL YOGA DAY

Yoga for Self & Society

- Improve strength, balance and flexibility
- Keep cardiovascular problems at bay
- Reduce stress & anxiety



Shri Ashwini Vaishnaw, Minister of Railways participated in the yoga session on the occasion of International Yoga Day at Lodhi Garden, New Delhi.



Shri V. Somanna, Minister of State for Railways Celebrated the 10th International Yoga Day with fellow enthusiasts for a happier and healthier humanity.



The 10th International Yoga Day was organized On 21st June, 2024 by Northern Railway at Karnail Singh Stadium, New Delhi. Smt. Jaya Varma Sinha, Chairman & Chief Executive Officer, Shri Anil Kumar Khandelwal, Member Infrastructure, Shri Satish Kumar Member Traction and Rolling Stock. Shri Shobhan Chaudhuri, General Manager, Northern Railway, Shri Sukhwinder Singh, DRM, Delhi and other senior officers and staff of Railway Board and Northern Railway were present on this occasion and performed yoga asanas.



Shri R. N Singh, General Manager, Southern Railway inaugurated the Yoga Session at Railway Officers Club at Nungambakkam, Chennai. Shri Kaushal Kishore, AGM and all the Principal Heads of Departments, of Southern Railway, all the six divisions of Southern Railway and the Workshops of Southern Railway also observed the International Yoga Day.

South Central Railway observed the 10th International Day of Yoga at Indoor Stadium, Railway Sports Complex, Secunderabad on 21st June, 2024. Shri Arun Kumar Jain, General Manager, SCR was the Chief Guest on the occasion.





IRISET celebrated the 10th International Day of Yoga at its campus in Secunderabad. Shri C K Prasad, Dean, senior officers, faculty, staff and trainees participated in the Yoga demonstration.



The nternational Yoga Day was organized on 21st June, 2024 at Rail Coach Factory, Kapurthala.

Shri Manjul Mathur, GM/RCF, Shri Arun Kumar Jain, PCME, other senior officers and members of RCF Women Welfare Organisation were also present on this occasion.



Yoga Day was celebrated on 21st June with great enthusiasm at Banaras Locomotive Works.

On this occasion, General Manager Shri Abhay Bakre said in his address that yoga is a very important part of our life which helps in our mental and physical development. Yoga increases the efficiency of our officers and employees.



The International Yoga Day was celebrated at Rail Wheel Factory. Shri R Rajagopal, General Manager, Smt. Suvarna Deshpande Dash, Principal Chief Personnel Officer, Principal Heads of various departments, senior officials, members of Staff Council and various associations, staff and children participated in the Yoga and Pranayama session.

Chairman & Chief Executive Officer Visited Darjeeling Himalayan Railway



Smt. Jaya Varma Sinha, Chairman & Chief Executive Officer visited Darjeeling Himalayan Railway (DHR), a UNESCO World Heritage Site of Northeast Frontier Railway. Shri Chetan Kumar Shrivastava, General Manager of NFR, along with senior officers accompanied her during the inspection on 4th April, 2024.

She inspected the 109 years old Tindharia Workshop and emphasized for preservation of this Heritage site. Tindharia Workshop was established in the year 1915 and is the only workshop of Indian Railways where maintenance of Steam Engine and Wooden Body Coaches of Narrow Gauge are done. She also inspected the 100-year-old Steam Engine Loco 802-B which is still in operation at DHR. She also inspected various 'Z' reverses and loops on her way to Darjeeling. Later, she visited the Elysia Place, the present Headquarters of DHR and the then headquarters of the 'Assam Rail Link Project'. She visited the mini museum and DHR office there. The Chairman & CEO also inspected Kurseong station, an important stop on the Darjeeling Himalayan Railway route, which serves as an important operational and administrative hub for the DHR. She then inspected Ghum Museum and Station, which is the highest railway station in India. Later, she visited Darjeeling station and also inspected the newly refurbished heritage turntable.■

Chairman & Chief Executive Officer Inspected Sivok-Rangpo Rail Project

Smt. Jaya Varma Sinha, Chairman & Chief Executive Officer carried out an inspection of the on-going Sivok–Rangpo Rail Project (SRRP) on 5th April, 2024. Shri Chetan Kumar Shrivastava, General Manager of N. F. Railway along with other senior Railway and Construction officials accompanied her during the inspection.

The Sivok–Rangpo New Rail Line Project is one of the most prestigious ongoing National Projects. She took stock of the progress of works and inspected the lining works of Tunnel no. T–1 & T–8 of this project. Chairman & CEO also inspected Tunnel no. T–7 of the project. Notably, the first underground Railway Station within the Indian Railways network i.e. Teesta Bazar Station comes under this tunnel, marking a pioneering step in the advancement of Railway infrastructure. She also inspected Testa Bridge and Sivok Station construction work. She held discussion with the officials of IRCON on all the aspects of the Sivok–Rangpo New Rail Project.



The Chairman & CEO emphasised on safety and sustainability in tunnel construction which is crucial for ensuring uninterrupted connectivity. On completion of this project, the state of Sikkim will be connected via Railways. The Project includes construction of 14 tunnels (total 38.53 km), 5 railway stations and 13 major bridges.■

BLW was Inspected by
Member, Traction & Rolling Stock

On 23rd March, 2024, Member Traction & Rolling Stock, Shri Satish Kumar inspected the Banaras Locomotive Works. During the inspection, General Manager of BLW, Shri Basudev Panda and all the department heads and officers were present.

After the workshop visit, Member Traction & Rolling Stock held a progress review meeting with BLW General Manager, Shri Basudev Panda and all the major department heads and senior officers, in which important technical aspects related to railway engine manufacturing were discussed. Shri Kumar expressed happiness over BLW moving towards the highest goal of its loco production.



Member, Traction & Rolling Stock
Visited Chittaranjan Locomotive Works



Shri Satish Kumar, Member, Traction & Rolling Stock visited Chittaranjan Locomotive Works (CLW) on 26th and 27th April, 2024. Shri Kumar visited the Deshbandhu Heritage Loco Park and saw the rich preserved heritage history of locomotives showcased within the heritage precinct and the captivating exhibits of the Amrit Digital gallery. During the visit he was accompanied by Shri Hitendra Malhotra, General Manager and other senior officers. Shri Kumar visited various shops inside the workshop covering Shell, Bogie, Traction Motors and Loco Assembly Shops.

Member, Infrastructure
Inspected Bengaluru Division

Shri Anil Kumar Khandelwal Member, Infrastructure conducted Rear Window Inspection of Somanayakkanpatti-Bengaluru Section of Bengaluru Division on 20th April, 2024. He also inspected the ongoing redevelopment works of Whitefield, Bengaluru Cantonment and Yesvantpur Railway stations.



Surat Station was Inspected by Member, Infrastructure



Shri Anil Kumar Khandelwal, Member, Infrastructure inspected Surat Railway station on 27th March, 2024. Shri Khandelwal inspected the amenities and station upkeep of all the platforms. Thereafter, Member, Infrastructure reviewed the progress of various ongoing infra projects in Surat including the station redevelopment work of Surat station.■

Member, Infrastructure Inspected Projects of NFR

Shri Anil Kumar Khandelwal, Member, Infrastructure inspected some important on-going railway projects of N. F. Railway from 13th to 15th May 2024. Projects inspected included Bhairabi–Sairang New Line Project, Jiribam -Imphal New Line Project and Agartala–Akhaura International rail connectivity Project. On 13th May, 2024 Member, Infrastructure, inspected the construction work of Bhairabi-Sairang New Railway Line Project. He also inspected the construction work of Jiribam-Imphal New Line Project on 14th May, 2024. Shri Khandelwal also inspected the Agartala-Akhaura International Rail Connectivity Project on 15th May, 2024 which will link Bangladesh's Akhaura station through international immigration station at Nischintpur (Tripura).■



Director General, Safety Held Safety Review Meeting with General Manager, SER



Shri Braj Mohan Agrawal, Director General, Safety, held a high level Safety Review Meeting with Shri Anil Kumar Mishra, General Manager, South Eastern Railway at SER Headquarters on 19th April, 2024. Shri Agrawal said that safety is to be given utmost priority in Railways and laid emphasis on zero tolerance in safety related issues. General Manager, SER apprised him about several safety measures adopted by the Zone.

DG, Safety also conducted Window trailing inspection from Shalimar to Kharagpur and monitored the safety aspects over the section. Later, after arrival at Kharagpur he inspected the Crew Lobby and interacted with the Loco Pilots, Assistant Loco Pilots and Trackmen.■

RCF was Inspected by Director General, Safety

On 10th April, 2024 Shri Braj Mohan Agrawal, Director General, Safety, visited Rail Coach Factory, Kapurthala. Shri Agrawal inspected the coach manufacturing processes in the workshop. He examined various types of coaches being made by RCF. He also inspected Vande Metro coaches which are being being built by RCF, first time over Indian Railways. Shri Agrawal also examined the electrical components installed in coaches and their applications and had elaborate discussions on safety aspects with RCF. He held a meeting with Shri S. Srinivas, GM and senior officers on core issues pertaining to safety of coaches, production output, etc.■



Director General, Safety Held High-Level Meeting with GM, Eastern Railway



Shri Braj Mohan Agrawal, Director General, Safety, convened a significant safety meeting on 10th May, 2024 with Shri Milind K. Deouskar, General Manager of Eastern Railway, Shri Sumit Sarkar, Additional General Manager and other senior officers.

The primary agenda of the meeting underscored the non-negotiable stance on safety issues concerning train operations. DG, Safety emphasized the imperative of maintaining safety standards at the highest level and urged for stringent adherence to safety protocols.■

Director General, Human Resources Visited RCF

On 6th April, 2024 Shri Naveen Gulati, Director General, Human Resources visited Rail Coach Factory (RCF), Kapurthala. Shri Gulati inspected the coach manufacturing processes in the workshop. He examined various types of coaches being made by RCF. He also inspected the Vande Metro coaches which are being being built by RCF. Shri Gulati also examined the bogie components in Bogie Shop and their applications in coach bogies. He held a meeting with Shri S. Srinivas, General Manager and senior officers on core issues pertaining to human resources, production output, etc.■



Get ready for an Exciting and Unforgettable Journey....

Every day, Indian Railways is edging closer to connecting Kashmir Valley to the rest of the railway network. Out of the total 272 km USBRL project, 161 km of Railway track has been commissioned in 3 stages with first phase of 118 km Baramulla-Quazigund commissioned in 2009, second phase of 18 km Quazigund-Banihal commissioned in 2013 which has longest operational transportation tunnel of 11.2 km in India. And, third phase of 25 km Udhampur-Katra commissioned in 2014.

Now , final phase of USBRL Project is commissioning and Chenab Bridge lying in Bakkal-Dugga Block section of USBRL project is completed in all respects. World's highest railway bridge, Chenab Bridge is located on the Katra-Banihal stretch of the USBRL, which is the most challenging part of the project due to its complex topography and adverse weather conditions. A large number of tunnels and bridges are part of the alignment of the USBRL Project. The alignment crosses deep gorges of Chenab River near Salal Hydro Power Dam, which necessitates the construction of a long span bridge. For the first time since independence, USBRL will provide all-weather rail connectivity to Kashmir Valley. In view of the importance of the USBRL in providing seamless and hassle-free connectivity to Kashmir, the 272 km-long USBRL project was declared as a 'National Project' in 2002.

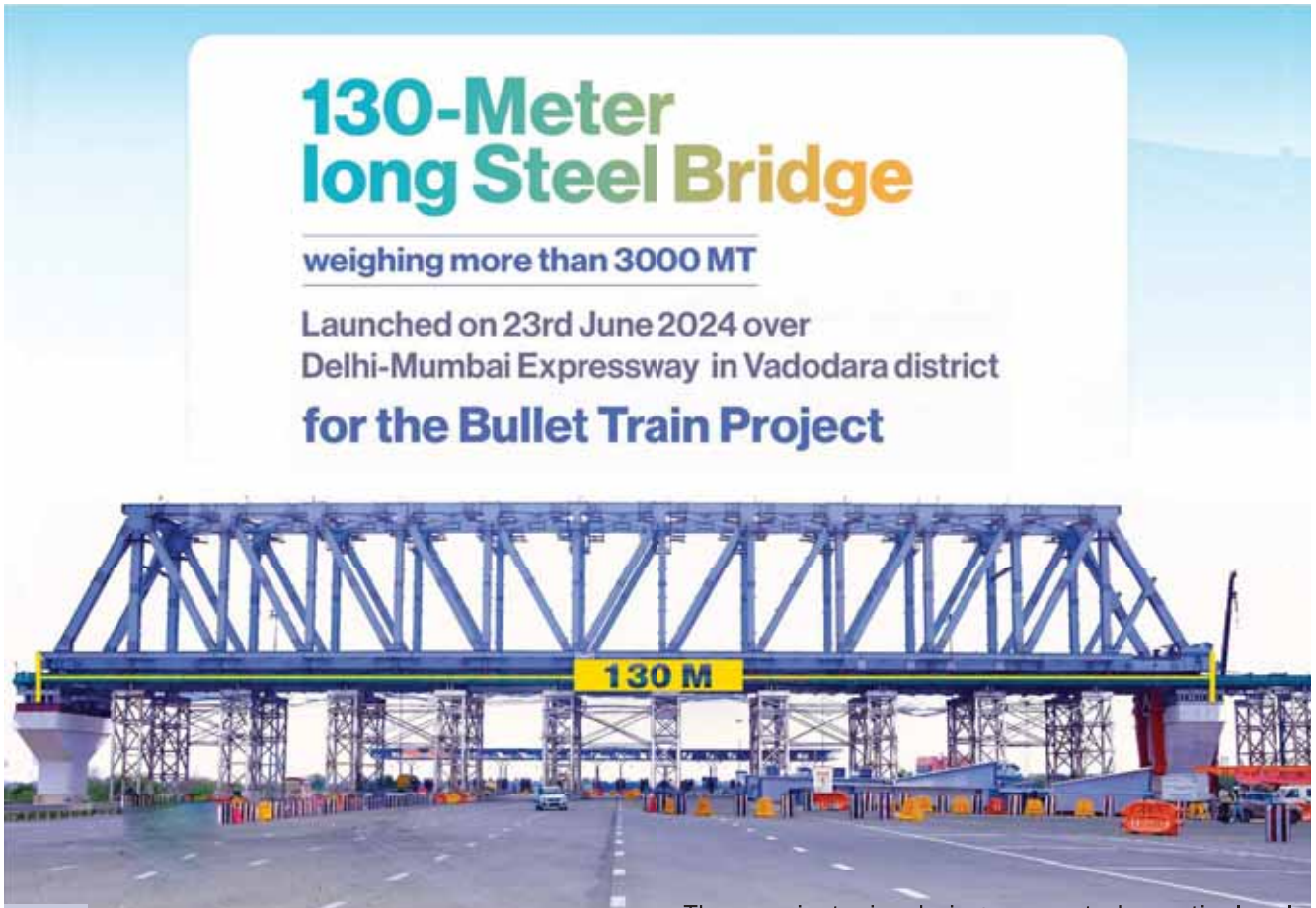
Having a length of 1315 meters with a central arch span of 467 meters, this iconic bridge across the Chenab River is being constructed at a height of 359 meters above sea level (higher than Qutab Minar (72m height) and Eiffel Tower (324m height), making it the highest railway bridge in the world. Work of construction of Chenab Bridge is awarded to Chenab Bridge Project Undertaking (AFCONS-ULTRA-VSL JV) with AFCONS as lead partner.



Unique Features of Bridge are as follows

- Bridge has been designed for a wind speed of 266 kmph.
- 28,660 MT of steel and more than 67,000 cum of concrete is used in Bridge construction.
- Concrete filled arch being used for the first time in India.
- Largest Foundation S 40 of Chenab Bridge is of size 36m x 48 m which is equivalent to 1/3rd of size of a football ground.
- Power operated cars for inspection and maintenance of bridge, being provided for the first time in Indian Railways.
- A continuous health monitoring and warning system is being provided for State of Art Instrumentation.
- Cable crane assembly used for erection of steel members of Bridge has a span of 915 meters, one of the longest in the world.
- One of the Pylon of Cable crane at height of 127 m is higher than Qutab Minar of 72 m.
- Phased Array Ultrasonic Testing machine used for inspection of welds.
- For the first time, NABL (National Accreditation Board for Laboratories) accredited Lab has been set-up at site for testing of welded elements in Indian Railways.
- Bridge is designed to bear earthquake forces of zone V.
- Highest steel pier at 169 m at S-40 foundation is higher than Qutab Minar of 72m and is highest pier constructed over Indian Railways.





National High Speed Rail Corporation Limited has successfully launched another steel bridge of 130 m length on 23rd June 2024. The steel bridge was launched over Delhi-Mumbai National Expressway near Vadodara in Gujarat for Mumbai-Ahmedabad Bullet Train Project.

The bridge launching was completed within 24 hours with intermittent breaks to allow road traffic to pass.

This 3000 MT of steel bridge of 18 m in height and 14.9 m in width has been fabricated at the workshop in Wardha, Maharashtra and was transported on trailers to the site for installation. It requires tremendous efforts to pull such a heavy girder which is likely to be the longest over any national highway in the country.

The bridge fabrication utilized approximately 124,246 Tor-Shear Type High Strength (TTHS) bolts with C5 system painting and metallic spherical bearings, all designed for a 100-year lifespan. The steel bridge was assembled at the site at a height of 15 m from the ground on temporary trestles and was pulled with automatic mechanism of two semi-automatic jacks, each of capacity of 250 ton using mac-alloy bars.

The project is being executed meticulously, maintaining the utmost standards of safety and engineering excellence. Leveraging Japanese expertise, India is increasingly utilizing its own technical and material resources to build infrastructure under the "Make in India" initiative. The steel bridge for the Bullet Train Project is a major example of this effort.

This is the third out of the 28 steel bridges completed for the corridor. The first and second steel bridge was launched across National Highway 53, in Surat and over Vadodara-Ahmedabad main line of Indian Railways, near Nadiad in Gujarat, respectively.

Steel bridges are most suitable to cross Highways, Expressways and Railways lines, unlike pre-stressed concrete bridges, spanning 40 to 45 meters, which are suitable for most sections, including river bridges.

India has the expertise of fabricating steel bridges for heavy haul and semi high-speed trains which run between 100 and 160 kmph. Now, the same expertise in fabrication of steel girders is implemented on Bullet Train corridor too which will have a staggering operational speed of 320 kmph.

100 m long 'Make in India' Steel Bridge Launched Over Indian Railways Tracks for Bullet Train Project



The first steel bridge of 100 m length, launched over Vadodara-Ahmedabad main line of Indian Railways, near Nadiad in Gujarat for Bullet Train Project- Mumbai- Ahmedabad Bullet Train Corridor.

Along with Japanese knowhow, India is increasingly utilizing its indigenous technical and material capabilities to build the infrastructure under 'Make-in-India' vision. And, this steel bridge for Bullet Train Project is one of such examples.

This 1486 MT of steel bridge has been fabricated at the workshop in Bhuj district of Gujarat, which is almost 310 km away from location of bridge launching site and was transported on trailers to the site for installation.

At the site, the steel bridge was assembled at a height of 15.5 mt from the ground on temporary trestles. Thereafter, the launching nose of 63 m in length and approx. 430 MT weight was assembled with the main bridge assembly. The steel bridge was pulled with automatic mechanism of two jacks, each of capacity of 180 MT using High Tension strands. The bridge was pulled in complete traffic and power blocks of Indian Railway lines with meticulous planning and precision.

Technical Points

- Length of the main bridge: 100 m
- Weight of the main bridge: 1486 MT
- Launching nose length: 63 m
- Launching nose weight: 430 MT

Each production batch of steel was tested by Ultrasonic Testing (UT) at the manufacturer's premises. The making of steel bridges undergoes high-tech and precise operations of cutting, drilling, welding and painting as per the design drawings prepared by Japanese engineer. The welders and supervisors were certified by International Welding Experts. The welding process is monitored by Japanese International Welding Experts (IWE) stationed at each workshop. Fabricated structure undergoes Check Assembly process and then follows the sophisticated 5- layered painting of the steel structure.

The painting technique adopted for the steel girders is first-of-its-kind in India. It conforms to C-5 Painting system of Japan Road Association's "HANDBOOK FOR CORROSION PROTECTION OF STEEL ROAD BRIDGES". The jointing of steel members is done using Tor Shear Type High Strength Bolts (TTHSB), which are being used first time for any railway projects in India.

This is the second out of the 28 steel bridges completed for the corridor. The first steel bridge was launched across National Highway 53, Surat in Gujarat. Approximately 70,000 MT of specified steel is used in making of these steel bridges. The length of these steel bridges span varies from 60 m 'simply supported' to 130 + 100 m 'continuous span'.

Steel bridges are most suitable to cross Highways, Expressways and Railways lines, unlike pre-stressed concrete bridges, spanning 40 to 45 meters, which are suitable for most sections, including river bridges. India has the expertise of fabricating steel bridges for heavy haul and semi high-speed trains which run between 100 and 160 kmph. Now, the same expertise in fabrication of steel girders will be implemented on MAHSR corridor too which will have a staggering operational speed of 320 kmph.■

Sabarmati Rolling Stock Depot for Bullet Train Project-An Example of Sustainability and Efficiency



The Mumbai Ahmedabad Bullet Train Project, a symbol of modern infrastructure, is set to usher in a new era of sustainability and efficiency with the development of the Sabarmati Rolling Stock Depot.

Designed to seamlessly integrate with the operational needs of the Bullet Train Project, the Sabarmati Rolling Stock Depot encompasses state-of-the-art facilities aimed at both light and heavy maintenance of trainsets. Spread across an impressive 83 hectares, it is the largest of the three depots and is equipped with cutting-edge equipment including inspection bays, washing plants, workshops, sheds, and stabling lines. The Sabarmati Depot stands as a beacon of innovation, drawing inspiration from depots in Japan.

The depot features 4 (four) inspection lines and 10 stabling lines, with plans for expansion to 8 (eight) inspection lines and 29 stabling lines in the future. Additionally, specialized facilities such as bogie exchange lines and general inspection lines have been incorporated to ensure comprehensive maintenance capabilities.

Key highlights of the Sabarmati Rolling Stock Depot include:

- A dedicated test track for post-overhaul testing of trainsets, ensuring optimal performance before deployment on the mainline.
- Industrial sheds of unprecedented scale, providing ample space for maintenance and overhaul activities.
- Centralized control facilities for efficient train shunting operations and overall depot management.
- From dining rooms and canteens to auditoriums and training facilities, the depot offers a holistic environment for staff and personnel.

In line with sustainable practices, the Sabarmati Depot incorporates eco-friendly initiatives such as rainwater harvesting and wastewater recycling. Rooftop rainwater harvesting and bore well water will fulfil depot's water requirements, while modern sewage and effluent treatment plants ensure responsible management of waste.

Furthermore, the depot is equipped for the segregation, compaction, and proper handling of garbage generated both onboard trains and within the depot premises, underscoring its commitment to save environment.

The depot sheds and buildings are being designed so that solar panels can be installed in future. The Sabarmati Depot alone will have the potential of solar power generation of around 14 MW.

With a forward-looking approach, the Sabarmati Rolling Stock Depot is not just an example of technological prowess but also a blueprint for sustainable infrastructure development. As construction progresses, the depot to play a pivotal role in the success of the Mumbai Ahmedabad Bullet Train Project, setting new standards for efficiency, reliability, and environmental responsibility.

Construction update on Sabarmati Rolling Stock Depot

- Earthwork has been completed for the depot.
- The foundation works and RCC works for the administrative building are in progress.

Over 76,000 Segments to be Cast for the 16 km Tunnel for Bullet Train Project



Under construction is 21 km tunnel between the Bandra Kurla Complex and Shilphata for the Mumbai-Ahmedabad Bullet Train Project. Of the total length, 16 km will be excavated using three Tunnel Boring Machines (TBMs), while the remaining 5 km will be constructed using the New Austrian Tunnelling Method (NATM). To construct the 16 km section with TBMs, 76,940 segments will be cast to form 7,441 rings. Special ring segments are being cast for the tunnel lining, each ring comprising nine curved segments and one key segment, with each segment being 2 meters wide and 0.5 meters thick.

High-strength M70 grade concrete is being used to ensure superior structural integrity and long-term durability. The casting and stacking yard, covering an area of 98,898 sqm (9.9 hectares) in Mahape, Thane district, Maharashtra, is currently being commissioned. The yard will feature nine sets of moulds, each containing ten pieces. Four sets of these moulds are already being installed on-site.

The yard is equipped with various cranes, gantries, and machines to automate and mechanize the casting operations, ensuring high-quality assurance during the casting and stacking of the segments. Additionally, the facility will include casting sheds, a stacking area, a batching plant, and a steam curing area.■

24x7 Geotechnical Monitoring for Bullet Train Project

Various types of Geotechnical Instruments like Inclinometers, Vibration monitors, Ground settlement markers, Tilt meter etc. have been installed at and around construction sites for monitoring tilt, settlement, vibration, cracks and deformation. These instruments play a crucial role in making sure that neither there is any risk to ongoing underground works like excavation and tunnelling nor to the structures surrounding the site.

The Geotechnical Instruments are connected to their respective modules to record and monitor the activities. This allows on-time identification of potential risks and enabling timely interventions to mitigate them.

The dust and noise monitors are also being installed at construction sites, to ensure that the noise and air pollution remains in the permissible limit at and around construction sites.

The construction activities are in progress for 21 km long underground portion of Bullet Train corridor in Mumbai and Thane districts in Maharashtra. The works include excavation for about 1 km long and



32-meter-deep (around 10 store inverted building) underground Bullet Train station at Bandra Kurla Complex, construction of shafts and portals for tunnelling works.

Three mega Tunnel Boring Machines (TBMs), will be deployed for 16 km tunnelling work, which includes 7 km under sea tunnel and remaining 5 km of the tunnel will be made by using New Austrian Tunnelling Method. The depth of the tunnel will vary from 25 meters to 57 meters. Three Shafts, one ADIT and a portal are being constructed for lowering Tunnel Boring Machines.■

394-meter-long Additionally Driven Intermediate Tunnel Completed for Bullet Train Project



The Additionally Driven Intermediate Tunnel (ADIT) of 394 meter at Ghansoli for Mumbai-Ahmedabad Bullet Train Project, has been excavated. This will expedite the construction of 21 km long tunnel between BKC and Shilphata in Maharashtra.

The 26-meter-deep inclined ADIT will facilitate construction of the 3.3 km (approx.) tunnel through New Austrian Tunnelling Method (NATM), by allowing simultaneous access for tunnelling 1.6 meter (approx.) on each sides. Out of 21 km of tunnelling works, 16 km is through Tunnel Boring Machines (TMBs) and remaining 5 km is through NATM.

The excavation work for ADIT was started on 6th December, 2023, and the entire length of 394 meter is excavated in a short duration of six months. Total 214 controlled blasts were done using 27,515 kg explosives under supervision of experts and high level of instrumentation was used to ensure safe excavation.

The ADIT of internal dimension: 11 meter X 6.4 meter will give direct vehicular access to the main tunnel during construction and operations and may also be used for the purpose of evacuation process in emergency situation.

A number of monitoring instruments are being used to ensure safe excavation of the tunnel and all the structures in the nearby area. Some of the instruments being used for the work are SSP (Surface settlement Points), ODS (Optical displacement Sensor) or tilt meter for displacement in both axis, BRT (By reflect target/3D targets), Strain Gauge for micro strains in tunnel surface, Seismograph for Peak Particle Velocity (PPV) or vibration and seismic wave monitor.

The construction activities related to 21 km (approx.) long tunnel from Mumbai Bullet Train station to Shilphata in the state of Maharashtra is progressing at a fast pace. The 7 km (approx.) stretch of this tunnel will be under the sea at Thane Creek (Intertidal zone). This is the first of its kind tunnel to come up in the country.

The 21 km long tunnel will be a single tube tunnel to accommodate two track meant for up and down tracks. To construct this tunnel, TBMs with cutter heads of 13.6 meter diameter will be used. Usually 6-8 meter diameter cutter heads are used for urban tunnels used in MRTS-Metro system, as these tunnels accommodate one track only.

The under construction three shafts at BKC, Vikhroli, and Sawli will facilitate the construction of 16 km long tunnel through TBMs.

News of Zonal Railways and Production Units



Smt. Aparna Garg Took Charge as DG, Indian Railways Institute of Financial Management

Smt. Aparna Garg, IRAS officer of Civil Services 1987 batch has assumed the charge of Director General, Indian Railways Institute of Financial Management (IRIFM).

Prior to taking over charge, Smt. Aparna Garg has worked as Principal Financial Advisor, Rail Wheel Factory, Bengaluru, Divisional Railway Manager of Mysore and in various other capacities in Southern Railway, Western Railway and South-Western Railway.

She is a Chevening Fellow and has done her Advanced Masters in Transport Economics from the University of Leads, United Kingdom. She also had training in Bocconi School of Management/Milan, INSEAD/Singapore and Indian School of Business/ Hyderabad.■



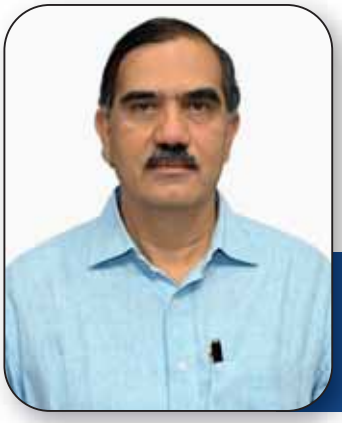
Shri Manjul Mathur is new General Manager of Rail Coach Factory

Shri Manjul Mathur took over as General Manager of Rail Coach Factory, Kapurthala on 27th May, 2024. He is from the 1988 batch of Indian Railway Service of Engineers.

Before taking over as General Manager of RCF, Shri Manjul Mathur was working as Chief Administrative Officer (Construction), North Central Railway Prayagraj. He has over 36 years of experience in the field of construction, maintenance and operation of rail networks. He has lead and implemented several key infrastructure projects for the Indian Railways and also handled various facets of construction across planning, engineering design, land acquisition, financial structuring, monitoring and implementation of contracting work etc. with Dedicated Freight Corridor (DFCCIL), a PSU affiliated with the Indian Railways. He has also worked closely with the World Bank for 7 years while leading teams of the Eastern Dedicated Freight Corridor project.

During his tenure with DFCCIL, 200 km section between Khurja and Bhadan stations of Kanpur-Khurja section was completed and Asia's second largest Operation Control Centre was built in Allahabad. During his 1.5 year stay at North Central Railway 275 km of infrastructure was commissioned.

Shri Mathur has undergone training at INSEAD/ Singapore, ICIF/Malaysia and various renowned institutes in France and Spain.■



Shri Abhay Bakre, took over as General Manager, BLW

Shri Abhay Bakre took over as General Manager, Banaras Locomotive Works (BLW).

Prior to this, Shri Abhay Bakre was holding the post of Director General (Head) of Bureau of Energy Efficiency since 2017, which is the nodal organization under Central Government to develop strategies for energy conservation in the country. He represented India in G20 Energy Transitions Working Group and

Ministerial meetings from 2018 to 2023.

He was instrumental in preparing Energy Transition Roadmap in line with 'Panchamrit' announcement to facilitate climate change mitigation and decarbonisation of Indian economy.

Shri Abhay Bakre is an M.Tech in Electrical Engineering from IIT, Kharagpur. He joined 1988 Batch of Indian Railway Service of Electrical Engineers and had worked in several major Railway assignments like Southern Railway Gauge Conversion, Delhi Metro and Kolkata Metro extension projects. During his initial postings he was responsible for Electrical Loco and EMU operations at Southern Railway.■

Western Railway's Jagjivan Ram Hospital Accredited with The National Accreditation Board For Hospitals



Western Railway's Zonal Hospital, Jagjivan Ram Hospital (JRH), Mumbai, has been accredited by National Accreditation Board for Hospitals (NABH) entry level, making JRH the first Hospital over Indian Railways to obtain this coveted Quality Control accreditation. Shri Ashok Kumar Misra, General Manager of WR unveiled the NABH certificate. in a ceremony held on 4th April, 2024 at Jagjivan Ram Hospital.

The NABH accreditation is a prestigious certification that proves that the hospital is dedicated to providing best facilities for its patients' care and that the hospital is monitored and examined to ensure the highest levels of safety. GM Shri A. K. Misra appreciated the outstanding performance of JRH and congratulated the committed medical team on becoming the first Railway Hospital over Indian Railways to have been awarded with 'NABH accreditation.'■

Breakthrough of Tunnel No. T-4 and T-7 Achieved in the Sivok-Rangpo Rail Project



In a major milestone, tunnel no. T-7 of the Sivok-Rangpo Rail Project (SRRP), located in Kalimpong District of West Bengal, achieved breakthrough on 30th March, 2024. With this breakthrough, mining activities have been successfully accomplished in 10 tunnels of this project. Notably, the first underground Railway Station within the Indian Railways network i.e. Teesta Bazar Station comes in this tunnel.

The Main Tunnel spans 3082 meters, accompanied by an access tunnel. The cavern extends for 650 meters, featuring a single platform as part of its design. This extensive cavern incorporates a network of six cross passages, with the total adit length reaching 800 meters, showcasing the project's comprehensive scale. To ensure passenger safety and comfort, meticulous ventilation has been integrated into the design, creating a conducive environment within the underground space.

Tunnel no. T-04/P2 (3948 meters long) to the Adit of the Sivok-Rangpo Rail Project (SRRP), located in Darjeeling District of West Bengal, achieved a breakthrough on 8th May, 2024.

With the tunnel breakthrough, mining activities have been successfully accomplished in all the Adit tunnels of this project. The length of the Main Tunnel of T-04 is 3948 meters, along with an Evacuation Tunnel of length 599 meters situated near the Hanuman Jhora in Darjeeling District, West Bengal. ■

Construction of the Longest Tunnel Under the Dimapur-Kohima New Rail Project Started



Construction activities started in Portal 1 of Tunnel no.-7 of the Dimapur-Kohima New Rail line Project in middle of March, 2024. This site is located in Tsiepama village of Medziphema circle of Dimapur district in Nagaland. This tunnel will be the longest tunnel in the Dimapur-Kohima New Rail line Project.

The length of this tunnel is of 6,610 meters. A 12 km long approach road was constructed through the hills to reach the Portal 1 of the Tunnel no.-7 in Tsiepama village. The tunnel is located between Pherima and Piphema stations of this project.

The 82.50 km long (2.75 km in Assam and 79.75 km in Nagaland) Dimapur-Kohima new railway line project which takes off from the Dhansiri station of Assam to Zubza adjacent to Kohima is being constructed at an anticipated cost of ₹6,663 crores. The project has 8 new stations i.e. Dhansiri, Dhansiripar, Shokhuvi, Molvom, Pherima, Piphema, Menguzuma and Zubza. The project includes 27 major bridges, 148 minor bridges, 5 Road Over Bridges, 15 Road Under Bridges and 21 Tunnels of 31 km length. The 16.5 km section from Dhansiri to Shokhuvi was already commissioned in October, 2021. Passenger train services from Shokhuvi to Naharlagun in Arunachal Pradesh and Mendipathar in Meghalaya have also been introduced.■

Ramagundam Freight Depot Receives 'IMS Certification' from Indian Register Quality Systems



The Ramagundam Routine Overhauling (RoH) Depot, one of the major freight depots of South Central Railway has received the prestigious 'Integrated Management Systems' (IMS) certification from Indian Register Quality Systems, a division of IRCLASS Systems and Solutions Pvt. Ltd. The Ramagundam depot is the only freight depot over SCR which has been awarded with IMS certification. Improving overall housekeeping of the depot and streamlining the procedure of record keeping has helped to achieve this feat. Shri Arun Kumar Jain, GM congratulated Shri Bhartesh Kumar Jain, DRM, Secunderabad Division and the mechanical wing of the Division for their efforts in achieving the IMS certification for Ramagundam Freight Depot.■

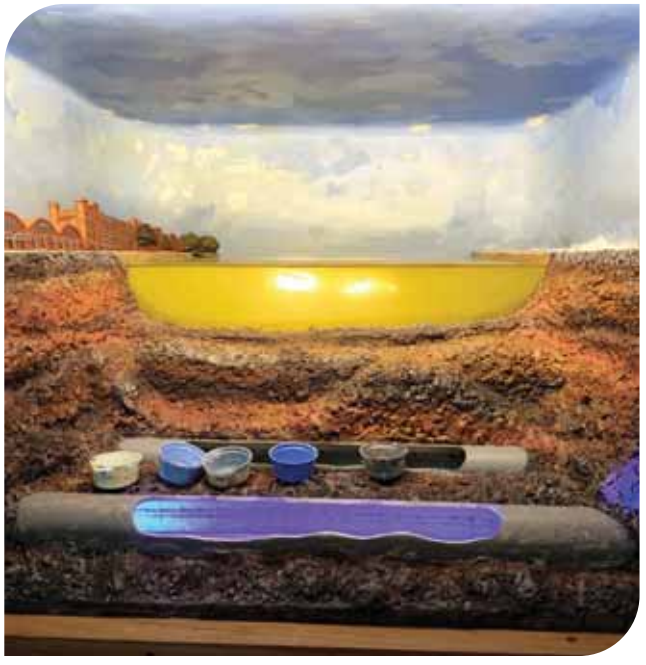
Green Building Gold Rating Awarded to Sealdah Station



The Sealdah Railway Station building has been awarded the esteemed gold rating for its exemplary utilization of renewable

energy, efficient water management, minimal environmental footprint, effective waste management practices, and provision of top-notch passenger amenities, among other commendable criteria. The Indian Green Building Council (IGBC) Green Railway Stations Rating System is based on a set of criteria covering various aspects of sustainable design, construction, and operation.■

Country's First Metro Leaves its Footprints in Country's Oldest Government Owned Science Museum



In order to recognize Kolkata Metro's contribution towards the socio-economic development of Kolkata and adjoining areas, Birla Industrial and Technological Museum (BITM), has started showcasing the gradual evolution of Kolkata Metro in its Transport Gallery dedicated for showing gradual evolution of transport system in the world. This gallery was opened on 18th May, 2024 as a part of International Museum Expo.

Visitors to this gallery can see the miniature model of under the river Metro system of Kolkata. This 3D model shows how under the river Metro runs. Another 3D model shows the different levels of underground Metro station and surface level. Various rare and heritage photographs have also found their places in this gallery which also briefs the visitors about different Metro Railway systems in the world.■

CLW Achieved Milestone, 100th locomotive of FY 2024-25 Rolled Out



CLW has manufactured first 100 locos in 50 working days in the financial year 2024-25, which is the fastest first 100 locos produced in any fiscal year. The 100th electric locomotive of the financial year 2024-25 was rolled out on 30th June, 2024 from CLW workshop premises. This remarkable accomplishment was achieved in a record 50 working days, marking the fastest production rate in any fiscal year.

It is mentioned here that, for this financial year 2024-25, CLW has been given production target of 700 locomotives.

Shri Hitendra Malhotra, General Manager congratulated the entire 'Team CLW' for this remarkable achievement.■

BLW Manufactured 475 Locos in the FY 2023-24



Banaras Locomotive Works once again set a milestone by manufacturing 475 locomotives, surpassing the target of 460 locomotives set by the Railway Board at the end of

the financial year 2023-24. This achievement is the highest and unique loco production record in any single financial year. BLW manufactured 470 electric locomotives for Indian Railways and 5 diesel locomotives for Indian domestic customers. Since its inception, BLW has manufactured a total of 10,210 locomotives including various types of diesel (alco and high power) as well as electric locomotives. This includes 1,895 electric locomotives, 2,467 HHP diesel locomotieve, 5,031 alco locomotives, 636 locomotives for non-railway customers in India, 172 exported locomotives, 8 conversions locomotive and 1 dual mode locomotive. Shri Basudev Panda, GM personally congratulated them on the occasion. ■

Belgium Delegation Visited RDSO



Belgium delegation visited RDSO on 24th April, 2024. Members of Six Belgium companies including Mr. Samuel Buche, Business Developer, A.G.C. Glass, Mr. Sylvain Bertacco, Regional Director, C.E.T. Power visited RDSO and the purpose of this visit was to connect with Indian Railways and showcase their products.

On this occasion, a detailed presentation was given by RDSO covering the recent achievements of RDSO and the ongoing projects. The procurement procedure of Indian Railways was also explained during the presentation.

During this presentation, many important discussions were held between the delegation and RDSO officials. ■

High Level Delegation from Czech Republic visited Rail Coach Factory, Kapurthala



High level delegation from Czech Republic visited Rail Coach Factory, Kapurthala on 5th June, 2024. It was led by Mrs. Marie Vopalenska, Director General, Association of Czech Railway Industry The objective of the visit was to discuss opportunities for cooperation in the rail sector, to establish greater synergy and to promote bilateral cooperation to achieve more practical results.

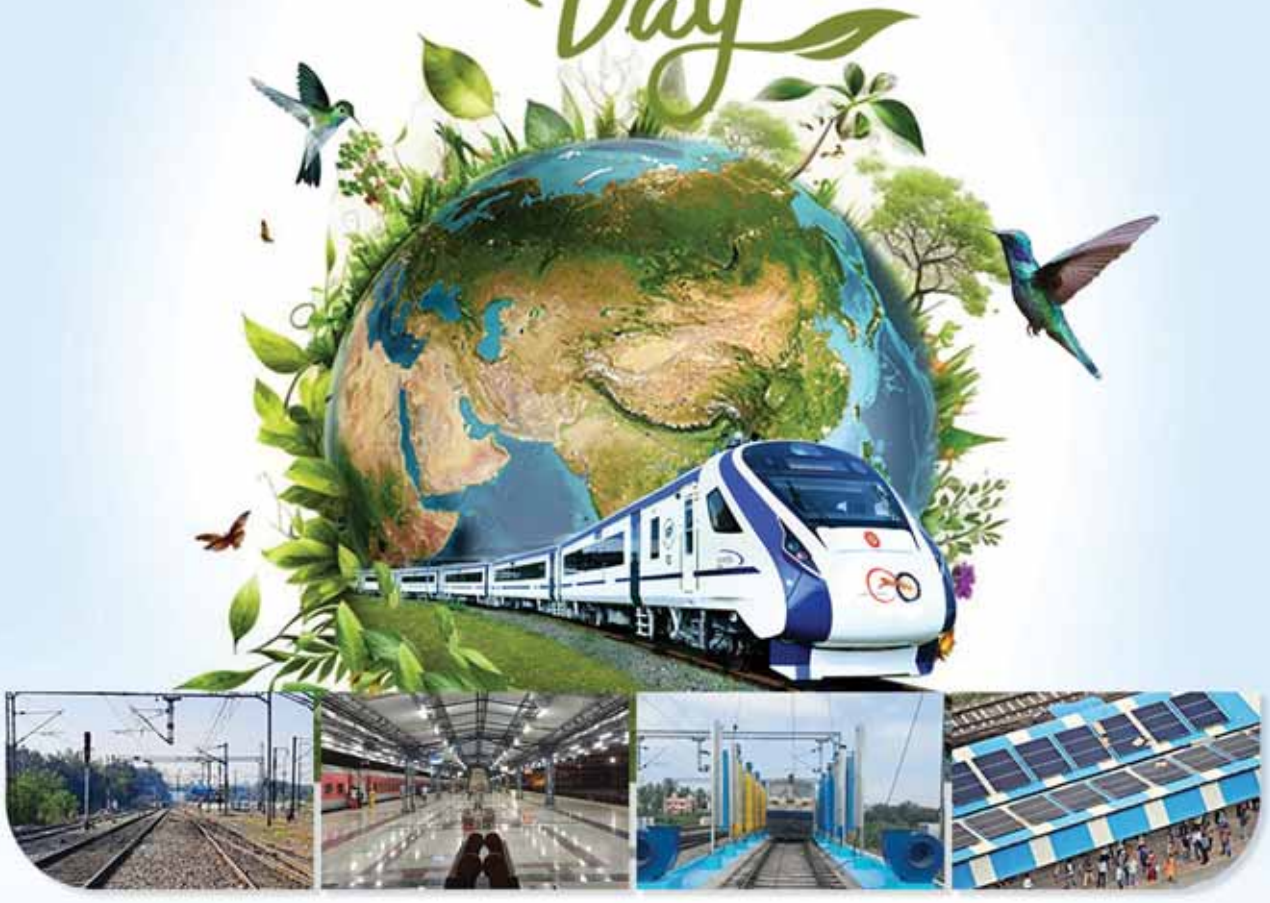
On arrival at Rail Coach Factory, a special interactive session was organized in which a presentation was made regarding the production of coaches being manufactured at RCF. Apart from this, various aspects of coach manufacturing were discussed in detail in this session in which General Manager of RCF, Shri Manjul Mathur and Heads of Departments participated. A presentation was also made by the Czech delegation on this occasion.

The delegation also visited the workshop of Rail Coach Factory where it showed special interest in the manufacturing of various types of railway coaches. ■

READERS
are requested to send their
SUGGESTIONS/FEEDBACK
editorindianrailways@gmail.com

Indian Railways 'Our Land, Our Future'

World Environment Day



Indian Railways, like every year, observed World Environment Day on 5th June, 2024 keeping in line with the theme of this year's World Environment Day 'Our land, Our Future'. World Environment Day 2024 themes focus on land restoration, halting desertification and drought resilience. Smt. Jaya Varma Sinha, Chairman & CEO, Railway Board and other senior officials of Railway Board graced the event. Chairman & CEO, Railway Board motivated Railway officials to increase their efforts in further environmental protection activities.

This year, Indian Railways is also taking major outreach and advocacy activities for mass mobilization on 'Mission LIFE' with the aim to sensitize people about the impact of behavioural change on the environment during the month of June 2024. As of now, 249 awareness and 147 action events have been conducted across all Indian Railways in which 4,921 participants have participated. A total number of 4,395 'Mission LiFE' pledges have also been administered across Indian Railways.

Indian Railways is an environmental friendly means of bulk transportation. For environment protection, Railways have been taking continuous initiatives that have positive impact on the environment by way of reducing pollution/GHG emissions, promoting resources and energy efficiency and contributing to sustainability. Some of the major policy initiatives taken by IR in order to be sustainable are as follows:

- Indian Railways has electrified 63,456 route kilometers (RKMs) upto April, 2024 which is more than 96% of the total broad-gauge network of Indian Railways.
- A total of 2,637 stations and service buildings have been provided with solar roof-top plants with a total power generation capacity of 177 MW.
- Energy efficiency guidelines for re-development of railway stations and other buildings have been issued with Super-ECBC compliance. These Super ECBC guidelines have been developed with a goal to minimize energy demand through climatic responsive building design and energy efficient technologies.
- For the re-development of the Major Railway Stations, IR has provided guidelines in the form of Environment Management Plan. These guidelines have to be followed in the Zonal Railways in order to mitigate the effects of construction in surrounding areas.
- As a policy initiative, IR has introduced the concept of assigning Carbon Saving Points termed as "Rail Green Points" to its freight customers which give details of the expected saving of carbon emission. This initiative of customer participation in creating environmental impact will motivate them to transport more by train in future.
- Indian Railway has implemented comprehensive waste management strategies that emphasize recycling, reduction and its responsible disposal. Creation of green space, proper disposal of hazardous waste materials and recharging ground water aquifers can reverse the land degradation.
- Indian Railways has taken major steps in order to be Energy Efficient in its production process. At present all 8 PUs and 44 workshops are ISO-50001 certified which shows the commitment towards energy conservation and energy efficiency.
- Around 700 major railway stations have been certified for implementation of Environment Management System to ISO 14001. Further, Indian Railways have installed around 65 Effluent Treatment Plants, 86 Water Recycling Plants, 90 Sewage Treatment Plants, 18 Waste to Energy Plants, 186 Waste to Compost and 32 Solid Waste Management Plants. Around 208 stations have composting plants and 193 Railway stations have Material Recovery Facilities.
- Around 826 Plastic Water Bottle Crushing Machines have been installed at major railway stations.
- As a part of our Clean India movement, IR has taken a number of initiatives in order to provide the hygienic environment:

IRs has ensured the fitment of bio-toilets in all its coaches which has eliminated the problem of direct discharge of human waste from trains. Taking a step ahead, with an aim to reduce the water consumption in toilets, IR has started the fitment of bio-vacuum toilets in new coaches.■

NORTHEAST FRONTIER RAILWAY

World Environment Day was observed all over N. F. Railway with the theme 'land restoration, desertification and drought resilience' with focuses on trees, healthy soil, and clean water that are imperative for a solid planet.

Shri Chetan Kumar Shrivastava, GM, N. F. Railway inaugurated the Sewage Treatment Plant (STP) with a capacity of 100 KLD (kilolitres per day) and a bio-toilet lab, at Kamakhya Coaching Depot in Maligaon on 5th June, 2024. Tree plantation along with various other awareness drives were also carried out in headquarter and all the five divisions of Northeast Frontier Railway with participation of railway officials.■



SOUTH EASTERN RAILWAY



South Eastern Railway celebrated World Environment Day on 5th June, 2024. The theme of this year's World Environment Day is 'Land Restoration, Desertification and Drought Resilience'. Shri Anil Kumar Mishra, GM planted saplings as a part of observance of World Environment Day and also inaugurated a park 'Amrit Udhyan' at the Headquarters premises in presence of Smt. Preeti Mishra, President, SERWWO.

World Environment Day was also observed at all four Divisions i.e. Kharagpur, Adra, Chakradharpur and Ranchi by organizing tree plantation, nukkad nataks, prabhat pheri, seminars etc.

SOUTH CENTRAL RAILWAY

South Central Railway observed the World Environment Day on 5th June, 2024. Shri R. Dhananjayulu, AGM was the chief guest. Principal Heads of the Departments and senior officials participated in the program. Officials from different departments such as Mechanical, Electrical, Engineering and Medical etc. presented detailed reports on their contributions and action plans towards sustainability of the environment. AGM presented mementos to winners of drawing competition on the theme of 'Land Restoration, Desertification and Drought Resilience' for the children of Rail Nilayam employees as part of the World Environment event.



RAIL WHEEL FACTORY



World Environment Day was celebrated on 6th June, 2024 at Rail Wheel Factory. Shri R. Rajagopal, GM, presided over the function and addressed the gathering. Shri P R Sheshagiri Rao, founder of Krishi Hrudya, was the Guest of Honour. Shri M K Poddar, PCME was present during the function. Shri. Anand Swaroop, Chief Environment Officer, Principal HODs, senior officers and staff were present during the function. Tree plantation by dignitaries was also part of the programme.

CHITTARANJAN LOCOMOTIVE WORKS



World Environment Day was observed in Chittaranjan Locomotive Works (CLW).

An awareness rally was organised by the Bharat Scout and Guide, Chittaranjan District Branch, wherein environment protection message was propagated. This was followed by pledge-taking ceremony in the Administrative Building foyer. A Seminar was organized in the Badhwar Hall of the Technical Training Center wherein presentations were made on various topics related to environment issues like waste management, land restoration, environmental sustainability and global warming and its effects. Principal Head of departments, Senior officers were present in the seminar.

BANARAS LOCOMOTIVE WORKS

On the occasion of World Environment Day, BLW Institute organized a roller skating rally from BLW Inter College to BLW Cinema Hall. The rally was started by Chief Guest Shri Rajkumar Gupta, Vice President Institute and Senior Personnel Officer (Headquarters) and Special Guest Shri Rajesh Kumar, PRO, BLW. The trainees of the Roller Skating Academy, which is run by the institute, participated in the rally wearing their roller skating. On this occasion, an Amla tree was planted in the campus of the sub-institute of the institute.



RAIL COACH FACTORY



Rail Coach Factory organized World Environment Day at its premises on 5th June, 2024. This year the theme of World Environment Day focuses on 'Land Restoration, Desertification and Drought Resilience,' under the slogan 'Our Land'.On this occasion, General Manager, Shri. Manjul Mathur initiated the campaign to keep the environment green by planting a sapling. Senior officers and employees of RCF planted saplings of fruit and shade trees. Civil, Quality and other departments of RCF participated in the programme with enthusiasm. A rally was taken out to make the employees and their families living in the Rail Coach Factory premises aware about the environment.

Water Management and Initiatives at Modern Coach Factory, Raebareli



Shri Prashant Kumar Mishra
General Manager

Water is a precious resource essential for all life on Earth. It is our prime responsibility to take proactive steps towards conserving this valuable resource. Remember, every drop counts when it comes to water conservation.



Inspired by the Hon'ble Prime Minister vision to conserve each and every drop of water, MCF as part of Jal Shakti Abhiyan planned water conservation strategy and developed 100 million litres water conservation capacity in 2023-24. In financial year 2023-24, Modern Coach Factory RaeBareli, had executed five Rain Water Harvesting having recharge potential of 30.20 million litre per year. To optimized cost of water conservation, innovative Rain Water Harvesting concept through Recharge Bore digging, along the periphery of existing pond has been developed, in which concrete and brick work has been totally eliminated an innovative green water recharging concept. Ten recharge bore wells had been constructed along periphery of existing pond further increasing water recharge capacity of 33.12 million litre per year.

In addition to above, one existing pond in Joggers cum Eco park had been enlarged resulting increase of water holding capacity by 18 million litres. Three ponds having water holding capacity of 12.49 million litres have also been excavated. Diversion of rain water passing through Mathana nala in MCF premises has also been executed. This is going to be a game changer as rain water of large catchment area covering dozens of villages will be tapped and used for rain water harvesting.

A mega water conservation plan has been adopted and four ponds of total holding capacity 30.49 million litres and five rain water harvesting and 10 recharge bores along periphery of existing pond having total 63.22 million litre recharge capacity was created during FY 2023-24.

With 100 million litres water conservation capacity generation in 2023-24, total water conservation capacity of MCF has risen to 530 million litres.

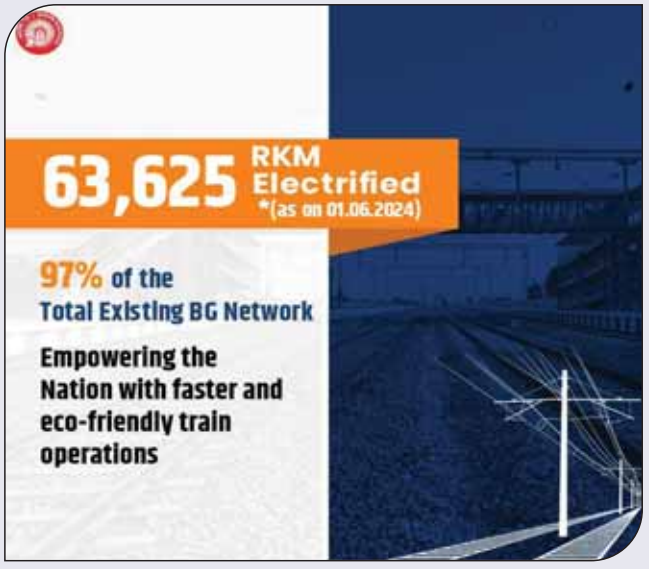
MCF has further planned to create 100 million litres water conservation capacity in the current financial year 2024-25.■



ACHIEVEMENTS

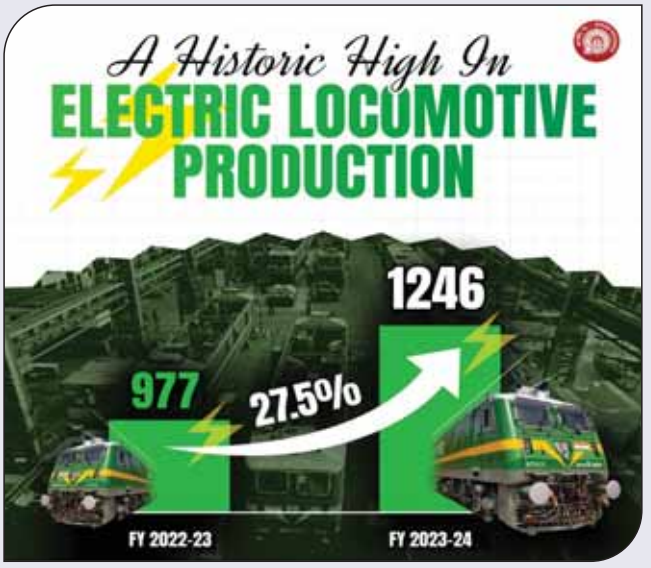




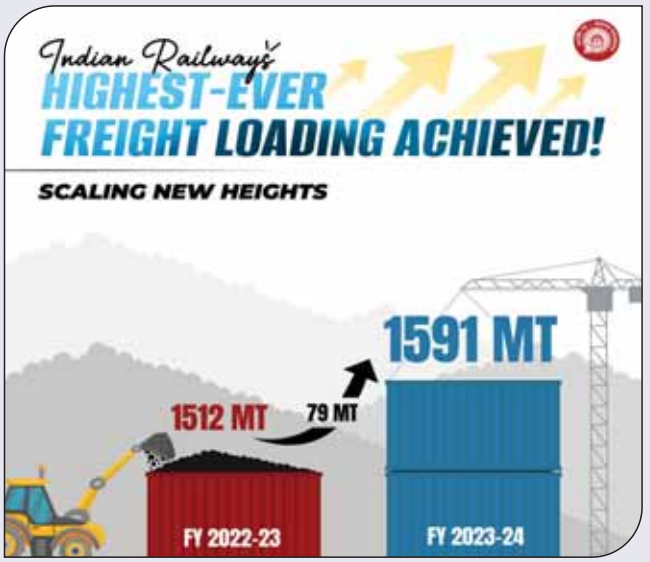








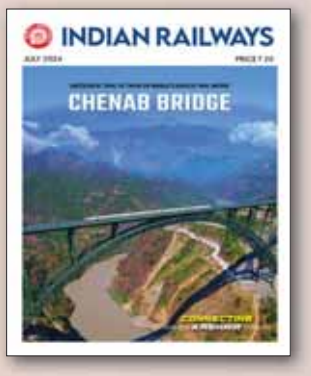








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List of Ministers of Railways and Ministers of State for Railways

On 11th June, 2024, Shri Ashwini Vaishnaw again took over the charge of Minister of Railways. For the information of the readers, a list of Ministers of Railways and Ministers of State for Railways till now is being given.



List of Ministers of Railways



Shri Asaf Ali
02-09-1946 to 14-08-1947



Dr. John Mathai
15-08-1947 to 22-09-1948



Shri N.G.S. Ayyangar
22-09-1948 to 13-05-1952



Shri Lal Bahadur Shastri
13-05-1952 to 07-12-1956



Shri Jagjivan Ram
07-12-1956 to 10-04-1962



Shri Swaran Singh
10-04-1962 to 21-09-1963



Shri H.C. Dasappa
21-09-1963 to 08-06-1964



Shri S.K. Patil
09-06-1964 to 12-03-1967



Shri C.M. Poonacha
13-03-1967 to 14-02-1969



Shri Ram Subhag Singh
14-02-1969 to 04-11-1969



Shri P. Govinda Menon
04-11-1969 to 18-02-1970



Shri G.L. Nanda
18-02-1970 to 17-03-1971



Shri K. Hanumanthaiya
18-03-1971 to 22-07-1972



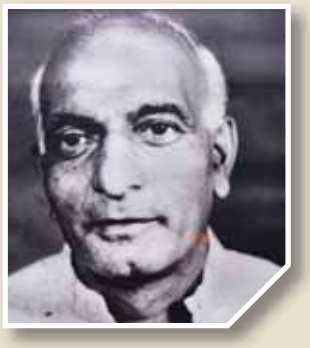
Shri T.A. Pai
23-07-1972 to 04-02-1973



Shri L.N. Mishra
05-02-1973 to 02-01-1975



Shri Kamalapati Tirpathi
11-02-1975 to 23-03-1977



Shri Madhu Dandavate
26-03-1977 to 28-07-1979



Shri T.A. Pai
30-07-1979 to 13-01-1980



Shri Kamalapati Tirpathi
14-01-1980 to 12-11-1980



Shri Kedar Pandey
12-11-1980 to 14-01-1982



Shri P.C. Sethi
15-01-1982 to 02-09-1982



Shri A.B.A. Ghani Khan Choudhury
02-09-1982 to 31-12-1984



Shri Bansi Lal
31-12-1984 to 04-06-1986



Smt. Mohsina Kidwai
24-06-1986 to 21-10-1986



Shri Madhavrao Scindia
22-10-1986 to 01-12-1989



Shri George Fernandes
05-12-1989 to 10-11-1990



Shri Janeshwar Mishra
21-11-1990 to 21-06-1991



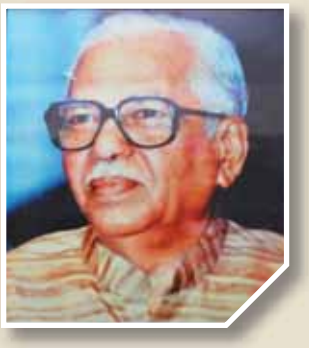
Shri C.K. Jaffer Sharief
21-06-1991 to 16-10-1995



Shri Ram Vilas Paswan
01-06-1996 to 19-03-1998



Shri Nitish Kumar
19-03-1998 to 05-08-1999



Shri Ram Naik
06-08-1999 to 12-10-1999



Ms. Mamata Banerjee
13-10-1999 to 15-03-2001



Shri Nitish Kumar
20-03-2001 to 22-05-2004



Shri Lalu Prasad Yadav
23-05-2004 to 22-05-2009



Ms. Mamata Banerjee
23-05-2009 to 19-05-2011



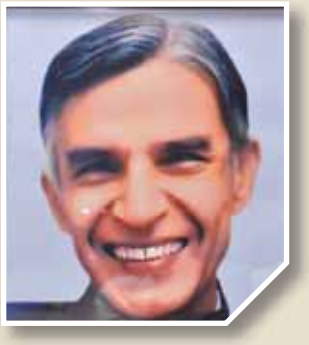
Shri Dinesh Trivedi
13-07-2011 to 19-03-2012



Shri Mukul Roy
20-03-2012 to 22-09-2012



Dr. C.P. Joshi
22-09-2012 to 28-10-2012



Shri Pawan Kumar Bansal
28-10-2012 to 11-05-2013



Dr. C.P. Joshi
11-05-2013 to 16-06-2013



Shri Mallikarjun Kharge
17-06-2013 to 26-05-2014



Shri D.V. Sadananda Gowda
26-05-2014 to 09-11-2014



Shri Suresh Prabhakar Prabhu
09-11-2014 to 03-09-2017



Shri Piyush Goyal
04-09-2017 to 07-07-2021



Shri Ashwini Vaishnaw

1st Term
08-07-2021 to 10-06-2024

2nd Term
11-06-2024 to Till Date

List of Ministers of State for Railways

S. No.	Name of Ministers of State for Railways	Tenure	
		from	to
1	Shri K. Santhanam	01-10-1948	29-02-1952
2	Shri Ram Subhag Singh	13-06-1964	13-03-1967
3	Shri Parimal Ghosh	13-03-1967	17-10-1969
4	Mohd. Shafi Qureshi	10-10-1974	24-03-1977
5	Shri Sheo Narain	14-08-1977	28-07-1979
6	Shri C.K. Jaffer Sharief	14-01-1980	31-10-1984
7	Shri Madhavrao Scindia (Independent Charge)	31-12-1984	22-10-1986
		22-10-1986	01-12-1989
8	Shri Bhakta Charan Das	21-11-1990	21-06-1991
9	Shri Mallikkarjun	21-06-1991	18-01-1993
10	Shri Kanu Charan Lenka	19-01-1993	02-04-1994
11	Shri Mallikarjun (Independent Charge)	22-08-1995	16-09-1995
12	Shri Suresh Kalmadi (Independent Charge)	16-09-1995	16-05-1996
13	Shri Satpal Maharaj	06-07-1996	09-06-1997
14	Shri Ram Naik	19-03-1998	05-08-1999
15	Shri Bangaru Laxman	22-11-1999	31-08-2000
16	Shri Digvijay Singh	13-10-1999	22-07-2001
17	Shri O. Rajgopal	01-09-2000	01-07-2002
18	Shri Digvijay Singh	01-08-2001	01-07-2002
19	Shri Bandaru Dattatraya	02-07-2002	08-09-2003

S. No.	Name of Ministers of State for Railways	Tenure	
		from	to
20	Shri A.K. Moorthy	02-07-2002	14-01-2004
21	Shri Basangouda R. Patil (Yatmal)	09-09-2003	22-05-2004
22	Shri Naranbhai Rathwa	23-05-2004	22-05-2009
23	Dr. R. Velu	23-05-2004	28-03-2009
24	Shri E. Ahamed	28-05-2009	18-01-2011
25	Shri K. H. Muniyappa	28-05-2009	28-10-2012
26	Shri Bharatsinh Solanki	19-01-2011	28-10-2012
27	Shri Mukul Roy	20-05-2011	12-07-2011
28	Shri K. J. Surya Prakash Reddy	28-10-2012	26-05-2014
29	Shri Adhir Ranjan Chowdhary	28-10-2012	26-05-2014
30	Shri Manoj Sinha	26-05-2014	30-05-2019
31	Shri Rajen Gohain	05-07-2016	30-05-2019
32	Shri Suresh Angadi Channabasappa	31-05-2019	23-09-2020
33	Shri Raosaheb Patil Danve	07-07-2021	10-06-2024
34	Smt. Darshana Jardosh	07-07-2021	10-06-2024
35	Shri V. Somanna	11-06-2024	Till Date
36	Shri Ravneet Singh	11-06-2024	Till Date

Sports News

Dr. B N Tiwary, Indian Railway Officer and Renowned Surgeon, Earned 3rd Ironman Title



Dr. Bishwanath Tiwary, a notable Additional Chief Health Director/GI and HPB Onco surgeon from Northern Railway Central Hospital, New Delhi has once again made history by securing his 3rd Ironman Title in Ironman Hamburg Championship 2024. He previously also completed the Ironman championship two times and now again he achieved another feather in his cap by completing 3rd Ironman Championship. Dr. Tiwary remarkable feat established him as 1st Indian Railway Officer and 1st surgeon of India who earned 3 ironman titles.

The Ironman Championship comprises 3.8 km swimming in sea, 180 km cycling and 42 km of running within a cut off time of 16 hours. Dr. Tiwary accomplished the event in mere 12 hr and 58 minutes by improving his personal record and did this task 7 minutes before his previous record created in 1st Ironman championship held in Denmark.

He dedicated his Ironman championship to Indian Railways and people of India.■

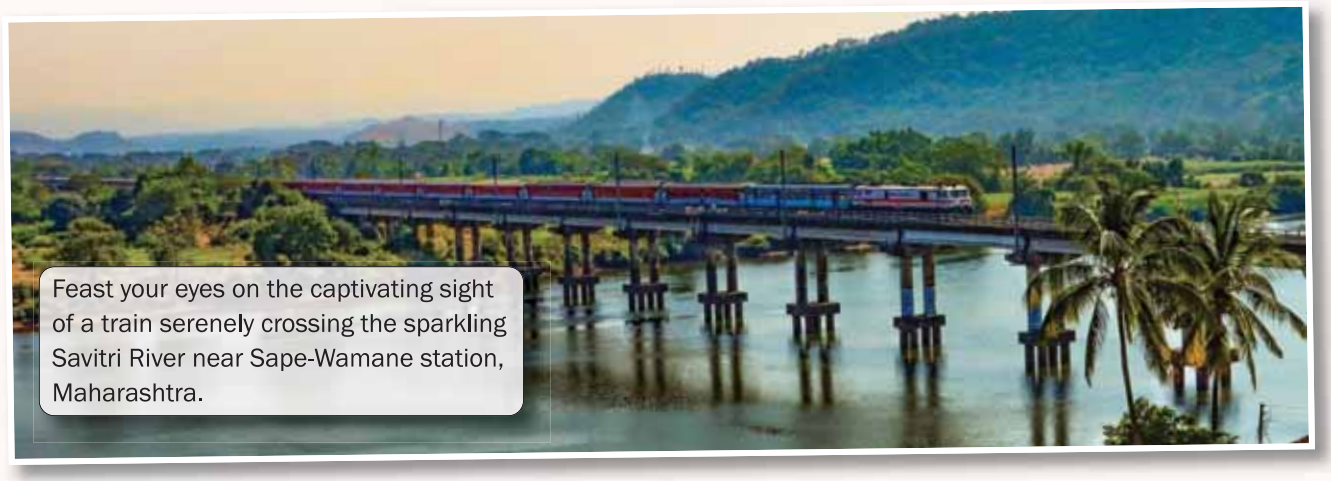
WR's Senior Officer Shri Sachin Sharma Completed the Comrades Marathon



Shri Sachin Ashok Sharma, Secretary to GM, Western Railway accomplished a remarkable success in the recently concluded Comrades Marathon 2024 held in South Africa. This Marathon is one of the world's most challenging long distance races. Shri Sharma completed this 86 km marathon, which runs from Durban to Pietermaritzburg in South Africa, in 11 hours and 24 minutes. The Comrades Marathon known as the oldest and one of the toughest marathons globally, saw participation from 20,000 runners from various countries. This historic race, established in 1921, involves a grueling uphill run with an elevation gain of 1,800 meters.

Shri Sachin Sharma had participated in numerous 10 k runs, half and full marathons, ultra marathons, triathlons. Some of the notable ones are Ladakh Full Marathon, Tata Mumbai Marathon, Vasai-Virar Marathon, Tata Ultra (50 km), Kaas Ultra (65 km), Khardung La Challenge (72 km in High Altitude), Pune Ultra Trail Run (100 km), Goa Iron Man (70.3 km) and Bergman (113 km), He has even participated and completed Open Sea Swimming i.e. Sunk Rock to Gateway (5 km)-National Level, Malvan Sea Swimmathon (3 km)-National Level and Juhu Sea Swimmathon (3 km)-State Level. Shri Sharma is now targeting to participate in the Silk Route Ultra (122 km) to be held in Ladakh in September 2024, Hell Race Jaisalmer to Laungewala (160 km) in December 2024 and Pune Ultra (160 km) in November 2025 as well as the Ironman Australia in 2025.■

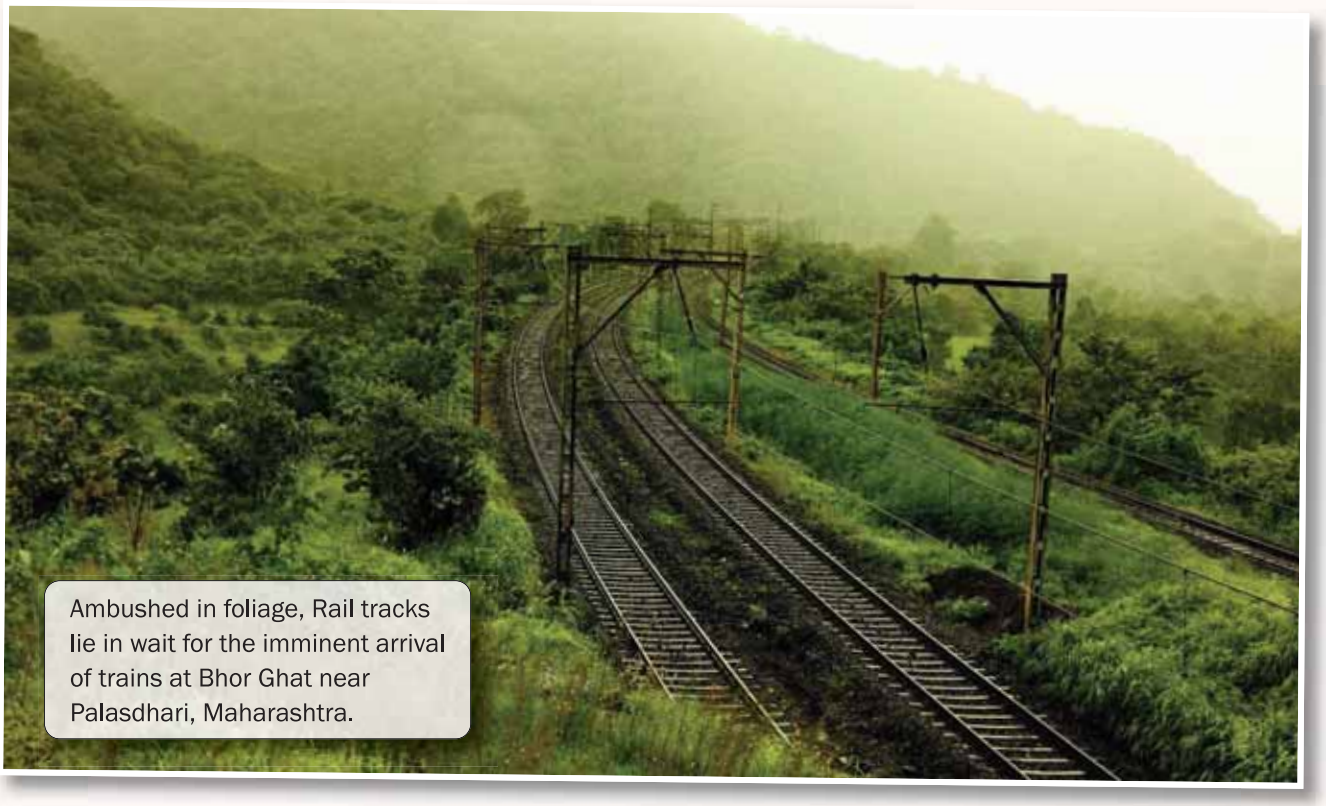
Photo Gallery



Feast your eyes on the captivating sight of a train serenely crossing the sparkling Savitri River near Sape-Wamane station, Maharashtra.



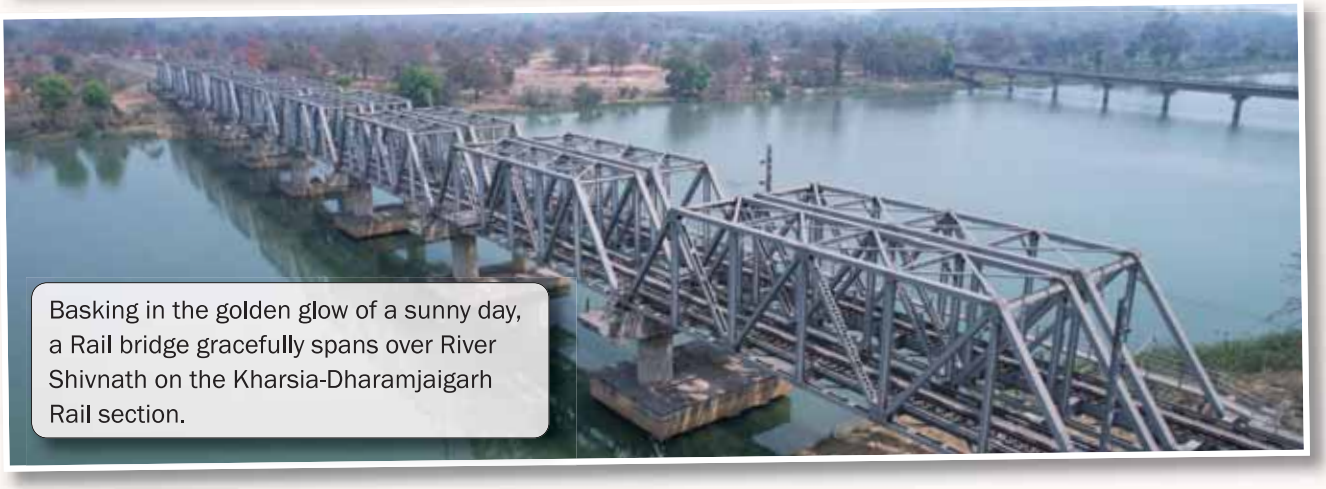
Spanning River Luna, a river bridge stitches two vibrant worlds in Odisha.



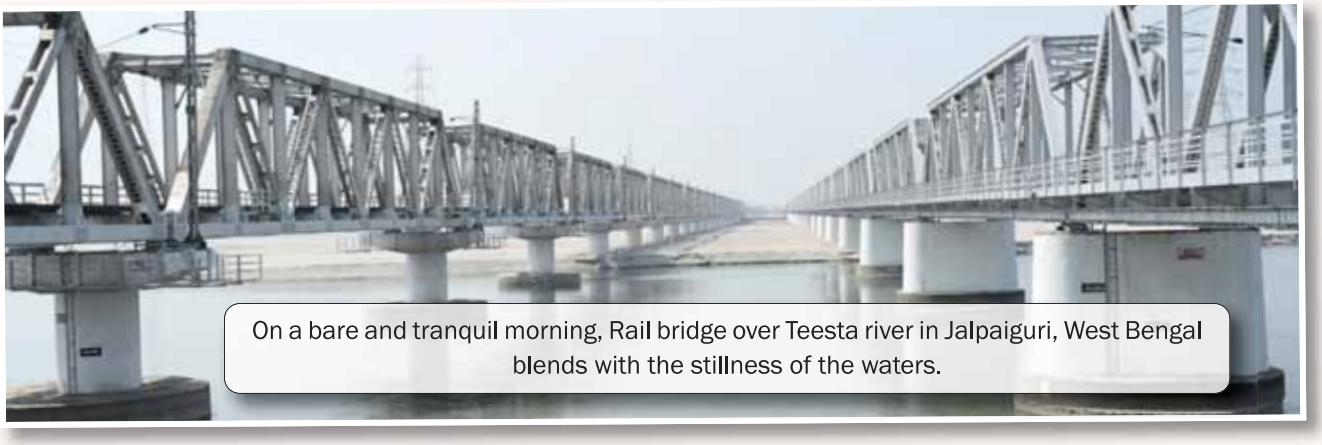
Ambushed in foliage, Rail tracks lie in wait for the imminent arrival of trains at Bhor Ghat near Palasdhari, Maharashtra.



Too good to miss! Gaze over a train emerging from the verdant greenery of the mighty Braganza Ghat along the Karnataka-Goa border.



Basking in the golden glow of a sunny day, a Rail bridge gracefully spans over River Shivnath on the Kharsia-Dharamjaigarh Rail section.

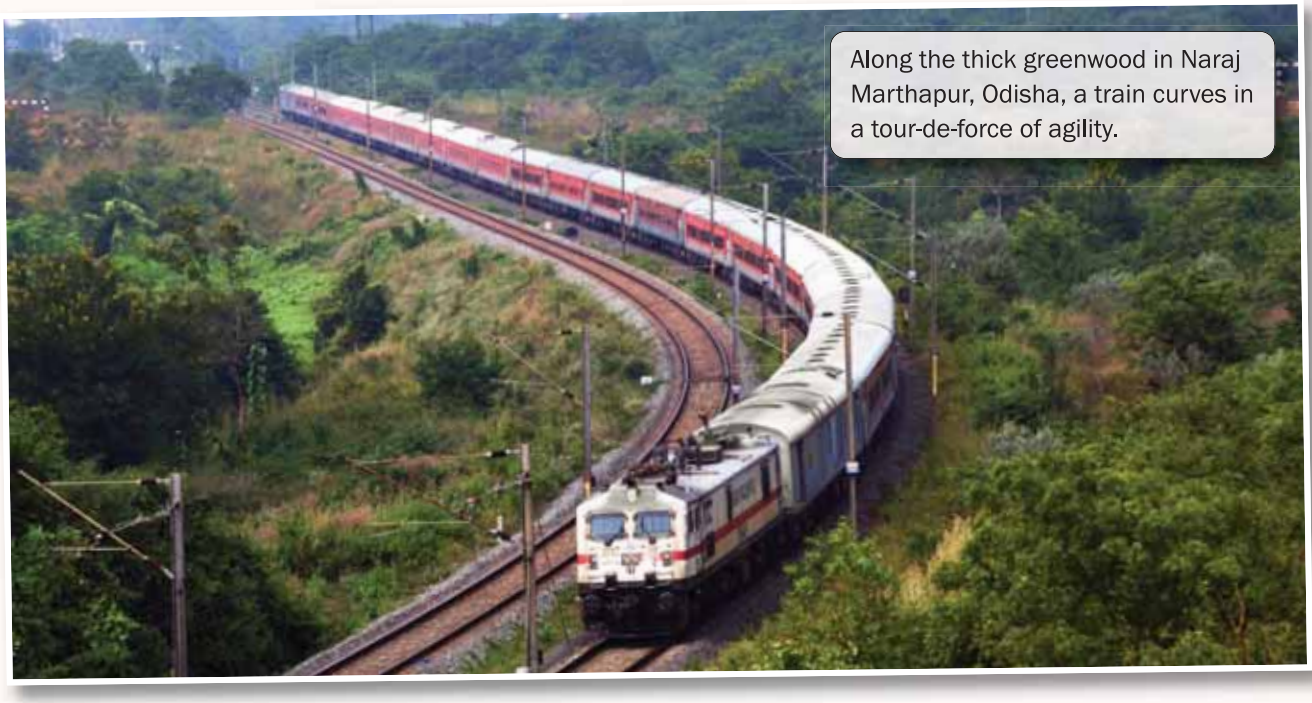


On a bare and tranquil morning, Rail bridge over Teesta river in Jalpaiguri, West Bengal blends with the stillness of the waters.

KIND ATTENTION

AUTHORS/WRITERS contributing articles for the magazine are requested to restrict their articles to a reasonable size. Ideally an article should not exceed 1000 WORDS.

In view of the space constraints of the magazine, sometimes it becomes difficult to include longer articles. All are requested to appreciate our problem and co-operate.



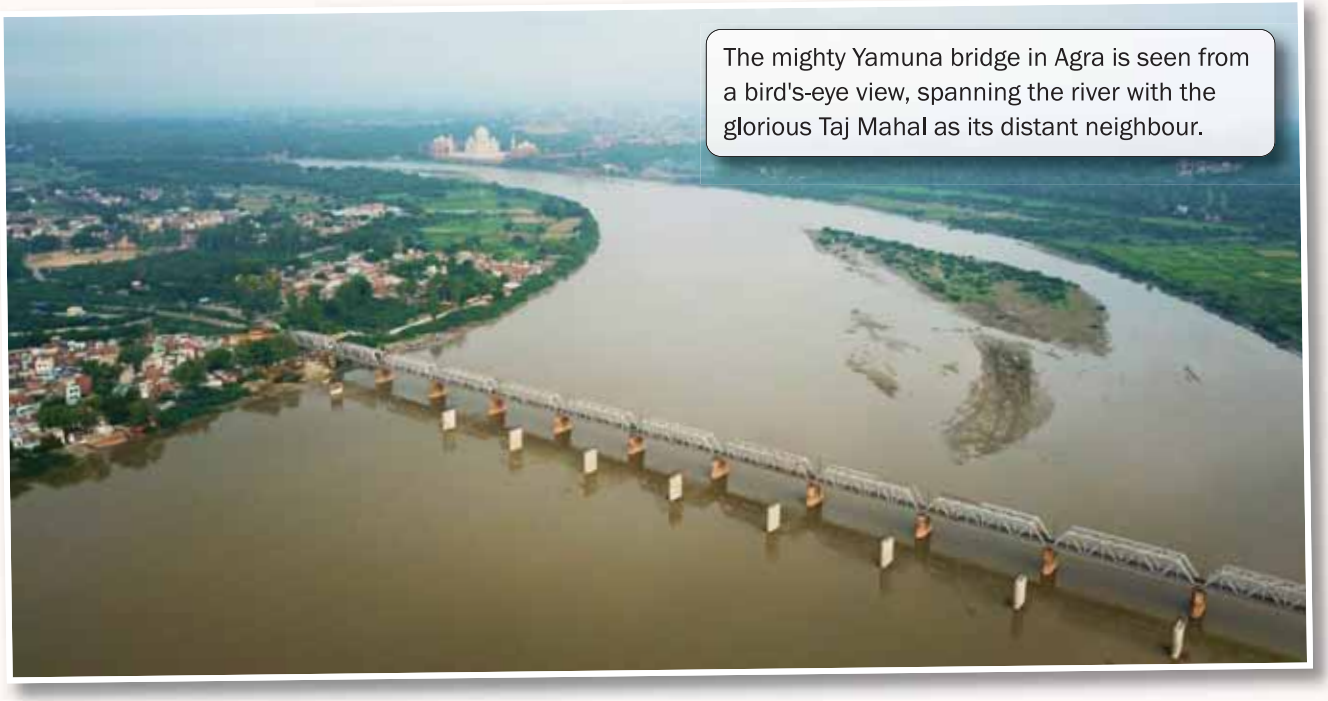
Along the thick greenwood in Naraj Marthapur, Odisha, a train curves in a tour-de-force of agility.



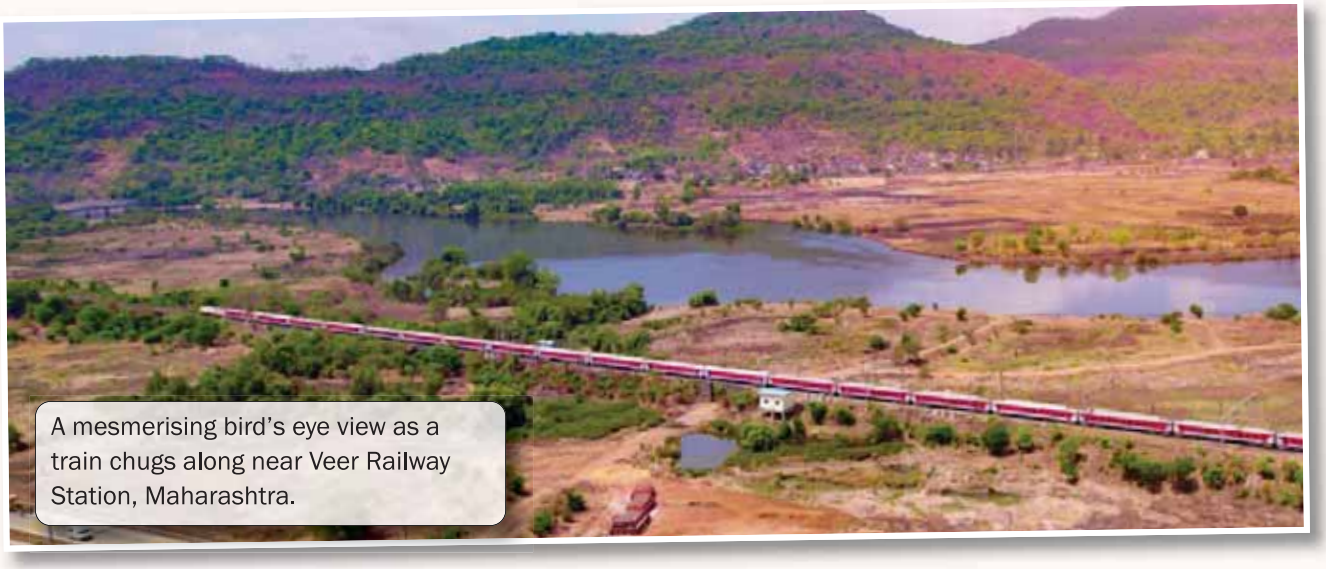
Bidding adieu to the amber sky, a train graces forward on its way towards Kansudhi Railway Station, Gujarat.



Endowed with precision, the Naranarayan setu in Jogighopa, Assam, forbearingly awaits the arrival of trains across tranquil waters.



The mighty Yamuna bridge in Agra is seen from a bird's-eye view, spanning the river with the glorious Taj Mahal as its distant neighbour.



A mesmerising bird's eye view as a train chugs along near Veer Railway Station, Maharashtra.



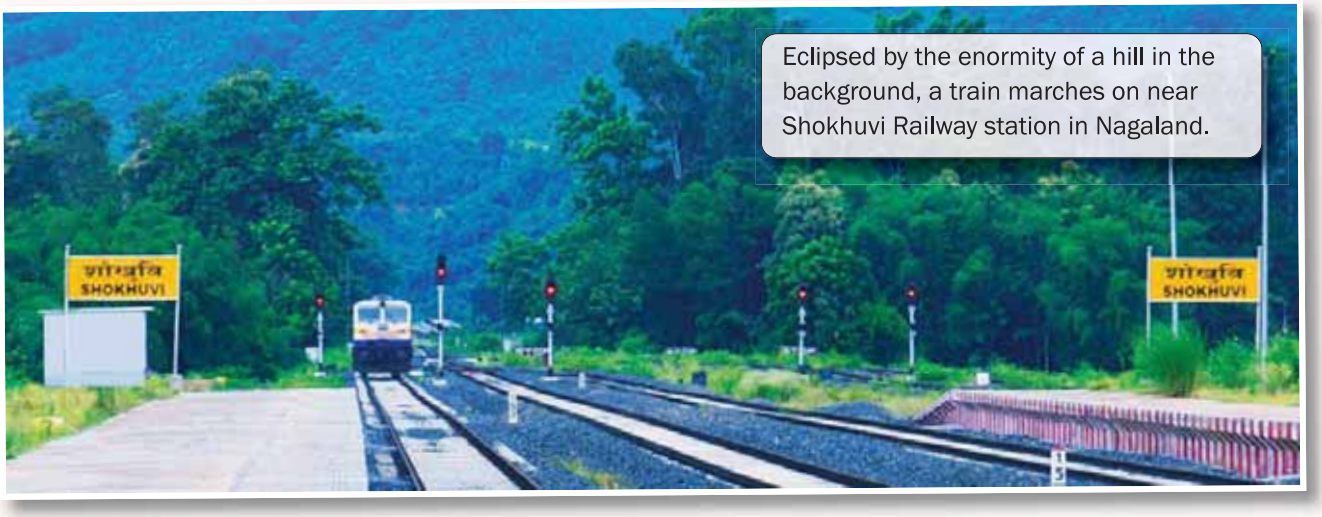
Triumphing over terrain, Vande Bharat Express maps the contour of Monkey Hill in Bhor Ghat, Maharashtra.



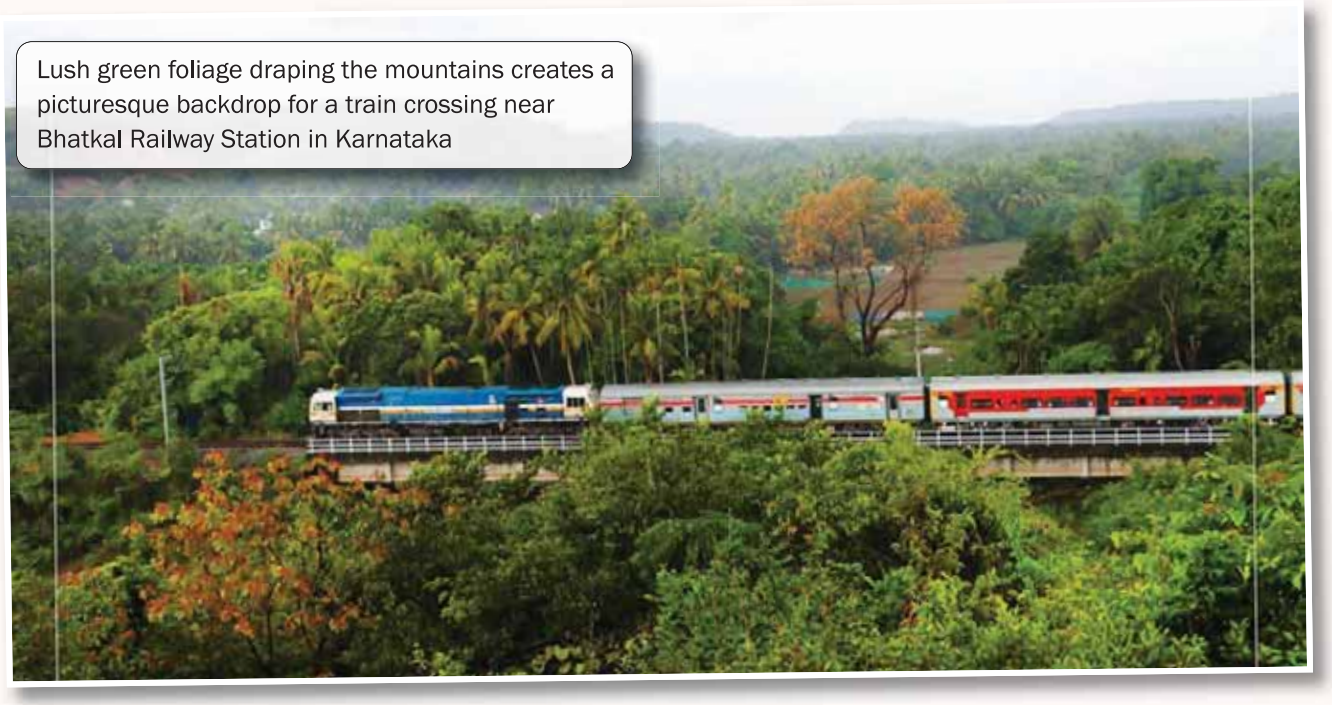
Proceeding towards New Cooch Behar, a train is greeted by a blossom hedge unfolding in all its glory near New Jalpaiguri Junction, Siliguri, West Bengal.



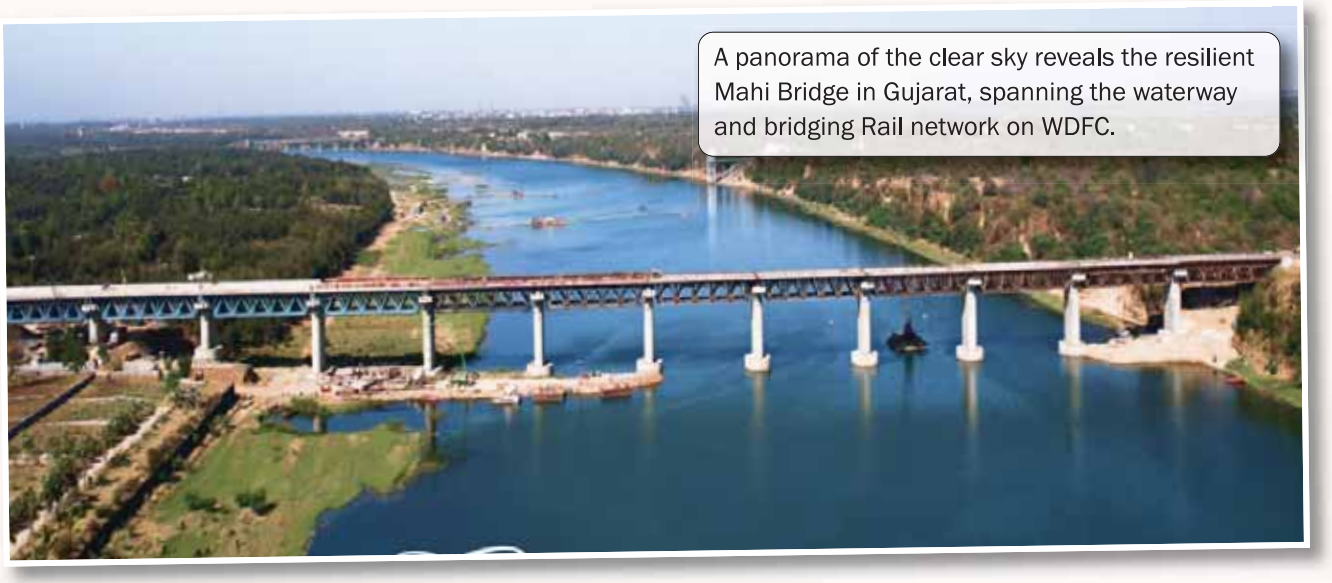
Strolling away with trees fringed on either side, Antagarh-Taroki Rail Line diffuses into the horizon.



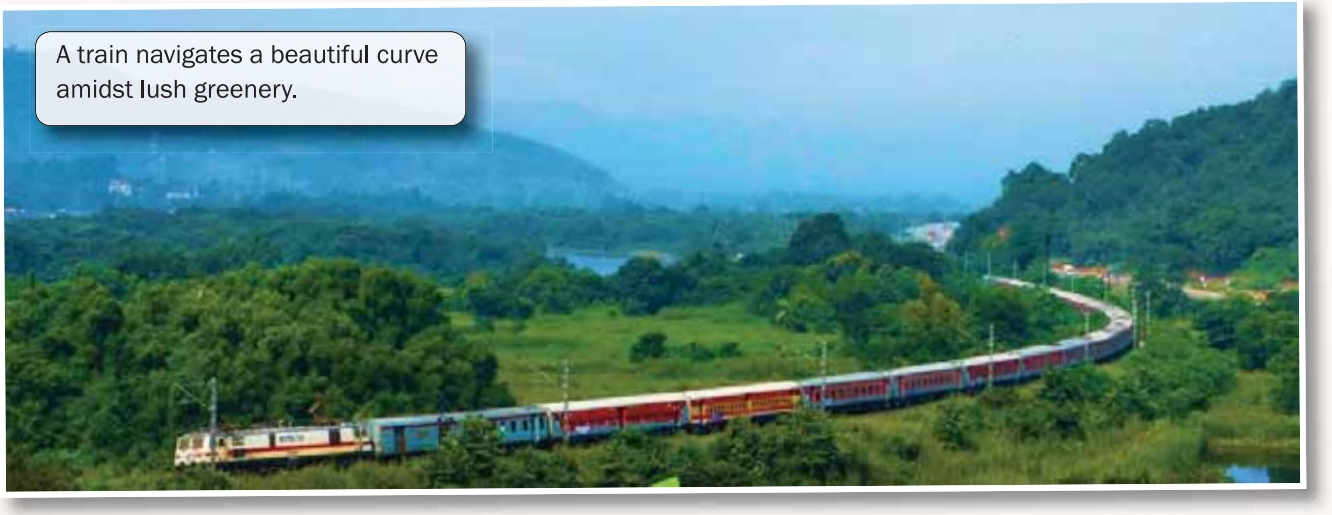
Eclipsed by the enormity of a hill in the background, a train marches on near Shokhuvi Railway station in Nagaland.



Lush green foliage draping the mountains creates a picturesque backdrop for a train crossing near Bhatkal Railway Station in Karnataka



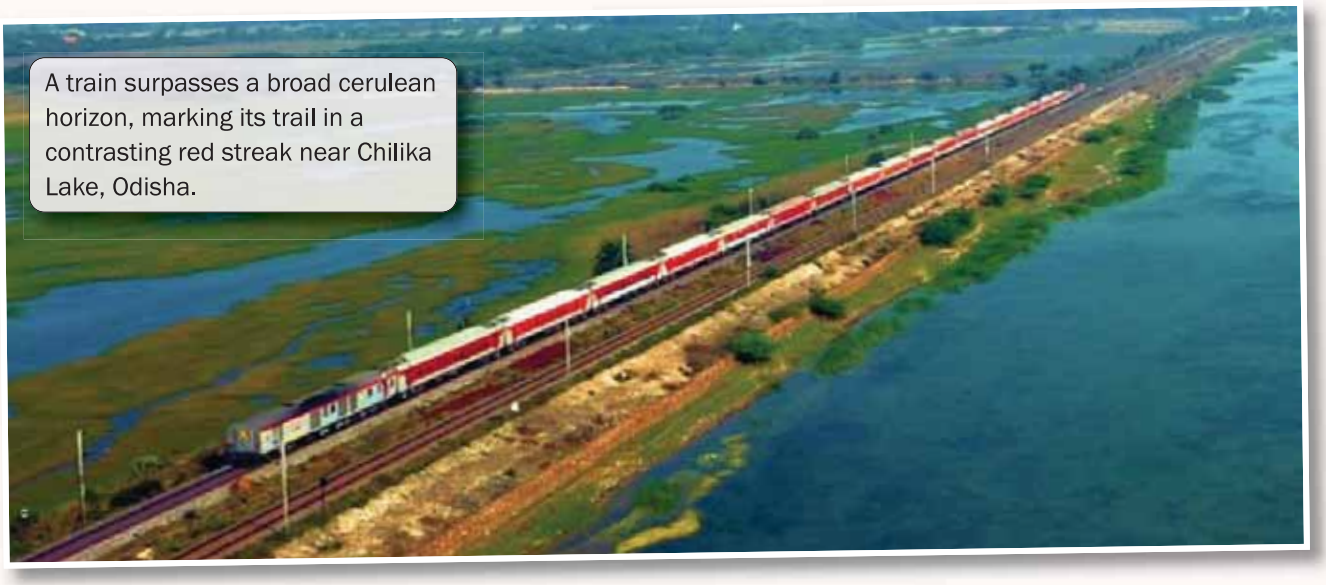
A panorama of the clear sky reveals the resilient Mahi Bridge in Gujarat, spanning the waterway and bridging Rail network on WDFC.



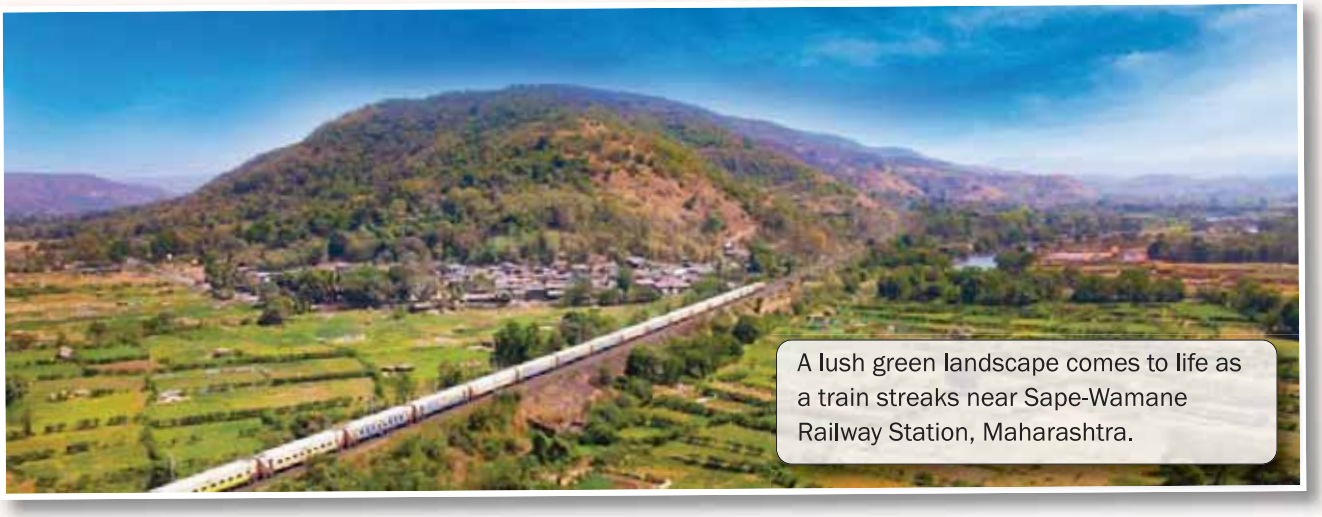
A train navigates a beautiful curve amidst lush greenery.



Marvel at the New Haflong Railway Station in Assam, with misty hills serving as the perfect backdrop.



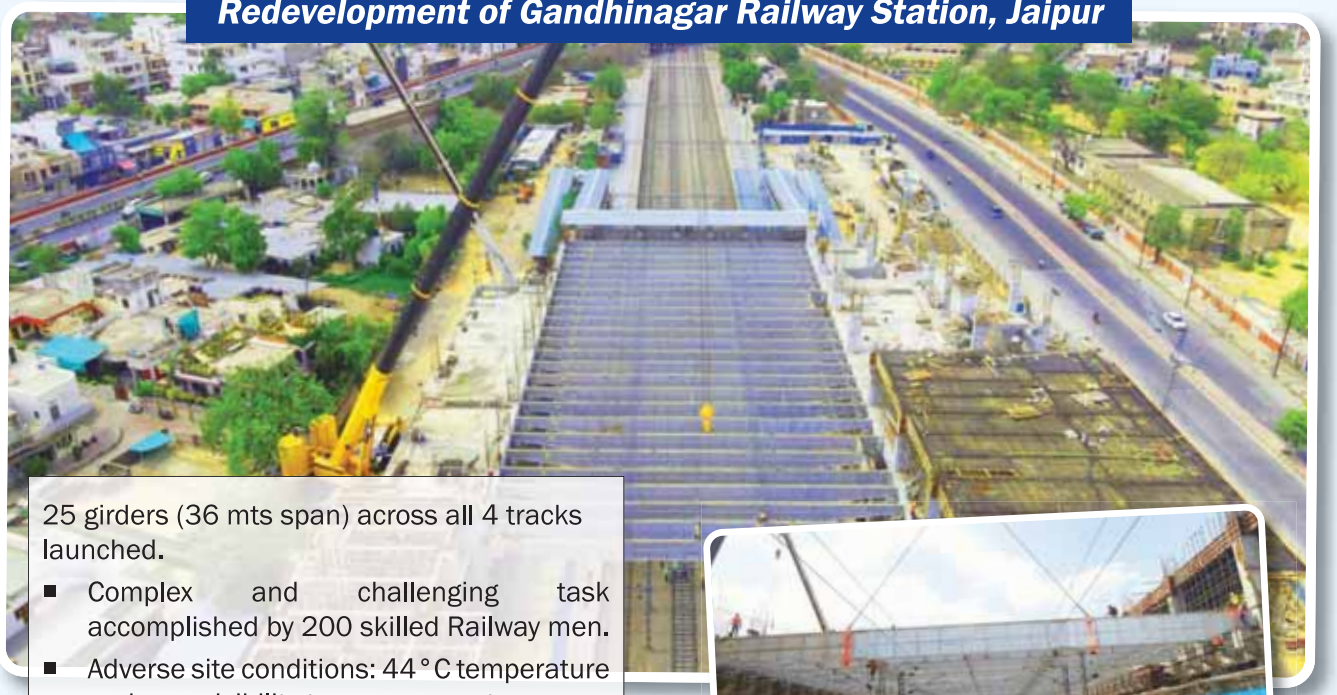
A train surpasses a broad cerulean horizon, marking its trail in a contrasting red streak near Chilika Lake, Odisha.



A lush green landscape comes to life as a train streaks near Sape-Wamane Railway Station, Maharashtra.

Progress Report

Redevelopment of Gandhinagar Railway Station, Jaipur



25 girders (36 mts span) across all 4 tracks launched.

- Complex and challenging task accomplished by 200 skilled Railway men.
- Adverse site conditions: 44°C temperature and zero visibility to crane operators.
- Completed in record 12 hour and 2 follow up blocks.

13th June, 2024

Swift progress in Vijayawada-Gudur 3rd Rail Line (288 km)



26th June, 2024

Progress: 233 km Rail line commissioned

Bolster connectivity between Northern and Eastern parts of the Country with Southern states

Boost trade and commerce in the region

Mathura-Jhansi 3rd Line Project (274 km)



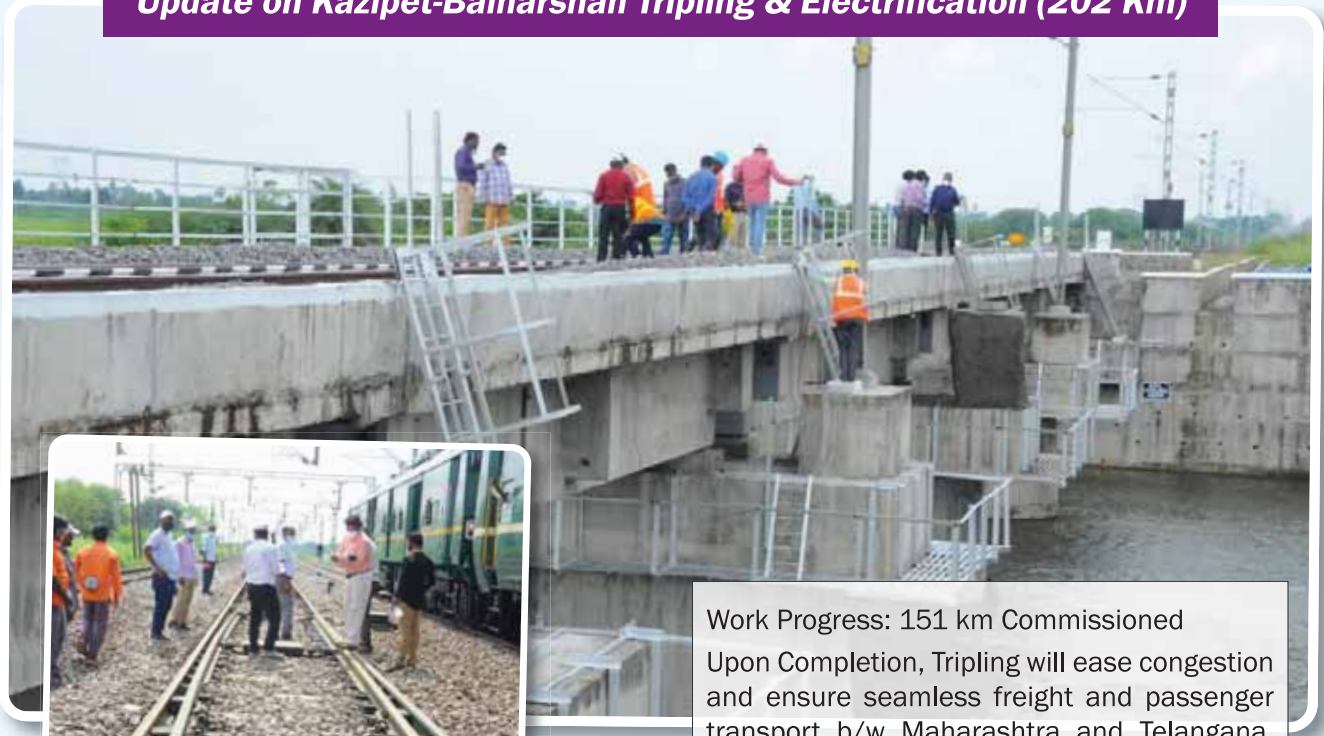
Work Progress: 193 km Commissioned

Benefits

- Propel regional development in Chambal region and Bundelkhand area
- Increase the average speed of trains

23rd June, 2024

Update on Kazipet-Balharshah Tripling & Electrification (202 Km)

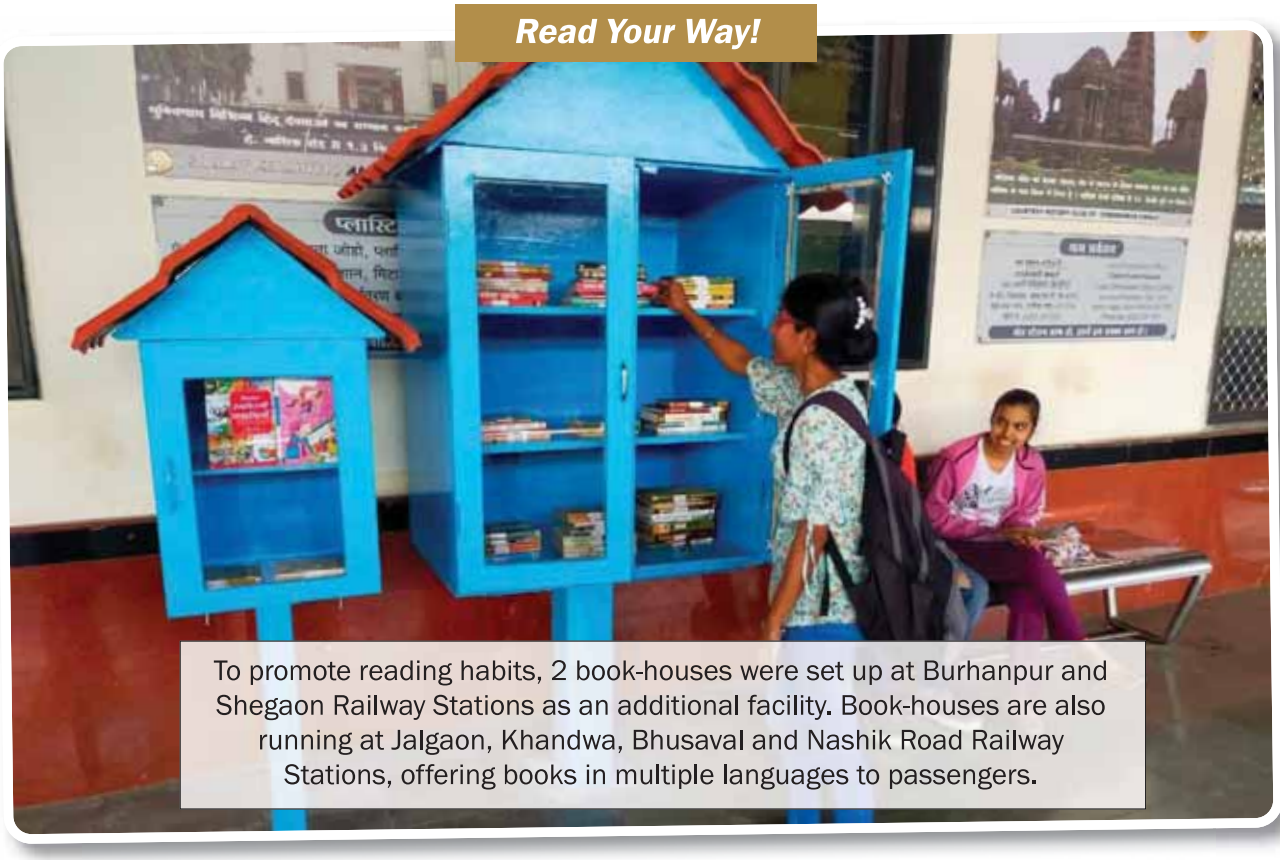


25th June, 2024

Work Progress: 151 km Commissioned

Upon Completion, Tripling will ease congestion and ensure seamless freight and passenger transport b/w Maharashtra and Telangana, aiding coal & cement transportation.

Read Your Way!



To promote reading habits, 2 book-houses were set up at Burhanpur and Shegaon Railway Stations as an additional facility. Book-houses are also running at Jalgaon, Khandwa, Bhusaval and Nashik Road Railway Stations, offering books in multiple languages to passengers.

Rail Coach Restaurant was inaugurated at Mirzapur Railway Station premises in Uttar Pradesh



At Mirzapur Railway Station premises in Uttar Pradesh a Rail Coach Restaurant was inaugurated. Local residents and railway passengers will be able to enjoy delicious food in this rail coach restaurant.

One Railway-One Signalling: Unlocking Hidden Potential of IR with Standardization & Automation

Shri Rajneesh Gupta
Executive Director/Signal
RDSO

Shri Amit Misra
Executive Director/Signal-I
RDSO

Shri Rajendra Dhambel
Ex. PED/S&T
RDSO

Abstract: RDSO is a globally recognized organization that has successfully standardized the fourth-largest rail network in the world. By skillfully integrating various technologies, they have achieved economies of scale, uniformity, and lower operating, maintenance, and production costs. Over the years, the IR signalling has made considerable efforts to standardize its practices through the use of signal engineering manuals and instructions, resulting in uniformity, ease of maintenance, and increased installation quality. However, one crucial area of signalling design and drawing has been neglected, leading to the proliferation of unstandardized practices that adhere to the same interlocking principles. As a result, timely and high-quality project execution, skilled manpower development, and in-house modifications have been adversely affected, hindering the use of technologies to achieve automation. In light of India's aspiration to position itself as an "engine of growth" and fulfil the national mission of "Gatishakti," standardization is the key to achieving that dream. This study aims to explore the causes, obstacles, initiatives, and future course of action in addressing this critical issue.

One Railway-One Signalling

Railway transport is the most cost-effective, safe, and environmentally friendly mode of transport. Every year, Indian Railways (IR) carries more than 8 billion people across India, which is continually growing. During covid pandemic, IR tireless efforts ensured uninterrupted supply chains across country. Thereby, rightfully claimed itself as the" lifeline of nation" or "engine of growth". Logistics and supply chain costs currently account for approximately 12% of India's gross domestic product (GDP), compared to 8% globally, attributed to the country's excessive reliance on road transport. To address this critical issue, Indian Railways has planned a massive capital expenditure of ₹2,15,058 crore in FY 2022-23 to align with the prime minister's mission gatishakti missive. Swift and high-quality project execution becomes critical to achieving this national mission and vision.

The Research Design and Standards Organization (RDSO) played a pioneer role in the world by standardising technologies and ensuring their seamless implementation across Indian railways. Through a deliberate policy, it achieved economies of scale, uniformity, and lower operating, maintenance, and production costs. All across the world, uniform standards such as EN, IEC, and IS have contributed to product uniformity and quality by requiring manufacturers to adhere to certain criteria when deploying their products. Only after the integration of the European Union (EU), EU emphasized standardisation pan EU, as evidenced by the adoption of uniform technologies and protocols such as ETCS and recently introduced the EULYNX protocol. Chinese railways have also successfully leveraged standardisation across their network in pursuit of their mission of "intelligence, integration, standardisation, and openness". It has facilitated them in seamlessly integrating new technologies while keeping implementation costs low.

The process of standardization involves developing and implementing common technical standards to establish a shared understanding of engineering criteria, principles, and practices. These standards provide organizations with a set of processes that, when carried out by qualified individuals using appropriate tools and methods, enable them to perform effective and efficient system engineering. They define expected tasks and outcomes and describe how processes and tasks interact to produce required inputs and outputs. Technical specifications or other precise criteria make up the standards, which provide several advantages, such

as consistency of output, production efficiency, reduced complexity of systems, shorter operation time, and faster development of qualified personnel for a particular task. Standardization also serves as a first step toward automation, enabling the creation of an automated SIL2/SIL4 tool. Additionally, it allows for establishing centres of excellence to focus on design improvement and provides an easier, faster way to put new policies or designs into practice.

Since 1955, Indian Railways has used the Signalling Engineering Manual (SEM) to standardise signalling principles in an effort to improve safety, efficiency, and cost effectiveness. In addition, it facilitated the Indian Railways to achieve its goal of "safety, security, and punctuality" by modernising its signalling system. Indian Railways is becoming digital by integrating systems and technology to better manage and control trains for passenger safety and comfort. Indian Railways' signalling systems are rapidly moving from analogue to digital, which requires standardisation. Standardisation of drawings is the first step towards automation, improving productivity and project delivery times . IR signalling was largely successful in standardising their products through uniform policies and manuals such as SEM; however, guidelines for standardising S&T drawings remained insufficient. In addition, zonal railways have their own naming conventions for signalling functions based on their own preferences and practises. Because of this, IR now has around 72 different types of interface circuits and 150 different types of application logics, which impedes the timely completion of projects. Since primary objective of entire IR is “SAFETY”, it is essential to standardize design and drawing practices to overcome challenges of speedy & quality project execution. The study delves into current issues surrounding design and drawing preparation, their associated challenges, and finally, the methodology for overcoming those obstacles.

Challenges in Signalling Design and Drawings for Indian Railways

Signalling system is the vital part of a railway system which ensures safe travel and improves overall capacity of the system. One of the primary reasons that signalling systems are critical and difficult to develop is that they must adhere to the recommendations of related functional safety standards such as EN 50128, EN 50126, and EN 50129. Railway interlocking systems are categorized as safety critical systems with SIL-4, based on EN50126 and IEC61508 standards. The railway interlocking systems' functional specifications are defined in signalling interlocking plans (SIP) and interlocking control tables (or table of control) (TOC). They spell out the conditions that must be met before a train can be moved on railway lines or stations. TOC serves as both an interlocking design specification for interlocking designers and a test specification for testers. These tables summarise the interlocking system's critical functional safety requirements. Railways design application logic for signalling circuits using SIP and TOC. The process of developing these SIP and TOC, particularly for medium to large scale stations, is labour intensive, time consuming, and requires specialised skills. Currently, the process is entirely manual. Obviously, this can be a significant source of human error during the interlocking system design process. Fig. 1 illustrates a typical work flow for the design and drawing process associated with yard commissioning. The process is repeated if any of these steps for document preparation are altered.



Fig.-1

Signalling plan is a complicated set of safety related documents that necessitates a high level of technical expertise to prepare, verify and validates. Further, due to manual processing of specialized of work and extensive work load of different project in recent times, The D & D department is severely understaffed, resulting in a massive backlog of work. Projects are frequently delayed due to a severe staff shortage and the nature of the work. The

typical working days required to prepare these critical documents, such as SIP, TOC, and application logic with IFAT is given in Fig.-1, which increases significantly as number increases higher beyond 500 routes.

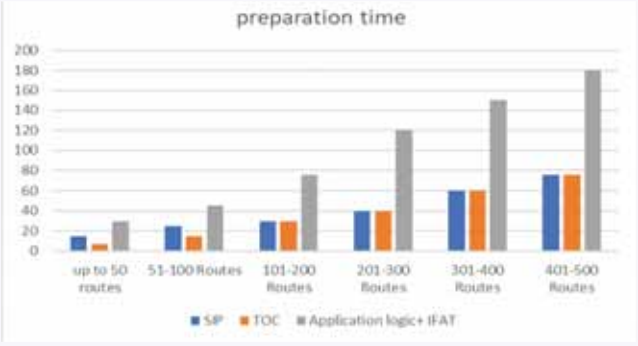


Fig.-2

During the course of a project's execution, changes made to the SIP and TOC can trigger further changes, leading to project delays. Additionally, CRS recommendations during the final commissioning stage may cause delays or result in insufficient testing. In order to accommodate these changes, project deadlines are often compromised, resulting in increased costs, planning failures, and bunching of projects. These constraints can also compromise the quality of the final output, with qualitative issues being discovered at a critical final stage or going unnoticed for extended periods of time.

Preparing D&D documents poses a number of typical challenges that affect changes, necessitating due care during preparation. For example, multiple zonal/divisional/sub-divisional practices can complicate the preparation of input for automation, with input from railways differing from zone to zone and resulting in 72 types of interface circuits patterns and 150 types of application logic patterns. Additionally, time constraints may lead to the initiation of the design process with unapproved SIP/RCC inputs, which are then subject to numerous modifications during the approval process, requiring additional design work. Even approved inputs, such as SIP and TOC, can be modified at the last minute due to observations by CRS or other agencies, leading to design delays and requiring additional effort and time. Finally, unwritten policies and practices of zones/divisions or D&D officials can also affect the design implementation process. Below are some typical challenges in preparing D&D documents that affect changes, which mandates due care while preparation: -

Common design elements affecting frequent changes in SIP

1. Signalling gear addition/deletions/Renaming.
2. Shifting the Signal position.
3. Crank handle Group changes.
4. Level crossing controls (addition/removal).
5. Uncontrolled signalling gears scope changes.
6. Aspect controls changes.
7. Block Instrument changes (UFSBI, SGE etc).
8. BPAC changes (HASSDAC/MSDAC).
9. Gradient changes.

Common design elements affecting frequent changes in TOC

1. Finalization of number of routes.
2. Converse locking clarification.
3. Back Shunt/short shunt movement finalization.
4. Long halt train movements.
5. Level cross control limits.
6. Cup shape movements practice/reference changes.
7. Conditional locking for Yard flexibility.

Common design elements affecting frequent changes for sectional route release table

1. Method of SRR table preparation (Route Wise or Section Wise).
2. Sections to achieve Yard flexibility (Grouping of Multiple track for section) is getting changed based on individual perspective. No solid standard for allocating sections.
3. Design as per SIP/SM position.

Other challenges in Design Document

1. VDU screen resolution changes/ size changes as per site requirements (2K, 4K & multiple 4K).
2. Axle counter Reset functions (Hard Panel/VDU).
3. Mismatch in site requirement and standard practice might lead changes in later stages.
4. Different type of relay nomenclature.
5. Variety of block working requirement.
6. Different type of signal and .lighting circuit.

Standardization and automation in Application Data Design and its importance:

The standardisation of application data design plays a crucial role in improving the efficiency and effectiveness of railway design processes. It enables quick turnaround and dispensing of manual approval processes, resulting in an expeditious approval process. Standardisation also allows for validation and verification through formal methods, improving the understanding and ease of maintenance. Conformance to RDSO Relay Logic standards and verification of interlocking logic with respect to safety principles are also ensured through standardisation. Additionally, it enables simulation and visualization of yard working, and the generation of test plans for factory and site acceptance tests. Overall, standardisation leads to improved design quality and reliability, reduced cost, enhanced safety and more importantly pave way for automation.

Success of 21st century is credited to automation. Automation of manual repetitive job based on standarization result increased productivity, more efficient use of man and materials, better quality, improved safety, and reduced delivery period. Despite the claims of high quality from good workmanship by humans, automated systems typically perform the manufacturing process with less variability than human workers, resulting in greater control and consistency of product quality. Furthermore, automation provides advantages such as efficient change request handling, minimized risk of project delays, validation of system requirements, automated safety verification, streamlined development process, and simplified maintenance and upgrades.

Consequently, standardization of typical yard layout and other D&D practices will help CRS to scrutinize plans faster without much change suggestions. Due to complexity of application design, IR is usually dependent on OEM for even simpler yard modification. Standardization along with automation will make railways self-sufficient and expedite yard modifications.

Action plan for implementing standardization in design and drawing

Interface circuits (to reduce 30 to 40% of time without even using tools)

- Sheet numbers of circuits standardised to make detailing faster.
- Each circuit to be standardised including block circuits across IR.
- Upto 4 road stations, bit position and relays position to be standardised to the maximum possible.
- CT rack termination of cable and type of cable to be standardized.
- System configuration and switches to be standardized.
- Relay contacts to be standardised for each circuit.

Application Logic (to reduce 30 to 40% time)

- Each circuit and contact proving standardised across IR. It should be mandatory to be implemented for minimum 100 routes stations.
- Application logic structure to be standardized by OEM.
- Each route should prove contact as per RCC line for easy verification.
- Each route should have it's own UCR and HR to avoid more parallel circuits and finally one common UCR/HR to be picked for signals having multiple routes.
- Except stick path and ASR circuits, parallel paths to be avoided for faster verification.

Areas of Automation

Signalling systems are amenable for automated computerized testing as the sequence of activities is precise and repetitive; results are predictable.

1. Automation of design and drawing document of signalling plans like signal Interlocking plan, table of control , application logic etc.
2. Automation in preparation of system integrity test plan and verification and validation of system integrity.
3. Automation in Factory Acceptance testing (FAT) and Site acceptance testing (SAT).

Indian Railways Initiatives for Standardization and Automation

Realisation of above challenges prompted Indian Railways to focus on addressing above issues in the last decade. In 2018, Railway Board constituted two separate committees for

(i) Standardisation of drawings - Signalling Plans,

Control Tables, Scheme Plan and Version Control concepts.

(ii) Finalisation of the typical Electronic Interlocking circuits.

Based on the drawing practices of major railways, the committee for 'Standardisation of Drawings' published booklet 'Standardisation of Drawings V2.0' in 2019. available on Railnet at url http://10.195.2.19/iriweb/wiki/Learning Resources. This report elaborates on the common standards to be adopted by all railways in preparation of signalling plans, associated tables, notes and symbols; standard interlocking table, VDU diagram and introduction of version control and scheme plans. Similarly, second committee on typical electronic circuits has issued second report.

Following standardizations schemes have been submitted by RDSO and IRISET

1. Signal scheme plan has been standardized with layout, signalling details along with other associated information which includes main signals, train detection, gradients, symbols, numbering. Further more it has detailed to their modification process, updates and approval process.
2. Interlocking control table or TOC has been standardized.
3. It has defined document upkeep and their version control measures. Detailing has been done in such a way that each document and their subsequent modification are uniquely identified.
4. Type of relays both interface and internal and their nomenclature standardised
5. Signal functions for signalling plans as well as for VDU panel has been standardized.
6. VDU menu commands as well as VDU layout has been standardized.
7. Symbol for signal, different boards, operation place, gradient, indicators, LC gates, track circuits, points lines have been standardized for signalling plan as well as VDU panel.

The RDSO has developed a suite of techniques and tools to assist with the design of railway signalling systems, including Train Operation Control (TOC) and application logic. The railway yard is captured using a layout editor (LEWeb), which automatically identifies routes, conflicts, isolation requirements, and other aspects of the system. This information is then used to generate a route control chart (RCC), which in turn is utilized to produce relay logic expressions for the electronic interlocking equipment. Furthermore, the RDSO is planning to seek SIL-2 certification for regular use of these automation tools after developments.

Conclusion: India's railways industry is on the brink of significant growth, driven by the country's ambitious vision for progress under the auspices of the PM mission gatishakti. However, in order to achieve these aspirations, there is a pressing need to expedite project execution while simultaneously enhancing quality, reducing costs, and minimizing time. While IR has already made significant strides towards standardization, there remains a crucial imperative to translate these frameworks into meaningful action. Effective implementation represents an unparalleled opportunity to bring all zonal and divisional railways onto a shared platform, facilitating greater coherence, consistency, and productivity across the industry. It is important to note that standardization is not a one-time event but a continual process, requiring the establishment of a center of excellence for design that can address the complex and evolving challenges associated with this rapidly changing sector. Ultimately, standardization is the key to unlocking technical development and realizing the full potential of India's railway industry.

The development of standardized design principles has already begun to yield significant benefits, particularly in the realm of automation, where established techniques and tools have transformed the design process for railway signalling systems. While these automation tools are widely used in developed countries and metros, they have yet to be fully exploited in India to address the complex demands of railway signalling. However, the recent progress made by the RDSO in developing these tools represents a major milestone in the modernization of India's railway signalling systems. By automating the design process, these tools can minimize the risk of errors and inconsistencies, and substantially enhance productivity and efficiency. Moreover, the planned SIL-2 certification will further ensure the reliability and safety of systems designed using these tools. Overall, standardization is a vital enabler of the Indian railway industry's journey towards greater growth and prosperity, and the RDSO's endeavours are a promising indication of the transformative power of modernization in this vital sector.■

South Western Railway's Track Upgradation Initiatives

Shri Pavan H. Somannavar
Sr. Publicity Inspector, CPRO/O/HQ/SWR



Track Fitment Analysis

An analysis of track suitability within SWR divisions provides valuable insights into the current state of infrastructure readiness for increased speeds. The total track length in SWR is 5,346.621 km, of which 2,360.255 km of track is suitable for running trains at a speed of 110 kmph. Additionally, 1,155.192 km of track is suitable for trains to operate at speeds around 100 kmph, while 858.212 km of track can accommodate speeds of 80 to 100 kmph. Furthermore, 751.655 km of track is capable of supporting speeds between 60 to 80 kmph, and 221.301 km of track is suitable for speeds below 60 kmph due to topography constraints.

Proposals for Speed Enhancement

SWR has put forward several proposals to raise the sectional speeds of key rail routes, aiming to improve connectivity and reduce travel time for passengers. Proposals to raise speeds from 110 to 130 kmph on the Bengaluru City-Jolarpettai and Bengaluru City-Dharmavaram sections are in process for approval. Additionally, plans are underway at the division level for the Bengaluru-Hubballi-Dharwad route with an Investment of ₹491.49 crore, to elevate speeds to 130 kmph. Another project involves the provision of double distant signals in the Chikkabanavara-Nelamangala-Hassan section of Bengaluru Division. This initiative aims to enhance speeds to 130 kmph and improve overall safety and efficiency along the route and is also underway at the divisional level.

Reasons for Lower Speeds of Trains

Infrastructure Condition: The sections with lower speeds encounter challenges such as worn-out tracks, insufficient ballast, and infrastructure concerns, including critical bridges and tunnels. Additionally, the type of coaches and wagons utilized also plays a role in determining operational speeds.

Curves and Gradients: Sections with sharp curves or steep gradients inherently limit the speed at which trains can safely operate. Trains need to slow down to navigate curves without derailing and to ascend or descend gradients without losing control.



Level Crossings: Sections with frequent level crossings often impose speed restrictions to ensure that trains can safely stop in case of vehicles or pedestrians crossing the tracks. Higher speeds in such areas could increase the risk of collisions.

Station Infrastructure: Stations with shorter platforms or limited facilities may require trains to reduce speed when approaching or departing to ensure passenger safety and efficient boarding and alighting.

Urban Areas: Sections passing through densely populated urban areas may have lower speed limits to minimize noise pollution, vibrations, and the risk of accidents in crowded areas.

Maintenance Work: Temporary speed restrictions may be imposed during maintenance or repair work to ensure the safety of workers and passengers. These restrictions are lifted once the maintenance is completed.

Works Required for Speed Enhancement

- Increasing of super elevations, to make curves fit for higher speed.
- Ballasting of track.
- Tamping of track.
- Removal of defective rails (Defective Welds which is to be Renewed/Defective Welds which is to be kept under observations) from track.
- Removal of ordinary Switch Expansion Joints from track.
- Attention of track based on latest TRC (Track recording Car) run analysis and OMS (Oscillation Monitoring System) run analysis.
- Identification of Trespassing locations and suitable measures have to be taken to prevent trespassing.
- Improvements of weak formations and de-stressing of bridges.

Conclusion

Improving overall railway efficiency and safety typically entails infrastructure upgrades, track maintenance, modernization of signalling systems, and adherence to safety regulations. The proposed track upgrade initiatives by South Western Railway represent a significant advancement in enhancing rail travel within the region. With the aim of increasing sectional speeds and modernizing track infrastructure, SWR seeks to enhance connectivity, decrease travel time, and elevate the passenger experience. As these proposals advance through different stages of approval and implementation, they carry the potential to reshape the rail network and open up new avenues for economic growth and development throughout the South Western Railway region.



TECHNOLOGY WITH A HUMAN TOUCH 5.0

Prof. S. Balakothandapani
Former Chief Trainer, ZRTI /TPJ



Technology is moving so fast that you have to unlearn the old things and relearn new things according to moving time. Covid pandemic enabled us with ways to automate and work along with humans and machines to enhance productivity. This is how we embarked upon bringing a lot of automation into the organisation.

George Cardoz,
Head HR, Forbes Marshall. I

During 1780 steam engines were created, that is 1.0 Mechanisation. Then came Electrification called 2.0 After that is 3.0 Automation and that took about 200 years. So automation came in 2010. From 3.0 to 4.0 it has been just 40 years and we are talking about 5.0 already. The pace of change is accelerating. So we as human beings also have to catch up with the change or the acceleration of the change. Technology was probably taking place of the humans.

WHAT IS 5.0

The fifth Industrial revolution or 5.0 will be focused on the co-operation between man and machine, as human intelligence works in harmony with cognitive computing. By putting humans back into industrial production with collaborative Robots, workers will be unskilled to provide value-added tasks in production leading to mass customization and personalization for customers.

Preparing to Change the World With Artificial Intelligence

The famous American researcher Raymond Kurzwell said at the beginning of this century that technology is not limited to making tools, it is a process that gives rise to more powerful technology. He said that the pace of development of technology will at least double in a decade. The level at which technology has reached today proves that his statement was not wrong. But with the rapid development of technology, the fear of it getting out of control has spread equally fast.

AI has made its prominent place in all the new inventions of the world. It is able to influence all its activities through superhuman intelligence. Actually human is of inquisitive nature and wants to know everything. In such a situation this technique will prove to be very helpful. Advances in technology often open the door to prosperity, whether the development is of the nation, individual or social everything is connected to each other through techniques. It is technology that has made human life very comfortable, easy and interesting. Along with this, the truth is also where on one hand technology has always paved the way for development at the same time some ethical dilemma has also come in the way of technology.

In point of fact, Artificial intelligence means intellectual ability developed in an artificial way. In this an attempt is made to run a computer or robotic system on the basis of the same logic on which the human brain work according to John McCarthy the Father of Artificial Intelligence, it is the science and engineering of creating intelligent computer programs that are performed by machines. Actually it is a computer controlled robot or software that thinks in an intelligent way like a human. It also studies how the human brain thinks, how it takes decisions, what it thinks while solving the problem and how it works. Then he also guides him accordingly.

Central Government Guidelines

The Central government had prepared a 7–point strategy which would form the basis of India's strategic plan to use Artificial Intelligence. Prominent among these are:

- Developing methods for human machine interaction.
- To build an empowered workforce with Artificial Intelligence and R&D.
- Ensuring the security of Artificial Intelligence systems.
- Understanding and working on the ethical, legal and social implications of Artificial Intelligence.
- Evaluating Artificial Intelligence technology as a standard and measuring through benchmarks

BLUE OCEAN 5.0

Blue Ocean is a truly recognized deep tech start up globally and is actually working on nabobs. It is science that never existed before and when started this journey, most of people used to perceive it as science fiction. Nanobot is a tiny robot that can be injected inside the human body and can travel through it. It was very hard to believe because most people have no inkling of what is Artificial Intelligence in the 5.0 Industry.

I continue to be original by being passionate about what I am doing. This sense of being original is what I feel is lacking in most of the population. I still recall I used to talk to people and ask them that as to why they were graduating and hardly anyone came and said they were doing it because they were crazy about it.

APAR GUPTA
(Founders), Blue Ocean Innovation)

Artificial Intelligence in Indian Banks

An analytical study was conducted on banks' Annual reports by the RBI staff between 2015-16 and 2021-22. The study employed a textual analysis method by matching key-words specific to the domain and utilizing named entity recognition techniques. It leveraged widely recognized Artificial Intelligence and Machine Learning using a cloud indicates a significant emphasis by banks on automation.

Conclusion

Today Artificial Intelligence is a burning topic. Scientists are worried about its good and bad consequences.

Ai can be used to create intelligent systems which are embedded in machines that can work with higher accuracy and speed than humans and at the same time be responsive like humans. AI together with Internet of Things and Sensor Technology can be the great enabler of precision agriculture. AI can play a critical role along with remote sensing technology in wide scale implementation of Climate Smart Agriculture.■

Mahalaxmi Express

where changes are constant

Shri Parag Purohit

There is a historical train running on Indian Railways' network, which is connecting the cities of Mumbai and Kolhapur-the Mahalaxmi Express. The train is running since 1863 and over the last 160 years she has changed a lot. The latest change is that the old ICF coaches in this train have been replaced with the state-of-the-art LHB coaches. This change has made the overnight journey more comfortable and pleasant.

Recently, I got a chance to travel by newly converted Mahalaxmi Express. That was my first journey by this train after many years. As I got on the platform, the train was already shunted there. The entire rake of brand-new coaches was glittering in the platform lights. I boarded in my coach and went to my seat. I did not have any difficulty in searching my seat number due to proper bright lighting in new coaches. Seating arrangement was looking better than older coaches. Now I started feeling confident that my journey would be comfortable and pleasant. The train started journey sharp at right time from Chhatrapati Shivaji Maharaj Terminus Mumbai.

The Mahalaxmi Express was introduced immediately after opening of the Bhore Ghat section in 1863. The Ghat lies between Mumbai and Pune. Mahalaxmi Express was then known as Poona Mail and was running bearing that name till 1970s. She was a daily Mail train service between then Victoria Terminus (now renamed as Chhatrapati Shivaji Maharaj Terminus) and Pune. Poona Mail used to depart from Pune at 7 in the morning and reach at Victoria Terminus (VT) at 11:10. In return journey she used to depart VT 2:45 pm and arrive at Pune at 7 O'clock in the evening. Many years later the timings of return journey to Poona were changed i.e. departure from VT at 5:55 pm and arrival at Poona at 10 pm. After independence the Poona Mail was extended up to Bangaluru via Miraj. But the route from Pune to Bangaluru was metre gauge. Due to change of the gauge passengers had to physically transfer from broad gauge Mail to metre gauge one at Pune Junction. In 1974, the gauge conversion of entire Pune-Miraj-Kolhapur route was completed and the broad gauged Poona Mail started coming up to Miraj Junction. But the rest of the route still remained metre gauge between Miraj and Bangaluru. Hence, the physical transfer of passengers started taking place at Miraj Junction instead of Pune Junction. Later in 1974 the broad gauge Bombay-Poona Mail was extended up to Kolhapur and the time table of that train was also changed.



After extension to Kolhapur the Poona Mail was renamed as Mahalaxmi Express. The name was given after the Goddess Temple of Adishakti Ambabai (also known as Mahalaxmi), which is situated in the heart of the city of Kolhapur. Nowadays Mahalaxmi Express is carrying around a thousand passengers daily. It is one of the most popular trains running on Central Railway.

During 19th century then Poona Mail (Mahalaxmi Express) was running with wooden framed coaches. Those days she was one of the prestigious trains on Indian sub-continent. In later years the wooden coaches were replaced with steel coaches and with ICF coaches after independence. From 25th January, 2024 Mahalaxmi Express has started running with modern LHB coaches. During pre-independence era then Poona Mail was running with 7 coaches, but now she is running with 21 LHB coaches. The coaches have been equipped with bio-toilets and LED lights. The work horse of this legendary train changed over the years from steam engine to diesel and now to electric locomotive. All these features make the Express really a Green Train.

My journey from Mumbai to Kolhapur on Mahalaxmi Express ended with great satisfaction. I was travelling in Sleeper Class. During the journey I found that a heighted person like me can comfortably sleep on the side berths. These berths are longer than side berths in conventional coaches. I also noticed that the LHB train can pick speed more fast than older conventional coaches and gives a smooth ride. My overall experience of this new avatar of the legendary train was very good. I deboarded at Kolhapur's Shri Chhatrapati Shahu Maharaj Terminus at 7 in the morning. I already knew the historical facts of this legendary train before boarding. Hence, when I completed the journey, one thing that came to my mind was "the change is always constant".■

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Test Your Knowledge

1 Who is our new Minister of Railways?

(a)	(b)	(c)	(d)
Shri Suresh Prabhu	Shri Ashwini Vaishnaw	Shri Piyush Goyal	Shri D.V. Sadananda Gowda

2 Who assumed the charge of Minister of State for Railways and Food Processing Industries?

(a)	(b)	(c)	(d)
Shri Ravneet Singh	Shri Jayant Chaudhary	Shri Gajendra Singh Shekhawat	Shri Mansukh Mandaviya

3 Name the Minister of State for Railways and Jal Shakti?

(a)	(b)	(c)	(d)
Shri Pankaj Chaudhary	Shri Jitendra Singh	Shri V. Somanna	Shri Arjun Ram Meghwal

4 A new record has been set by the Ministry of Railways by uploading how many photographs in one hour in the programme organized on 26th February, 2024?

(a)	(b)	(c)	(d)
550	690	583	683

5 How many Gati Shakti cargo terminals has Indian Railways planned to set up?

(a)	(b)	(c)	(d)
75	60	65	80

6 The world's highest railway bridge on which a trial run was conducted recently, has been built in which state or union territory of India?

(a)	(b)	(c)	(d)
Jammu & Kashmir	Ladakh	Himachal Pradesh	Meghalaya

7 How many seismometers will be installed between Mumbai-Ahmedabad High Speed Rail Corridor?

(a)	(b)	(c)	(d)
25	27	30	28

8 What is the length of the underwater metro transportation tunnel built under the Hooghly river?

(a)	(b)	(c)	(d)
5 km	4.8 km	4 km	5.5 km

9 How many 'Amrit Bharat' trains are currently in service?

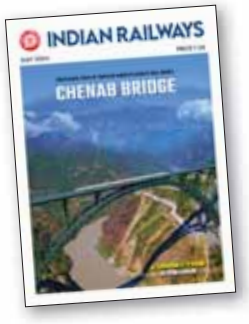
(a)	(b)	(c)	(d)
5	4	2	3

10 What is the name of the mission run by RPF to stop smuggling of wildlife and animal parts?

(a)	(b)	(c)	(d)
Operation WILEP	Operation Narcos	Operation Jeevan Raksha	Operation Uplabdh

Right Answers

1- (b)	2- (a)	3- (c)	4- (d)	5- (c)
6- (a)	7- (d)	8- (b)	9- (c)	10- (a)



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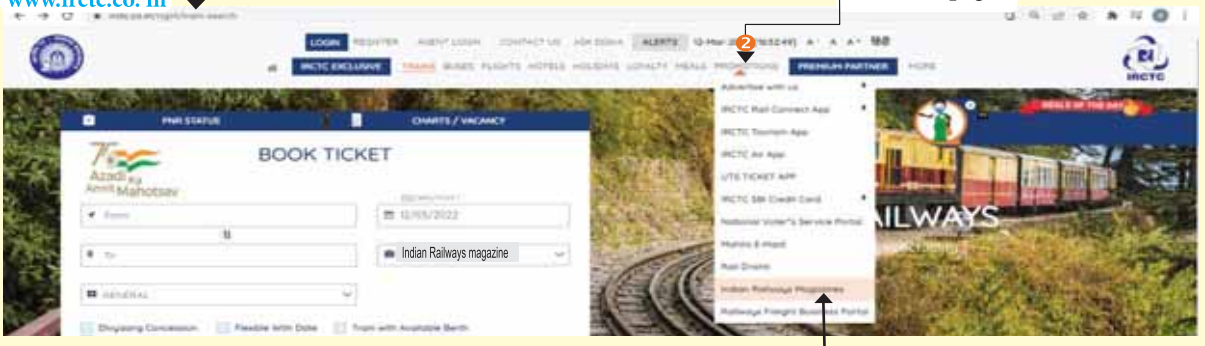
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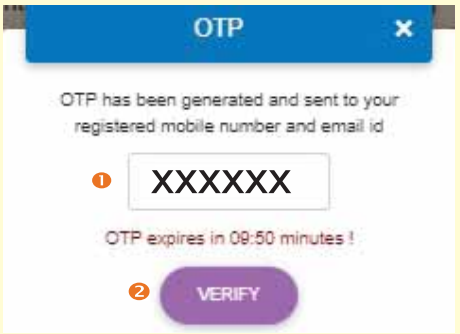


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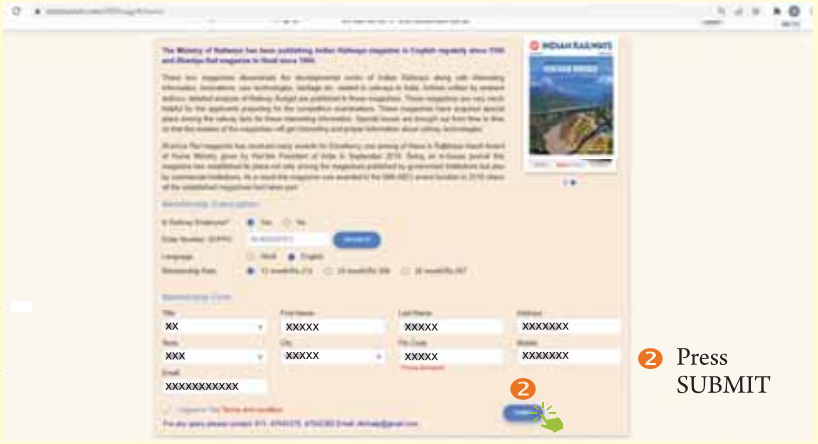
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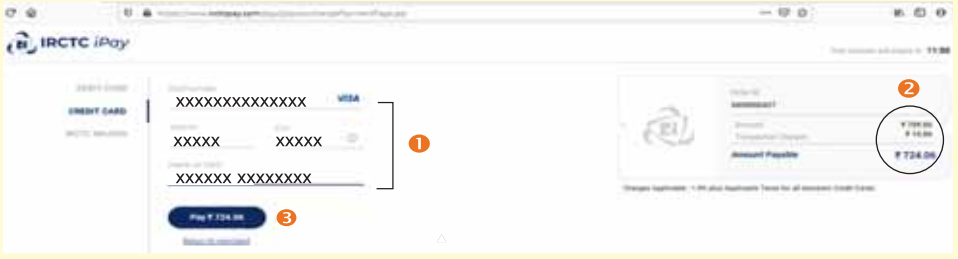
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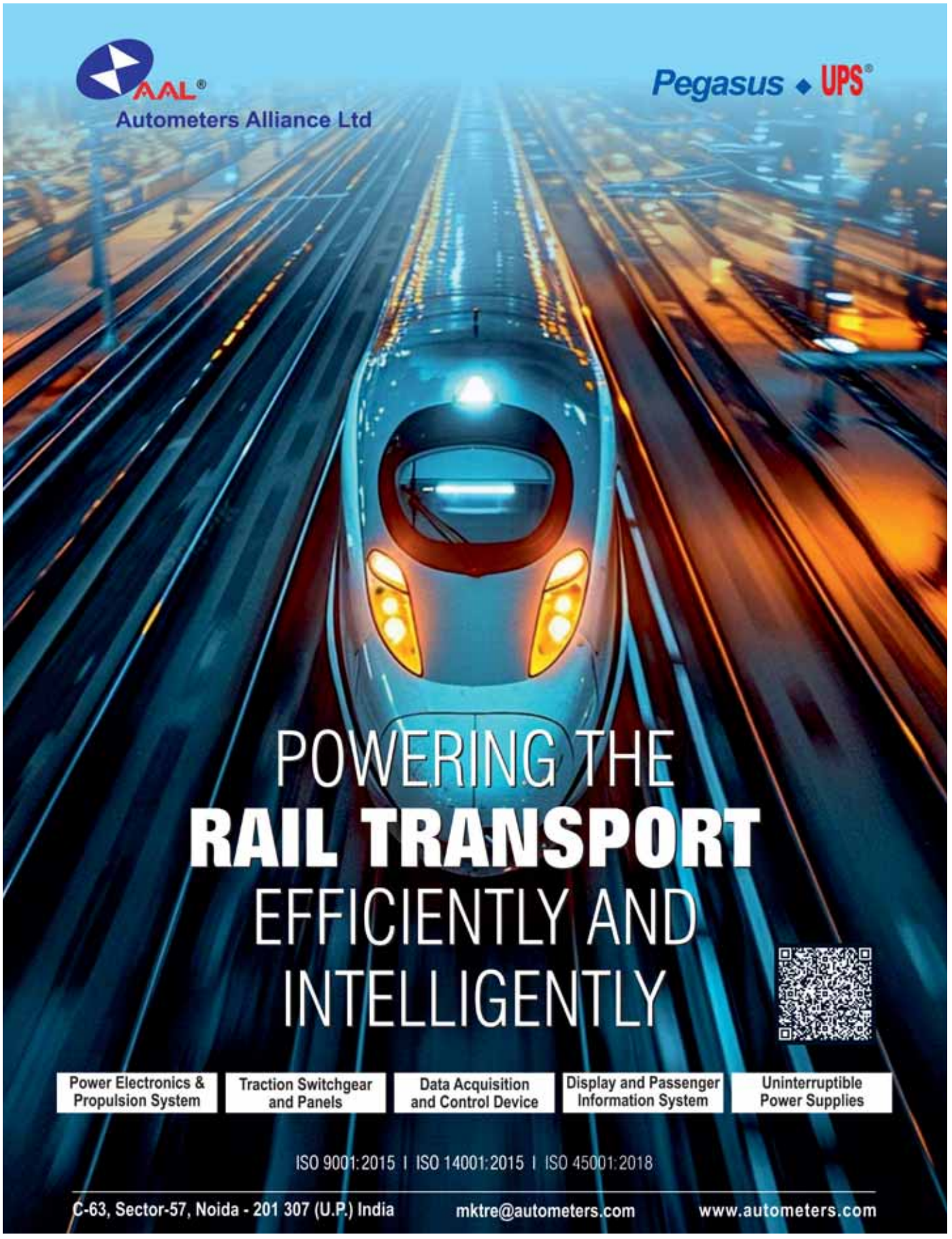
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