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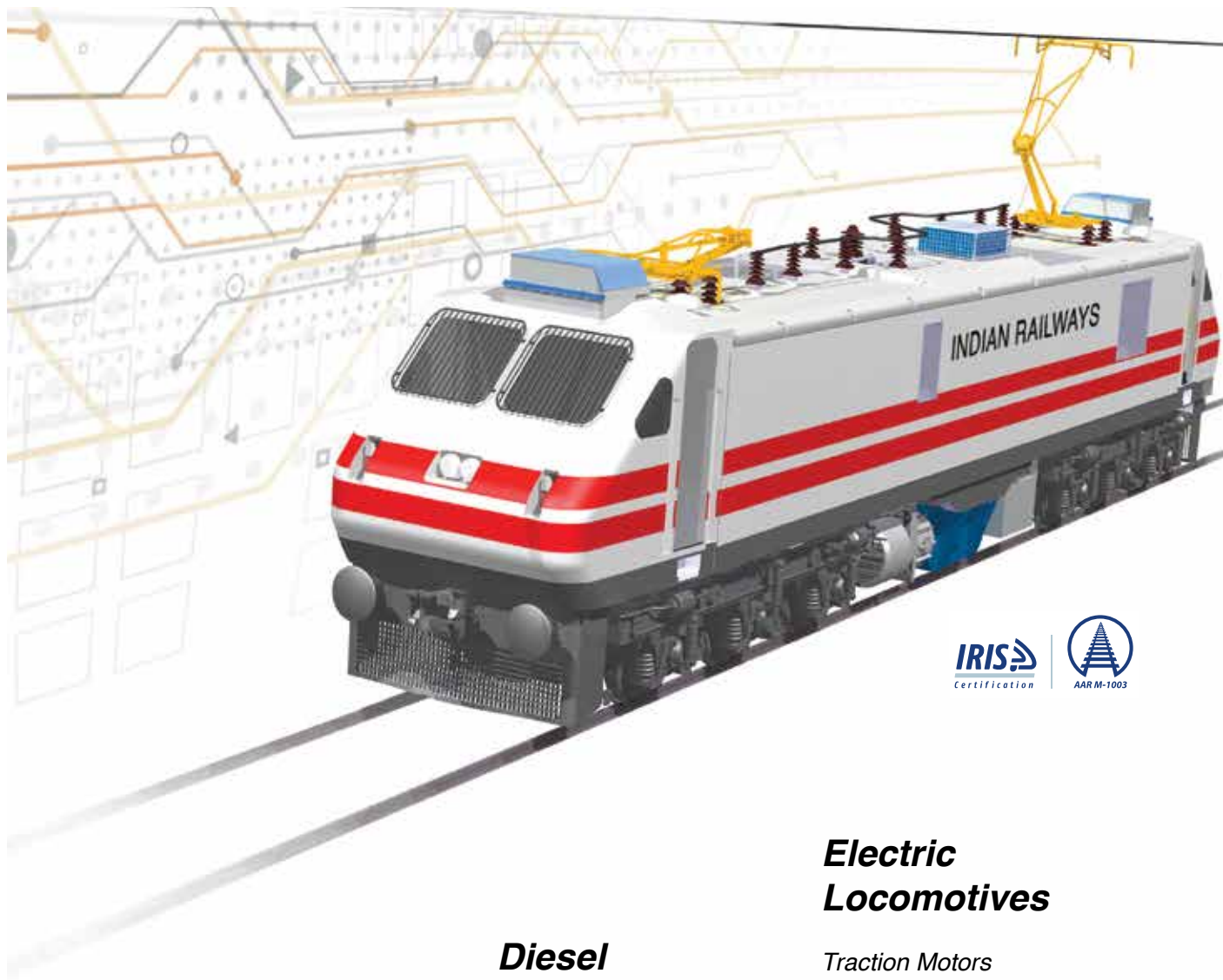
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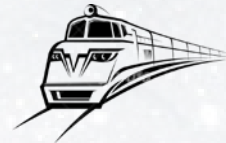
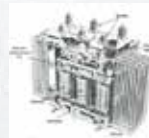
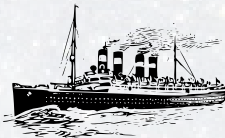
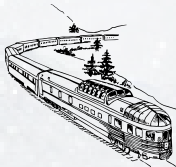
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Editorial

April 2021 will witness completion of 168th anniversary of Indian Railways. The first train of the country started from Mumbai Railway Station on 16th April, 1853. The 34 Km run from Bori Bunder to Thane has gradually developed into today's 67000 RKM of rail network. Today IR is the 4th largest railway network of the world.

Centenary of the first run was observed in the form of a Railway Week with great excitement all over the country in April, 1953. At about the same time a need was felt to have an in-house magazine of Indian Railways to cater to the needs of Railway employees and railway users, to keep them updated with all the latest developments taking place in the field of rail transportation and to build a sort of a bridge between the Management and the workforce. The first issue of the 'Indian Railways' Magazine in English language was thus published in April 1956. So, this month will also see completion of 65th anniversary of the magazine. The magazine congratulates all its readers and patrons for their unstinted love, co-operation and support that they have been extending to the magazine all these years.

In our constant pursuit of excellence and full customer-satisfaction, we have not only transformed the appearance of the magazine but are also introducing new features every now and then. We are doing what in our perception would be of interest to our readers which can only be confirmed or contradicted by the readers themselves. We are dismayed by the fact that very few of our esteemed readers have taken the pain of giving their feedback on the magazine to the newly created email ID feedbackindianrailways2021@gmail.com. The content of the magazine is decided as per the requirement of our readers and we would continue/discontinue, expand/squeeze the new features based on their feedback.

Last month has been particularly special for IR's sportspersons. The magazine congratulates Ms Vineeta Phogat and Mr Bajrang Punia, wrestlers of Indian Railways for having won gold medals in their respective categories at the recently held Matteo Pallicone Ranking Series Tournament in Italy. The magazine also congratulates Mithali Raj on her scoring 10000 runs in international cricket - the first in the world of Women's cricket. ■



Export of Locomotive to Mozambique



The Minister of Railways, Commerce & Industry, Consumer Affairs and Food & Public Distribution, Shri Piyush Goyal flagged off 3000 HP Cape Gauge Locomotive indigenously developed by Banaras Locomotive Works, Varanasi via video conferencing along with Minister of Transport and Communications, Government of Mozambique, Shri Janfar Abdulai, Minister of Skill Development and Entrepreneurship, Dr. Mahendra Nath Pandey and other dignitaries present at the event site.

The export of locomotives to Mozambique shall boost the Indo-African relationship and pilot the economic empowerment through export. Indian Railways is exporting first batch of 2 locomotives as part of total order of 6 locomotives of 3000 HP cape gauge locomotive and 90 stainless steel passenger coaches to Mozambique. These locomotives are developed indigenously by Banaras Locomotive Works under Make-in-India, they are being exported through Indian Railways' PSU, Rites Limited. In spirit of 'Atmanirbhar Bharat', these Cape Gauge Diesel Locos have been designed in India, Made in India and financed by India. ■



Features of 3000 HP Cape Gauge Locomotive

- This locomotive is capable of hauling 2255 Ton at 100 kmph at level track and maximum tractive effort of 400N.
- The driver cabin of this locomotive is Noise Vibration and Harshness standard compliant having very good acoustics, ergonomically designed seats, integrated Graphic Driver Display, and also provided with Heating Venting AC (HVAC) for better crew comfort and reducing fatigue.
- Facilities include on board water-closet (toilet module), refrigerator and hot plate.
- New control console has been designed and developed for Right hand drive.
- Equipped with Computer Controlled Brake system (CCB 2.0) for ensuring highest safety standards, reliability and maintainability.
- Larger fuel tank of 6000 liters for longer operation.
- Stainless steel pipes have been used for ensuring corrosion resistance.
- M/s Bureau Veritas/Noida an International inspecting agency appointed by Mozambique Railway is doing stage inspection of Mozambique Locomotives at BLW.
- Locomotives are cost effective and are at par with International Standards. ■



- ➔ Indian Railways’ Production Unit, Banaras Locomotive Works (BLW) received order for Six Diesel, Cape Gauge locomotives for Export to Mozambique.
- ➔ In spirit of ‘Atmanirbhar Bharat’, these Cape Gauge Diesel Locos have been Designed in India, Made in India and Financed by India.
- ➔ This is BLW’s first AC-AC traction system 3000 HP, Cape Gauge loco.
- ➔ The locomotives have haulage capacity of 2255 Ton at 100 kmph at level track and maximum tractive effort of 400N.
- ➔ The new design, procurement and manufacture of two locos completed within 14 months after getting confirmed order in January 2020.
- ➔ Most critical item of Engine i.e. Crank-case assembly has done in-house in BLW.
- ➔ Indian Railways’ BLW can provide export services of Technology, Training and Maintenance support, besides locomotives and spares, for multi traction multi gauge systems. ■



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Shri Piyush Goyal Flags off Kotdwar-Delhi Junction-Kotdwar Siddhabali Jan Shatabdi Express Special train through Video Conferencing

- The train will connect Kotdwar with National Capital & bring socio economic development in Uttarakhand
- Pilgrims visiting Siddhabali temple shall be benefitted with improved connectivity



The Minister of Railways, Commerce & Industry, Consumer Affairs and Food & Public Distribution, Shri Piyush Goyal flagged off Kotdwar-Delhi Junction-Kotdwar Siddhabali Jan Shatabdi Special train through video conferencing on 3rd March, 2021 along with Education Minister, Dr. Ramesh Pokhriyal 'Nishank' and other dignitaries present at the event site. Speaking on the occasion, the Railway Minister Shri Piyush Goyal expressed his gratitude to the hard-working railway employees who served the country during

pandemic by supplying medicines, coal and other necessary essential items. He informed that Kotdwar-Delhi route electrification is almost complete, only 15 km stretch is pending which is expected to be completed by this month. After this, trains on electric traction will ply from Kotdwar to Delhi. It will also save the environment. Going forward all the trains will run on electric traction in entire Uttarakhand. This will ensure net zero carbon emission and protection of environment in the State. The train will connect Kotdwar with National Capital & bring socio economic development in the region. Pilgrims visiting Siddhabali temple shall be benefitted with improved connectivity.

About the Train

The Train no. 04047 Kotdwar-Delhi Siddhabali Jan Shatabdi Express Daily Special shall depart from Kotdwar at 15.50 hrs and shall reach Delhi at 22.20 hrs. The Train no. 04048 Delhi-Kotdwar Siddhabali Jan Shatabdi Express train shall depart from Delhi at 07.00 hrs and shall reach Kotdwar at 13.40 hrs daily. ■





Shri Piyush Goyal Flags off Tanakpur-Delhi-Tanakpur Purnagiri Jan Shatabdi Express Special train through Video Conferencing

- The train will connect Tanakpur with National Capital & bring socio economic development in Uttarakhand
- Pilgrims visiting Purnagiri temple shall be benefitted with improved connectivity



The Minister of Railways, Commerce & Industry, Consumer Affairs and Food & Public Distribution, Shri Piyush Goyal flagged off Tanakpur-Delhi Special train through video conferencing on 26th February, 2021 along with Education Minister, Dr. Ramesh Pokhriyal 'Nishank' and other dignitaries present at the event site.

Speaking on the occasion, Minister Shri Piyush Goyal said that the introduction of new modern, safe, LHB coach Purnagiri Janshatabdi train, will boost tourism and connectivity in the region.

The train will connect Tanakpur with National Capital & bring socio economic development in the region. Pilgrims visiting Purnagiri temple shall be

benefitted with improved connectivity.

About the Train

The Train no. 05325 Tanakpur-Delhi Purnagiri Jan Shatabdi Express Daily Special shall depart from Tanakpur at 11.25 hrs and shall reach Delhi at 21.35 hrs.

The Train no. 05326 Delhi - Tanakpur Purnagiri Jan Shatabdi Express shall depart from Delhi at 06.10 hrs and shall reach Tanakpur at 16.10 hrs.

This train will have total 12 LHB Coaches which includes 2 AC Chair cars, 08 Chair Car coaches & two Generator coaches. ■





Shri Piyush Goyal Flags off Jabalpur-Chandafort Superfast train and Inaugurates/Dedicates Host of Railway Projects, Passenger Amenities at various stations in Madhya Pradesh

- The new train between Jabalpur-Chandafort shall boost tourism in the region

The Minister of Railways, Commerce & Industry, Consumer Affairs and Food & Public Distribution, Shri Piyush Goyal flagged off Jabalpur-Chandafort Special train through video conferencing on 8 March, 2021 and inaugurated/dedicated host of railway projects, passenger amenities at various stations in Madhya Pradesh along with Minister of State, Ministry of Steel, Shri Faggan Singh Kulaste and other dignitaries present at the event site.



Speaking on the occasion, Minister Shri Piyush Goyal extended his best wishes on the occasion of International Women's Day and said that important projects are being dedicated/inaugurated on this day. He informed that all women crew operated the special train between Jhansi and Gwalior on 8th March, 2021.

About the Jabalpur-Chandafort Express Tri weekly Special Train

The Train no. 02274 Jabalpur-Chandafort Express Tri weekly Special train shall depart from

Jabalpur at 05.15 hrs and shall reach Chandafort at 13.45 hrs. It shall run on Tuesday, Thursday and Friday.

The Train no. 02273 Chandafort- Jabalpur Express Tri weekly Special train shall depart from Chandafort at 14.50 hrs and shall reach Jabalpur at 23.25 hrs daily. It shall run on Tuesday, Thursday and Friday.

This train has 1 AC Chair car coach, 1 Sleeper coach and 08 Chair Car coaches & two SLR Coaches. It shall have stoppages at Madan Mahal, Nainpur, Balaghat and Gondia stations enroute in both directions. ■

► Doubling of Satna-Kaima section (6 Kms)

At a cost of Rs. 30 Cr. doubling work of Satna-Kaima section was completed. This route is a part of Satna- Rewa route doubling work. It is an important railway project to improve the mobility on this route. With the doubling on this route, train connectivity shall be enhanced in this region and train operations are expected to be smooth.

► Improved Passenger amenities at Shivpuri station on Guna-Gwalior route

Various passenger amenities at Shivpuri station like beautification of station, new waiting room, improved platform surface, modernisation of hybrid power station for green station and GRP room were inaugurated at a cost of Rs. 2.5 Cr.

► Improved Passenger amenities at Sant Hirdaram Nagar Station under Bhopal Division

Foot Overbridge at Sant Hirdaram Nagar Station under Bhopal Division, expansion of cover over shed at the platform, improved platform surface and Coach guidance system inaugurated at a cost of Rs. 2 Cr. It will improve the travel experience of passengers in Bhopal area.

► New Goods shed at Sorai Station on Bhopal-Bina route

A new goods shed at Sorai Station was inaugurated. It is built at a cost of Rs. 18 Cr. on Bhopal Bina route which shall give impetus to freight loading. It shall serve the areas of Bhopal, Bina and Vidisha.

► New Foot Overbridge at Karakbel station on Itarsi-Jabalpur route

A new foot over bridge at Karakbel station on Itarsi-Jabalpur route was inaugurated. For the convenience and safety of passengers, this new Foot Overbridge has been provided at a cost of Rs. 1 Cr. ■



Prominent Sports Achievers of Indian Railways Felicitated by DG/HR on 12 March in his Chamber at Rail Bhawan





Redevelopment of Railway Stations

Redevelopment of railway stations across India is a priority agenda of Ministry of Railways, Government of India. This agenda is being driven with full force by the Government with the participation of private players as a part of PPP projects.

As part of this agenda, work on redevelopment of 123 stations is in progress. Out of this, IRSDC is working on 63 stations and RLDA is working on 60 stations. As per current estimates, total investment needed for redevelopment of 123 stations along with real estate development is about Rs 50,000 crore.

Shri Piyush Goyal, Minister of Railways, Commerce & Industry and Consumer Affairs, Food & Public Distribution, reviewed the progress of Habibganj and Gandhinagar Railway station. Hon'ble Minister appreciated the work being done for redevelopment of these Railway Stations with facilities at par with Airports and as Multi Modal Hubs and commercial development harmonious with the city development.

Habibganj Railway Station is the railway station on Indian Railways being redeveloped under Public Private Partnership (PPP) mode. The station is being redeveloped by IRSDC. The redeveloped station will have features like 'segregation of passengers based on arrivals and departures' leading to congestion free movement at Concourse and Platforms. The station will have ample sitting arrangement at Platforms, Concourse, Lounges and Dormitories and retiring Rooms, adequate Parking along with Divyang friendly

- ➔ Shri Piyush Goyal reviews the progress of Redevelopment of Railway Stations.
- ➔ Progress of upcoming Gandhinagar and Habibganj Railway Stations reviewed.
- ➔ Redevelopment of railway stations across India is a priority agenda of Ministry of Railways – Shri Goyal.
- ➔ Work on redevelopment of 123 stations is in progress.

amenities like Lifts, Escalators and Travelators. The station will have latest Safety, Security and Information features (Fire Safety, CCTVs, PA systems, Supervisory Control and Data Acquisition (SCADA), Access control, Scanning Machines, modern Signage and information displays). The station is being developed as per LEED 'Green Building' norms with use of Solar energy, Energy-Efficient Equipment and waste water treatment for reuse.

Gandhinagar Railway Station is being developed by Gandhinagar Railway and Urban Development (GARUD), an SPV formed with equity contribution of Government of Gujarat and IRSDC in the ratio of 74:26 respectively. The project is first of its kind in India with an exclusive 5-star Hotel Building over Live Railway Tracks. The station has column free platform roof spanning 105 meters, which is largest in Indian Railways. The station has been redeveloped with all modern amenities for better passenger experience. ■

3rd Party Audit of Bridges/ROBs/FOBs

Indian Railways has a vast network of 1,50,390 bridges on its tracks across the country. In addition, 3449 nos of Road Over Bridges (ROBs) have been provided to facilitate the public to cross the tracks on roads. For passenger / pedestrian crossing, 3771 nos. of FOBs are provided by Railways for convenience of public/rail users, as on 01.04.2020.

Indian Railways follows a well established system of annual inspection and maintenance of railway bridges/ROBs/FOBs by the designated railway officials as per the laid down schedule. To establish more confidence and reliability on the existing infrastructure, in 2018 it was decided to carry out third party audit of identified and critical bridges/ROBs/FOBs to have an independent expert view on the condition of the bridge. The objective of 3rd party inspection by expert agencies was to have Bird's eye view of the condition of critical

components which may have been adversely affected in corrosion prone areas.

3rd party audit of critical bridges/ROBs/FOBs is being done by Expert agencies like IITs, NITs, SERC etc. Zonal railways were advised to carry out one time third party technical audit of the bridges duly checking all aspects of the bridge (strength assessment including NDT testing, design adequacy for present day loading, physical condition etc. as considered necessary) by engaging expert national/international agencies. The third party audit of the bridges were undertaken as per the following priority:

- All mega bridges, Railway Bridges with ORN 1 ratings, ROBs & FOBs.
- Railway Bridges with ORN 2 ratings and bridges with speed restrictions.
- All important bridges more than 80 yrs old.
- Any other bridge which railway consider



- ➔ To reinforce safety, Indian Railways completes 3rd party audit of 815 bridges/ROBs/FOBs out of 1107 identified
- ➔ Indian Railways undertakes a massive 3rd Party audit of its Bridges
- ➔ The Third Party audit provides transparency in upkeep and maintenance of bridges, Road Over Bridges and Foot Over Bridges on Indian Railways

critical from its condition point of view.

Major benefits of 3rd party audit was realised in Mumbai area where dilapidated conditions were noticed in 49 ROBs and 75 FOBs. Essential repairs were carried out and a no. of RUBs and FOBs were closed, dismantled and their rebuilding is under progress.

To make the entire system transparent, Boards have been provided at all ROBs and FOBs. In respect of railway bridges, boards have been

provided at the stations (for next block section in increasing Km) at suitable locations on main platforms.

To further increase the transparency among users and to establish reliability of railway's infrastructure, the photographs of boards at ROBs/FOBs and at stations have been uploaded on web based Indian Railways Bridge Management System (IRBMS) which is linked to 'rail drishti' and the photographs of boards can be seen by any person through the site @ www.raildrishti.in by following the path:- Main Contents → Performance indicator → Bridge Inspection → Inspection Board photographs.

The photographs can also be accessed by Railway officials on edrishti website www.edrishti.cris.org.in → Operations → Bridge Inspection → Inspection Board photographs.

Various field units have so far uploaded 10363 photographs on IRBMS site against the scope of 11,600 photographs. ■

In a Huge Achievement, Indian Railway Surpasses Last Year Cumulative Freight Loading Way before the Year End

- ➔ In spite of Covid Challenges, on 11th March, 2021, Indian Railways achieved cumulative freight loading of 1145.68 million tonnes which is higher as compared to last year's total cumulative loading (1145.61 million tonnes)
- ➔ On a month to month basis as well, as on 11th March, the loading for the month of March 2021 is 43.43 million tonnes, which is 10 % higher as compared to last year's loading for the same period
- ➔ Extra Ordinary Freight recovery is a great indicator of National Economic upswing



In spite of Covid challenges, on 11th March 2021, Indian Railways surpassed last year's total Cumulative freight loading. On 11th March, 2021, Indian Railways' cumulative freight loading touched 1145.68 million tonnes which is higher than total cumulative loading of last year (1145.61 million tonnes). Freight figures continue to maintain the high momentum in terms of loading and speed in the month of March 2021. On a month to month basis, upto 11th March, 2021, Indian Railways loading was 43.43 million tonnes, which is 10%

higher compared to last year' loading for the same period (39.33 million tonnes) ■

Readers are requested to send their **SUGGESTIONS / FEEDBACK**

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Indian Railways Decides to Reactivate the Facility of UTS on Mobile App in zones where Unreserved Train Services are reintroduced

To decongest ticket booking counters & to ensure smooth compliance of social distancing norms, facility to book unreserved tickets through UTS ON MOBILE app is being reactivated by Indian Railways.

On Indian Railways unreserved train services are being introduced in a phased manner. In order to avoid any inconvenience to passengers in booking unreserved tickets and to ensure norms of social distancing at booking counters while purchasing the tickets, it has been decided that in addition to UTS ON MOBILE App facility available on suburban sections, this facility may also be reintroduced on non-suburban sections of zonal Railways. Zonal Railways have been instructed that whenever unreserved train services are introduced on any zonal Railway, the zonal Railway

- ➔ Indian Railways decides to reactivate the facility of UTS ON MOBILE App in zones where unreserved train services are reintroduced
- ➔ To avoid rush at counters and ensure social distancing, UTS ON MOBILE App facility is being introduced
- ➔ Zonal Railways have been instructed that whenever unreserved train services are introduced on any zonal Railway, the zonal Railway concerned may accordingly enable UTS ON MOBILE app for issuing unreserved tickets

concerned may accordingly enable UTS ON MOBILE app for issuing unreserved tickets. ■

WHO AM I QUIZ?

QUESTION FOR THIS MONTH

QUIZ NO. 3

I am a terminal Railway Station in Maharashtra. Very recently I have been awarded Gold certification by Indian Green Building Council. Who am I ?

Need more hint? Well, because of my architectural beauty, I have been attracting tourists and photographers since decades.

(You will be able to answer only if you read the whole magazine thoroughly and carefully. The answer lies hidden somewhere in its pages. Find out and mail your answer to: whoamiquizes@gmail.com)

Correct answer will be given in the next issue of the magazine

CORRECT ANSWER TO QUIZ NO 2

DC Electric loco no. 20024/WCP2
(Heritage Electric Locomotive)
mentioned in page 46.

Till 25/3/2021

Correct Answers were given by

1. Anil Saxena
2. Sagar Mahendru
3. Krintan Ghosh
4. Pushpa Lata
5. Pankaj Kumar
6. Minakhi Mahanty
7. N. Subramanian
8. Kalyana Sundraram
9. Santosh Upadhyay
10. Jos Vellara
11. Balako Thandapani
12. Samiran Biswas
13. Shanmugam
14. Gayathri. D
15. Sreevasan Anudarsh
16. Debasish Roy
17. Pukalendi. M
18. Rituparna Banerjee
19. Rashmi Rath
20. Purnachandra Rao
21. Sudesh Chandra Agarwal
22. Pawan Kumar Pattnayak
23. Krishna Kumar Goswami



Dr Subahana Nazeer
Sikar Health Unit of
Jaipur Division

Dr Subahana Nazeer, an NWR Officer of DIRHS 2019 batch, presently employed with the Sikar Health Unit of Jaipur Division, set yet another example to show that Railway staff, alongwith their regular official duties, are always on the forefront to serve the society at large.

On 17 March, 2021, Dr Nazeer was on her way back to Jaipur from her native place at Bengaluru by Flight No. 6E-469. Suddenly one of the lady passengers developed birth pangs and an announcement was made on the PA system about the immediate need for a Doctor.

Dr Nazeer immediately swung into action and with whatever medical equipments were available on board, made good a successful delivery of a perfectly healthy baby. Dr Nazeer took medical care of the newborn on board. On landing of the flight both the mother and the newborn were taken to a nearby hospital where both were reportedly recuperating. The Airport authority felicitated Dr Nazeer with Orange Card for her philanthropic service to the society. ■

Exceptional Alertness During Duty by NFR Staff

Shri Pranab Das, Track Maintainer under Rangiya division while performing duty as a gateman on 30th Oct, 2019 at Level Crossing gate No. RT-5, noticed a herd of elephants was crossing the railway track near the gate at railway KM 8/9-9/0 between Rangapara-Bindukuri. At that time, Train No. 55862 DN Dekargaon-Rangiya passenger had also left from Bindukuri station. The gateman promptly informed the on duty station Master of Bindukuri Railway Station over gate phone to control the train. Accordingly, the train was controlled; lives of the elephants were saved due to alertness of the gateman and a probable mishap was averted.

Shri Dipak Ch. Nath, Pointsman under Rangiya division was engaged to watch the through passed Train No. 14055 DN Brahmaputra Mail from off side on 20th Oct, 2019. He noticed brake binding in the rear SLR coach of the train while it was passing. He immediately showed red hand signal to the Guard of the train and on duty Station Master/Kendukona. The train was controlled at once and brake binding was removed. Thus, a probable mishap was averted due to his alertness.

Shri Mriganka Shekhar Saikia, Sr. Section Engineer (P-Way) under Lumding division was engaged at Major Bridge No. 283 located at railway KM 274/8-9 between Bokajan-Chungajan to monitor the increasing flood water level on 27th October, 2019. At about 17:00 hours when he noticed water level increased beyond danger level and excessive scouring of the abutment No. A-1, he immediately took decision to suspend all the train running in that section with immediate effect. Due to his alertness, a probable mishap was averted.

Shri Nandjee Kumar, Driver/Goods under Tinsukia division while performing duty in train No. 13281 New Tinsukia - Rajendra Nagar Express on 20th October, 2019, noticed a herd of elephant crossing the railway track at railway KM 362/8-9 between Titabor - Mariani at about 17:20 hours. He immediately applied emergency brakes and controlled the train just 25 m before the elephant herd. Thus the lives of the elephant were saved and a probable mishap was averted. In recognition of their meritorious service, each of them were awarded with a cash award of Rs. 3000 along with a certificate issued by the GM/NFR. ■



Kumari Vinita
Constable, RPF
Northern Rly.

On 23rd February, 2021, Kumari Vinita, Constable, RPF/Northern Railway was on duty at 'Meri Saheli' booth of Lucknow Railway Station. One lady passenger while trying to board the running train, lost her balance and was about to fall in the gap between the train and the platform. Kumari Vinita, without caring for her life ran to her help and dragged her out of danger. This was the second such commendable job for Kumari Vinita in recent times. Earlier also on 4th January, 2021, she had saved the life of another lady passenger in an almost identical incident. ■

RPF Personnel Rescued Lady Passenger with Her Child Taking Risk of His Own Life at Durgapur Station



Shri Julius Goswami
Constable, RPF,
Durgapur post
Eastern Railway

On 9th March, 2021 Shri Julius Goswami, Constable, RPF, Durgapur was on duty on platform No. 2 of Durgapur Railway station. When 02311 Netaji Express Special started to move from Platform No. 2 at midnight from Durgapur station,

one lady passenger alongwith her child trying to catch the train, became dis-balanced and was about to fall down in the gap between train and the platform.

Seeing the situation, the alert Shri Goswami, without thinking about his own life, rushed towards the passengers and dragged them out of the gap between the platform and the train. No doubt his own life might have been endangered, but due to his sincerity and sense of responsibility, he did not think twice for himself and went ahead to save the life of the passenger. No injury to the passenger was reported due to alertness and timely action of the said RPF staff. ■

Brave RPF Jawan of Western Railway Saves Life of a Man at Virar Station

Shri Praveen, Western Railway's RPF staff saved the life of a man with his presence of mind and alertness at Virar station and thus has shown a unique example of bravery & humanity.

A 32-year old person deeply grieved by the death of his mother, tried to commit suicide by laying on railway tracks at Platform No. 3 at Virar station around 11.21 hrs. Shri Praveen, IPF/RPF of Western Railway spotted the man during his round up of the station while a local train was approaching on the said platform. Shri Praveen immediately jumped from the platform, ran towards the man and quickly pulled him off from the tracks in the

nick of the time and saved his life. Shri Praveen was later assisted by Constables Shri Ravindra and Shri Ashish Kumar, who helped him bring the man away from tracks to the platform and later to the RPF post. The man was given water and consoled by the staff present there. After settling down, the man thanked the RPF personnel for saving his life. Minister of Railways Shri Piyush Goyal also praised the RPF jawans for their act of valour and took to social media to accolade for their alertness & bravery. In the past too, Western Railway's RPF and employees have always gone beyond their call of duty to render their valuable services to people. ■

Metro RPF Shows Humane Face to Commuters

On 25th January, 2021 at about 09.00 hrs, an on-duty **Lady RPF constable, Ratna Halder** noticed one unclaimed ladies bag on the sitting chair of the platform at Netaji Bhawan station. Finding no claimant of this bag, she deposited it at the Station Master's office of Netaji Bhawan and valuables like airpods, camera, chargers, smart card and cash were found inside it. A control message was sent to all Metro stations and at 09.30 hrs. A lady passenger came to the Station Master's office of Netaji Bhawan Metro station and claimed the ownership of the bag. After proper verification and observing all official formalities, the recovered bag was handed over to her and she expressed her heartfelt gratitude to the Station Master and RPF.

On 1st February, 2021 at about 20.40 hrs, a purse was found by an on-duty **RPF constable, S. Biswas**, on a chair of Shymabazar Metro station. Finding no claimant of this bag, he deposited it at the Station Master's office of Shyambazar station. The purse contained cash and some other valuable items like ATM card and medicines. A control message in this regard was sent to all Metro stations.

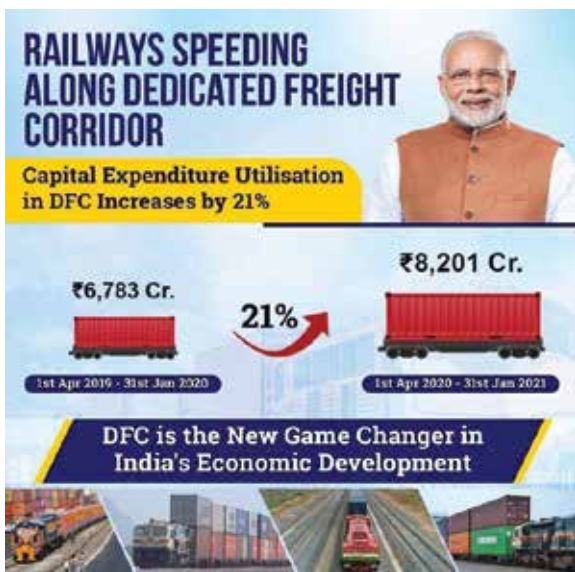
At about 21.22 hrs, one lady arrived at Station Master's office of Shyambazar Metro station and claimed the bag. After proper verification and observing all official formalities, the purse was handed over to her. She thanked RPF staff for their promptness to get back her lost bag. ■

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INFOGRAPHICS

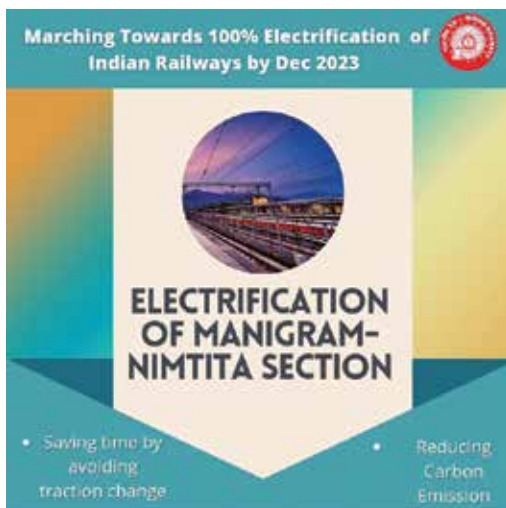
Game-Changer in India's Economic Development:

Despite COVID-19, capital expenditure utilisation in Railways Dedicated Freight Corridor increases by 21% to ₹8,201 Crore in the first 10 months of this financial year.



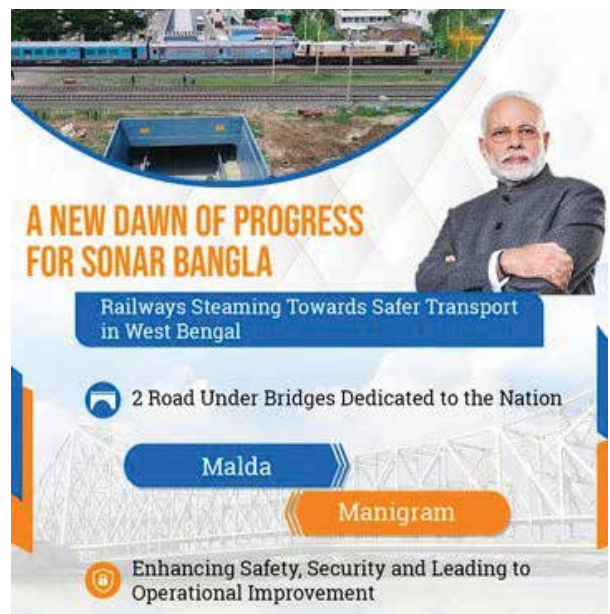
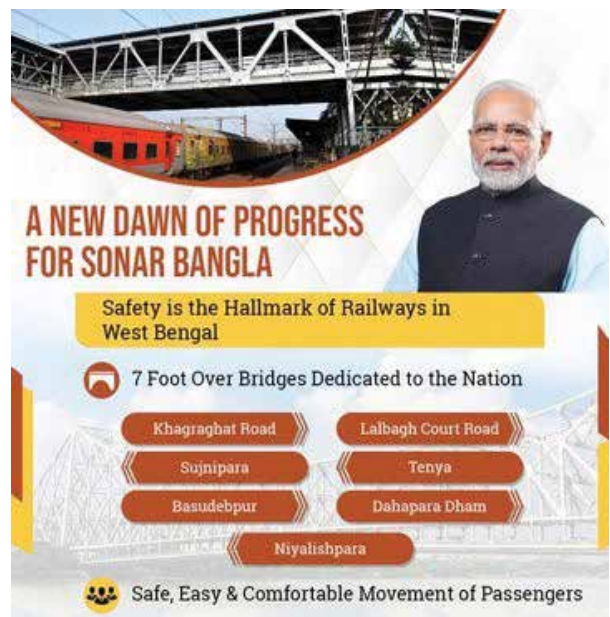
Marching towards 100% Electrification of Indian Railways by Dec. 2023

Electrification of Manigram-Nimtita section will save time by avoiding traction change and reduce Carbon emission.



Sonar Bangla Electrified to Welcome a New Dawn in Rail Transport:

Manigram-Nimtita electrified section & passenger amenities inaugurated in West Bengal. Travellers to embark on safer and environment-friendly journeys.



Railways: Engine of Growth for Madhya Pradesh

- Boost to Passenger & Freight Transport Facilities.
- Newly electrified 316 Kms Ratlam-Chhittaurgarh section dedicated to Nation.
- 17 Kms Teegaon-Chichonda 3rd line dedicated to Nation.

RAILWAYS: ENGINE OF GROWTH FOR MADHYA PRADESH
Boost to Passenger & Freight Transport Facilities

- Newly electrified 316 km Ratlam-Chhittaurgarh Section dedicated to nation
- 17 km Teegaon-Chichonda 3rd line dedicated to nation
- New Train from Rewa to Itwari flagged off
- Lifts at Betul, Pandhurna & Gwalior Stations

Railways eclipses previous year's freight loading numbers

RAILWAYS ECLIPSES PREVIOUS YEAR'S FREIGHT LOADING NUMBERS

1145.61 MT Apr '19 - Mar '20	1145.68 MT Apr '20 - Mar '21
---------------------------------	---------------------------------

#FreightFriendlyRailways
 MT - Million Tonnes
 Date: From 1st Apr to 31st Mar

Trespassing is dangerous and also it is a legal offence. It can lead to injuries or fatalities. It is advised to the commuters not to trespass and they should use FOBs, Escalator, Staircase & ROB.

Your Lifeline is in your own hands

Trespassing can be fatal. Be wise, make use of the following.

Railways: Engine of Growth for Tamil Nadu: Upgradation of stations to improve travelling experience

- Booking office & 2nd circulating area at Arakkonam
- Passenger convenience facility and ATM complex at Madurai stn. inaugurated/dedicated to the Nation.

RAILWAYS: ENGINE OF GROWTH FOR TAMIL NADU
Upgradation of Stations to Improve Travelling Experience

- Booking office & 2nd circulating area inaugurated at Arakkonam Station
- Passenger convenience facility & ATM complex at Madurai Station dedicated to the nation
- Multi level Two Wheeler Parking inaugurated at Katpadi
- PRS Centre & Station Building inaugurated at Nagercoil Town
- Double Discharge platform at Guindy Station dedicated to the nation

Redefine Travel Experience with Vistadome Coaches

The Vistadome Coaches provide comfort & panoramic view of scenic beauty of the landscape. Get onboard a journey in the beautiful Vistadome Coach in Ahmedabad-Kevadiya Janshatabdi Express & witness the breathtaking serene skyline.

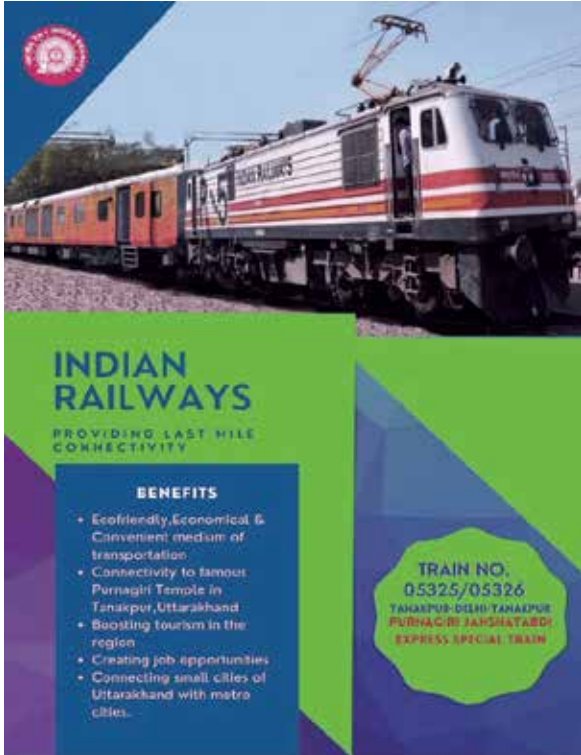
Indian Railways
 भारतीय रेल

Redefining Travelling with Vistadome Coaches
 Faster, Economical & Comfortable Journey



INFOGRAPHICS

Indian Railways is providing convenient, eco-friendly, economical connectivity to famous Purnagiri Temple, Tanakpur, Uttarakhand by running special train 05325/05326 Janshatabdi express-Tanakpur-Delhi-Tanakpur



Now dial only 139 for all your Railway queries. Rail Madad Integrated Single Helpline 139 replaces all other helplines like 182 & 138. For security, assistance, information, complaint, enquiry or any other concern, Dial #139.



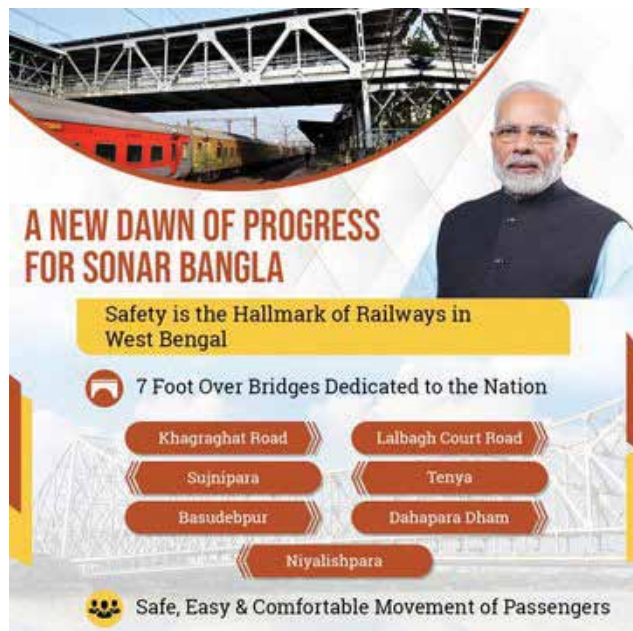
Indian Railways conducted Facebook Quiz about **“Achievements of Women in Indian Railways”** from 1st March, 2021 to 7th March, 2021 under **#Quiz_RailMinIndia** of which following six participants were awarded with **“Certificate of Appreciation”**



Congratulations Mithali Raj Cricketer from Indian Railways, Officer on Special Duty - South Central Railway
On becoming the first Indian Women Cricketer to score more than 10,000 international cricket runs.



Exemplifying our capability to develop indigenous products for the world, flagged off shipment of 3,000 HP state-of-the-art locomotives for export to Mozambique.



A NEW DAWN OF PROGRESS FOR SONAR BANGLA

Safety is the Hallmark of Railways in West Bengal

7 Foot Over Bridges Dedicated to the Nation

Khagrahat Road	Lalbagh Court Road
Sujnipara	Tenya
Basudebpur	Dahapara Dham
Niyalishpara	

Safe, Easy & Comfortable Movement of Passengers



ONE MORE PROMISING STEP FOR MAHARASHTRA

- Phaltan - Pune last mile Connectivity
- Growth in local trade & industries
- Affordable & faster mode of transport
- Better connectivity for Daily Commuters

New DEMU Train from Phaltan to Pune via Lonand

INDIAN RAILWAYS

Connecting Farmers with New Markets

Kisan Rail has emerged as fastest mode of transportation for perishable goods. 650 Kgs flowers grown in Osmanabad & Latur districts were loaded first time in Kisan Rail from Kurduwadi over Solapur Division to Adarsh Nagar, Delhi.



KIND ATTENTION, AUTHORS

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.



PICTURE GALLERY

A push trolley inspection of track after record snow fall in Shimla this year.



Saluting the Indomitable Nari Shakti

Tughlaqabad Diesel Shed of Indian Railways pays homage to brave women freedom fighters, who displayed character of steel, by dedicating high speed locomotives to them.



Heartiest congratulations to Indian Railways

wrestler Vinesh Phogat for winning gold at the Matteo Pallicone Ranking series tournament in Italy. She has made us proud with her talent & dedication, and is now ranked World No. 1 in the 53kg weight category.



Three cheers for Indian Railways wrestler

Bajrang Punia for winning a gold medal at Matteo Pallicone Ranking Series tournament in Italy. His willpower & dedication has placed him at world no. 1 spot in 65 kg freestyle weight category.





*Stations Decorated on the eve of International Women's Day
which was celebrated on 8th March*



Haridwar Railway Station



Ambala Cantt. Railway Station



Shree Siddharoodha Swamiji Hubballi Railway Station



Vadodara Railway Station



Asansol Railway Station



Guntakal Railway Station



Ahmedabad Railway Station



Chhatrapati Shivaji Maharaj Terminus (CSMT)



PICTURE GALLERY

Catch a glimpse of the magnificent exterior & interiors of Dakshineswar Metro station in Kolkata.

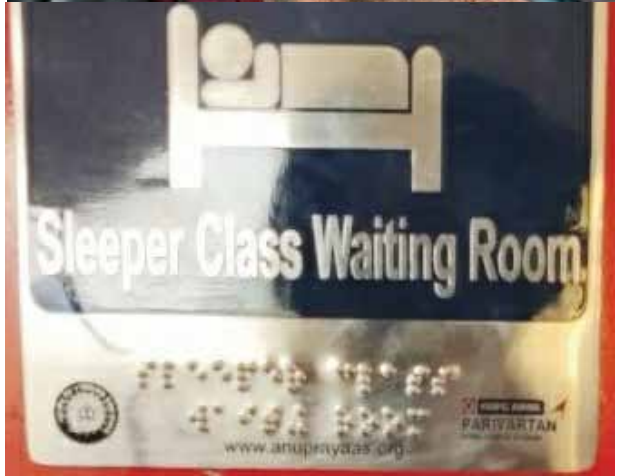


Empowering Visually impaired Divyangjan passengers to travel independently: IRSDC under CSR initiative has installed Braille Tactile Map for navigation assistance facilitation at Anand Vihar Railway station. The map provides the layout of the station & facilities at the station.



Incredible India!

Picturesque view of Train passing over glistening waters of Vashishti river near Chiplun station in Konkan Railway.



Green Railways, Green Station

Chhatrapati Shivaji Maharaj Terminus in Maharashtra is awarded Gold Certification by Indian Green Building Council. Key features include: Smart-tech amenities for passengers, Divyangjan & senior citizens friendly, Energy efficient measures adopted.





Restoring the old glory

The locomotive outside Bengaluru City Station in South Western Railway was recently beautified. It has enhanced the beauty of Bengaluru City station.



Electronic interlocking commissioned on 24th February, 2021 at Shree Siddharoodha Swamiji, Hubballi Junction in Karnataka.

- Improved connectivity for passengers with double line in three directions.
- Platforms increased from 5 to 8 including the world's longest platform.



A New Loading Station on Railway Map

1,326 metric tonnes of rice is being transported from Gangavathi in Karnataka to Azara in Assam.



New Station for New India

A magnificent look of the new Guntakal Rly Stn in South Central Railway depicting the modern look with elegant facade makes it an iconic Stn building. Wide circulating area, roads & best-in-class interiors provide travel delight to rail users.



Salute to Nari Shakti

On International Women's Day the first woman driver of Indian Railways, Smt. Surekha Yadav operates the all women-staffed Mumbai-Lucknow Special.





PICTURE GALLERY

SMVB Railway Station in Bengaluru – the first centrally airconditioned railway station in India



A gulmohar-covered platform of Melattur railway station, Southern Railway



Beautiful view of a train meandering its way near Kolavai Lake in the vicinity of Chengalpattu railway station in Southern Railway. Scenic Hills and locales of Chengalpattu at the backdrop.





**Models of Missile and Aircraft Made in Samastipur Workshop of ECR
Utilising the Scrap Generated in the Workshop**



Artist - Shri Asim Bannerjee, Staff of SWR



North East Frontier Railway : Initiatives by NFR Resulted into Increase in Freight Loading

In order to improve transportation of freight traffic, NFR has been taking various measures. This has also resulted into easier transportation of various goods by customers apart from helping local economy. The Business Development Units (BDU) created in all the five divisions of NFR are regularly getting in touch with existing and likely transportation agencies to know the actual need of various industries. Positive marketing by NFR has resulted into increase in loading trend of POL products by 33.15%; Cement by 397.895; Timber & Fire Wood by 37.66% up to December 2020 of the current financial year. To further augment freight traffic in NFR; 17 stations have been opened for handling goods loading/unloading, 4 stations have been opened for loading/unloading



A freight carrying train passing through NFR station yard

of vehicles and 1 station opened for handling Container traffic during the current financial year.

Cancellations of regular trains due to COVID related restrictions hampered the overall parcel traffic. To cope with the situation to some extent, 9 stations of NFR spreading over all the five divisions have been notified for

handling parcel traffic during the current financial year. To help freight transporters in loading/unloading of goods; 'Round the Clock' working has been introduced in 10 Goods sheds spreading over various states within NFR during the current financial year. The first Private Freight Terminal (PFT) in NFR of M/s Pristine Hindustan Infra-projects Pvt. Ltd. has also started functioning at New Jalpaiguri station under Katihar division. ■

Modern Facilities for Railway Passengers at Stations as a Result of Digital Initiatives by NFR

NFR has been continuously providing more and more facilities to railway passengers and customers at various stations and other points of customers' interaction. Most of these initiatives are being launched as part of the 'Digital Initiatives.' As a result, passengers are getting services like Free WiFi, Train Indication Boards, Coach Indication Boards, Digital Clocks, Integrated Passenger Information System; PC based Public Address System, Digital Museums etc at various stations.



Integrated Passenger Information System provided at Guwahati Railway Station

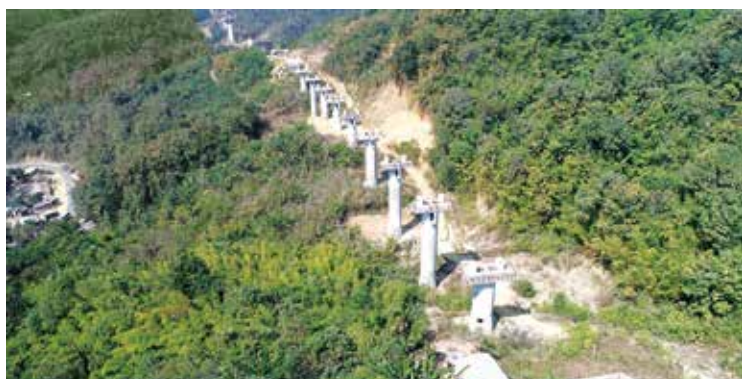
Similarly, amenities like Train Indication Boards, guide passengers with information like arrival / departure time of various trains with platform numbers. The Coach Indication Boards predicts and display position of various coaches of a train in a platform. So passengers having their tickets with coach number can position themselves at the exact

location to board the arriving train to avoid rush. During the month of December, NFR has provided Train Indication Boards at 5 stations and Coach Indication Boards at 3 stations. With provision if new Integrated Passenger Information System in one more station during the month of December, total 18 stations of NFR are having such facilities now. With addition of Public Address System at 10 more stations and Digital Clocks at 4 new stations during the month of December, total 349 and 228 stations respectively of NFR are having such facilities till December, 2020. ■

NFR provided Free WiFi facilities at 4 more stations namely Silghat Town under Lumding Division, Dhubri under Alipurduar Division and Sukna & Haldibari under Katihar Division during December, 2020. With these, total 374 stations under NFR are having a high speed Free WiFi facility. Passengers using these stations can avail the benefit of internet and other services by using the free facilities.



With Budget Allocation of ₹1000 Crores, Bairabi-Sairang Project is on Track for Completion in Time



View of completed substructure of bridge in Bairabi-Sairang project (L);
View of Tunnel in Bairabi-Sairang project depicting traditional Mizo village life (R)

In line with the plan of the Ministry of Railways to connect all the State Capitals of the Northeast with BG railway line, NFR is executing the Bairabi – Sairang new railway line project in Mizoram. Better rail connectivity will lead to economic development not only for the people of Mizoram but also for entire NE region. Traders of the state will be able to bring items of daily consumption as well as construction materials at a much cheaper, cost effective and eco-friendly way. Farmers of the state will be able to send their produce to the wider market of the various states at cheaper rate and in a time bound manner.

The Bairabi – Sairang new railway line project was sanctioned in the year 2008-09. The length of the entire project is 51.38 kms. The anticipated cost of the entire project is about ₹5521.45 crs. Till last year an amount of ₹3763.63 crs had already been spent for executing the project. There will be 55 major and 87 minor bridges in the entire project. The project will also have 5 Road Over Bridges and

6 Road Under Bridges. The entire project will also involve construction of several tunnels. Total 12639.20 meters (Approx) of tunnelling works will have to be done in this project. For construction of the project, work of 487.47 hectares (approx) of Land Acquisition and Earth work of 347.89 Lakh Cu.m is being done. From Bhairabi there will be four stations namely, Hortoki, Kawnpui, Mualkhang and Sairang in the project. From Sairang station the capital of Mizoram Aizawl is not far away.

Recently placed Budget for the year 2021-22 has allocated ₹1, 000 crs for the Bairabi – Sairang project for its steady progress. The allocation for last year (2020-21) was also ₹475 crs. With such allocations, Railway Ministry plans to complete the project by March, 2023. Completion of all the proposed rail connectivity projects of NE region will lead to 'Transformation of Northeast through better Transportation' in line with the Govt of India's policy for comprehensive development of the NE region. ■

RPF/NFR Recovered Narcotics/Contraband Goods worth more than ₹3.9 crore during 2020

The Railway Protection Force (RPF) of N.F. Railway has been successful in detecting smuggling of contraband goods from railway premises and recovered narcotics and contraband items valued over ₹3.9 crs during 2020. 23 persons were arrested under charges of carrying contraband items and were later handed over to appropriate authority along with seized materials for legal action as per law.

In one such recent case, on 11 January, 2021 RPF train escort party on train No. 02501 Dn

(Agartala-New Delhi Special Rajdhani Exp) comprising Head Constable, Rana Dey along with Constable, H. R. Sing and Constable, Arun of RPF Post / Badarpur recovered 02 unclaimed bags containing Ganja, weighing about 16.5 kgs valued about ₹99,000 (approx) from coach no B-7 of the said train in between Teliamura - Ambasa section. Later, the recovered Ganja was handed over to OC/ GRP/Ambasa who registered a case in this regard.

Acting on a tipoff, RPF/Agartala along with GRP & SB of Tripura detained one lady with 16



RPF personnel with recovered contraband items

pkts of Brown sugar on the evening of 21st January at Agartala Railway Station. She travelled by the Silchar-Agartala special. But her husband, who had also accompanied her, managed to flee. During interrogation it was revealed that they have a good network in Myanmar - Manipur - Dimapur to

Dimapur. In another case, RPF/NFR recovered 2 unclaimed bags from the circulating area of Agartala station at about 22-45 hrs on 30th January when luggage checking of the passengers of train no 05626 DN was going on. Later 8 pkts suspected to be of Ganja were recovered from the bag. ■

Tripura & Mumbai. The market value of the recovered item is about ₹6 lakh (Approx).

In one such case on 30th January, RPF/NFR during checking of 02250 (New Tinsukia-Bangalore exp) from Dimapur recovered 1 bag from one GS coach as un-claimed.

Later, the bag was found to contain about 6.2 kgs of Ganja which was later handed over to the Superintendent of Customs,

SCR surpasses the Previous Financial Year's Parcel Revenue

The parcel revenue of the SCR achieved a major milestone with the current financial year's earnings surpassing the last financial year total earnings. As on 23rd March 2021, SCR total parcel revenue registered Rs 104.37 crores against the last financial year's total Parcel revenue of Rs. 103.86 crores. Meticulous planning with special focus on the transportation of essential commodities combined with new initiatives to tap the demand has contributed in the parcel earnings surpassing last year levels, in spite of regulated number of trains operating due to the COVID pandemic.

The new initiatives introduced during this period like Timetabled parcel trains, Doodh Duronto, Kisan Rails and transportation to Bangladesh among others have contributed more than 32% of the total parcels quantity transported during this financial year. In addition, these new initiatives have led to diversifying the parcel commodity basket and making it more broad-based, while at the same time adding stations (both originating and destination) onto the Parcel map of the SCR. The Zone has also to its credit several



firsts in its Parcel performance which includes the following:

- The Zone amongst the first to start Time Tabled parcel trains. During the current financial year, 519 timetabled Parcel trains have transported 41,101 tonnes of parcels contributed Rs. 19.68 crores by 23.03.2021. These trains have provided a time-bound safe, fast and economical transport option for the parcel customers.
- Doodh Duronto introduced as a special Milk Train to run from Renigunta in Andhra Pradesh to Hazrat Nizamuddin in New Delhi has transported 7.14 crore litres of milk (which is the highest in any financial year since commencement of milk loading from Renigunta

- ➔ Zone Registered Parcel earnings of Rs 104.37 crores
- ➔ In spite of the pandemic, new initiatives help in surpassing last year's earnings



in 2011). The 302 Doodh Duronto special have contributed Rs 33.90 crores in earnings.

- This year, SCR also started South India's first Kisan Rail from Anantapur as well as Telangana's first Kisan Rail from Warangal. In total, the zone has run 103 Kisan Rails transporting 36,949 tonnes of agricultural commodities contributing Rs. 17.11 crores in revenue.
- SCR was also the first to start a Special Parcel train to Bangladesh when a parcel train carrying red chillies was started from Reddipalem in Guntur to Benapole in Bangladesh. In all, the zone has transported 5,035 tonnes of parcels to Bangladesh contributing Rs. 2.33 crores in revenue.
- For the first time on SCR, a New high capacity LHB Parcel Vans have also been introduced in Time tabled parcel train bound towards Guwahati from Kacheguda, which has been added advantage to load more parcels.
- For the convenience of cargo aggregators, several stations have been opened for parcel traffic during the lockdown period to facilitate hassle free and smooth transportation of parcels by Rail.
- The parcel transportation to the farther destinations like Howrah, Nizamuddin,



Guwahati, Ludhiana etc helped in connecting more places for supplying essential commodities.

- In addition, the leased and Non-leased parcel traffic through regular trains has transported 97,622 tonnes of parcels contributing Rs. 31.35 crores in parcel revenue.

Shri Gajanan Mallya, General Manager, South Central Railway complimented Principal Chief Commercial Manager, South Central Railway on achieving the increased parcel revenue during the current financial year. He also stated that time tabled parcel trains which were introduced in the current year has been very popular among parcel customers and has given a big boost to the parcel transportation business of the Zone. ■

Western Railway : General Manager Inaugurated Centralized Video Surveillance System Control Room at Churchgate

In order to enhance security at Railway stations which are major hubs of transportation, Indian Railways is in the process of installing Internet Protocol (IP) based Video Surveillance System (VSS) at stations, that is, waiting halls, reservation counters, parking areas, main entrance/ exit, platforms, foot over bridges, booking offices etc. Railway Board has approved works for provision of Video Surveillance System covering 983 stations over Indian Railways under Nirbhaya Fund. Recently, Shri Alok Kansal, General Manager of Western Railway inaugurated the Video Surveillance System Control Room at Churchgate and applauded the unique initiative which will ensure safety of passengers at station premises. Talking about this new system, WR GM said that a very important passenger amenity for security of our passengers has been added, especially women & children through integration of camera feed of all stations at Security Control Room at Churchgate station. On this occasion, Shri Harish Gupta – Principal Chief Signal & Telecommunication Engineer, Shri P.C. Sinha, Principal Chief Security Commissioner and Shri

Vinod Kumar Agarwal] Regional General Manager of RailTel along with other senior railway officers were also present.

RailTel – a Miniratna PSU under Ministry of Railways, has been entrusted with the work of providing IP based VSS with video analytics and facial recognition system. To have a better coverage and clearer image, four types of Full HD Cameras – Dome type (for indoor areas), Bullet type (for platforms), Pan Tilt Zoom type (for parking areas) and Ultra HD- 4K cameras (for Entry/Exit locations) are being provided. Each HD camera at the station consumes approximately 1TB of data and 4K cameras will consume 4 TB data per month. The recording of the video feeds from CCTV cameras will be stored for 30 days for playback, post event analysis and for investigation purposes. On Western Railway, RailTel Corporation of India Limited has installed Internet Protocol (IP) based Video Surveillance System (VSS) at 15 stations. All these stations viz. Vapi, Valsad, Navsari, Udhana, Vadodara, Anand, Nagda, Palanpur, Viramgam, Gandhidham, New Bhuj, Surendranagar, Rajkot,



GM WR addressing the audience (left) and viewing the various camera footages in the VSS Control Room at Churchgate (right)

Bhavnagar Terminus and Veraval are important stations falling under 'A-1/A' Class category. CCTV camera live feeds are displayed on multiple screens at the RPF Thana/Post for monitoring at every station. CCTV cameras provided at all the 15 stations of Western Railway have been networked through Optical Fibre Cable on RailTel MPLS backbone and video feeds have been brought to a centralized Security Control room at Churchgate station wherein same can be viewed on multiple LCD monitors by RPF personnel manned 24X7.

The new CCTV surveillance will help us provide more proactive security.

Talking about the project, Shri Puneet Chawla, CMD/RailTel said, 'As on 31st December 2020, we have completed work of providing VSS at 250 stations across country. We are working on providing similar centralized monitoring centres in other Zonal Railways also. The work is going on as per schedule in other stations as well. This VSS will help to provide proactive security to Passengers.' ■

General Manager Inaugurated the Mobile Train Radio Communication (MTRC) System for Suburban Trains

Shri Alok Kansal, General Manager of Western Railway inaugurated the new Mobile Train Radio Communication (MTRC) System for

suburban trains between Churchgate & Virar over Mumbai's suburban section, recently at Divisional Railway Manager's Office, Mumbai Central. This



General Manager inaugurating and interacting through the newly introduced Mobile Train Radio Communication (MTRC) System for suburban trains between Churchgate & Virar over Mumbai's suburban section



state-of-the-art technology system is a First of its kind over Indian Railways, which will enable better communication between the crew of EMU train with the Control Centre as well as enable Broadcast Call by Control to Passengers and also between all EMU cabs. After the inauguration, GM Shri Kansal interacted with the media representatives. GM Shri Kansal briefed the media about the various advantages of the newly introduced system. Shri Kansal stated that the Mobile Train Radio Communication system is an effective and a technologically advanced communication system which can play an intrinsic role in preventing train accidents through effective communication. It facilitates an instant and constant interaction of train crew with the Control Centre and the Station

Master. This system uses lowest time to connect calls i.e 300 milliseconds and it is the first time that MTRC is commissioned in India. It is a historic move over the Indian Railways. He further added that the MRTC acts in a similar way to that of Air traffic control (ATC) for aircrafts.

The system will monitor, track and aid in communication between the trains and the control room thereby ensuring smooth movement of rakes as well as help in preventing adverse events. The new system has already been installed in 105 rakes of Western Rly. The function was also attended by concerned Principal Heads of Departments and Divisional Railway Manager of Mumbai Central division. ■

Western Railway Organized Two Days Drama Festival Alongwith the Photography and Painting Exhibition



A two day Cultural Fest comprising of Drama Festival along with the Photography and Painting exhibition was inaugurated by Shri Alok Kansal, General Manager of W. Rly and Smt. Tanuja Kansal, President of Western Railway Woman Welfare Organisation in February, 2021 by lighting the ceremonial lamp. This event was organized by Western Railway Cultural and Fine Art Association under the aegis of Smt. Tanuja Kansal, President of Western Railway Woman Welfare Organisation and with valuable guidance by





Shri Alok Kansal, General Manager of Western Railway. The event was held at Godbole Cultural Hall of WR Headquarters Office at Churchgate.

The Cultural Fest was the brainchild & an initiative of Smt. Tanuja Kansal, President of Western Railway Woman Welfare Organisation. This event provided a platform for the artistes of Western Railway to showcase their talents. On the first day of the Drama Festival, a play titled 'Lambi Race Ka Ghooda' was performed by the artists from Mahalaxmi Workshop. This play subtly portrays the fact that parents should not pressurize the children to excel in academics alone but they should be allowed to follow their own interests too. Another play titled 'Aaj Chhutti Hai' was performed by the artists from Lower Parel Workshop. This play showcases how we must inculcate the values & philosophies advocated by Bapu ji – The Father of our Nation and to always tread the path of Truth as desired by Gandhiji. The plays performed on the second day were by the artists of Mumbai Division titled 'Mombatti' which delves into the various facets of struggle experienced by street dwellers and security issues faced by women. Yet another

play titled 'Punch Parmeshwar' was performed by the artists of Headquarters office, Churchgate. This play showcases the efficiency of the judiciary system in our country and how the Judges dispenses their duty impartially & unbiased.

A Photography & Art exhibition was also organized in which beautiful paintings & mesmerizing photographs by various employees were displayed. One of the main attractions was the photographs of sunset clicked by Shri Kansal himself. There were an array of paintings & photographs which were appreciated by one & all present. The function concluded with the felicitation & award distribution to the all artists by the General Manager and the President, Western Railway Woman Welfare Organization. This function was attended by Principal Head of Departments and senior officers. Principal Chief Mechanical Engineer & President of Cultural and Fine Art Association thanked both General Manager as well as the President, Western Railway Woman Welfare Organization for their encouragement which has boosted the morale of artistes for their future performances. ■





WC Rly : Surpasses Target of Raising of Sectional Speed in 2020-21

A Remarkable Feat in COVID Pandemic era

Raising of Sectional Speed is one of the key indicators of the overall railway productivity, efficiency in operations and utilisation of assets. Thus, WCR took up the challenge of raising the sectional speed to 130 kmph on GD – GQ Group A Route viz. Mathura – Nagda Section on Delhi – Mumbai Corridor and Bina – Itarsi Section on Delhi – Chennai Corridor in 2020-21.

WCR kicked off in this field with a Multi – Pronged strategy of planning/ utilising the existing assets, improve and upgrade curves in the sections, monitoring upgradations in track maintenance and risk mitigations in high speed operations. These strategies were seamlessly tailored in both sections.

In Mathura – Nagda Section, 545 Kms of Track in both UP and DN directions was upgraded in Track Maintenance and Monitoring through Tamping of Track and Turnouts, GPS based OMS Runs, Oscillograph Runs, Route Proving Runs and COCR Run. More than 200 Curves were upgraded in Super elevation and Transition design through On Track Tamping Machines and precise modifications in the curves. Boundary Wall was constructed to serve as need based Risk Mitigation upgrades for curbing trespassing. All these were intertwined with a robust Track Management System which regularly updated the safety related USFD and Inspection Schedules. WCR rose up to the occasion and upgraded the speed of the section to 130 kmph in May 20 saving a total time of 92 minutes in operations thereby augmenting capacity and increasing mobility of trains. Subsequently, many LHB Trains with High Speed Locos were approved for running at 130 kmph in the section and realising the benefit of transit time through faster accelerations and high speedo-graphs.

In Bina - Itarsi Section, 233 Kms of Track in UP, DN, MID Lines in Bina-Bhopal Section and UP & DN in Bhopal-Itarsi Section were upgraded in quite a similar manner. However, the work in this section was even more challenging. More than 400



Curves were upgraded, and 40 kms of boundary wall was made for addressing the needs of high speed operations. Additional issues of Weak Formation, Main Line Platforms and Ghat Section were interwoven in the PSRs which provided suitable measures for ensuring safety in these highly vulnerable patches. WCR again hit the bull's eye by implementing the raising of speed in this section in Dec. '20 saving a total time of 52 minutes in train operations. This feat was achieved one year in advance i.e. in Dec '20 instead of the target set by Railway Board as Dec '21.

With this WCR became the 1st Railway on IR to raise speed to 130 kmph on all its Gr. A Routes. Not only in the 2 routes above, sectional speed of several other sections were also raised in this year thereby achieving an astounding speed raising of 873 Kms against a target of 778 Kms in 2020-21. WCR achieved this portentous task in the COVID 19 Pandemic era by learning and adopting newer ways of working and monitoring. This speaks volumes about the professionalism, integrity and the competency of the Engineering department in WCR under the leadership of Shri S.K. Singh GM, Shri A.K Pandey PCE, Shri Rajesh Arora CTE, Shri O.P. Tanwar CBE and Officers and Staff of Kota and Bhopal Division. WCR shall strive much harder in the forthcoming years to raise speed in its Gr. B Routes as well. ■

WCR Completes Several Infrastructural Projects

A Boost during the COVID Pandemic times

One cannot overemphasize the need and importance of 'Railway Infrastructure' than call it the 'Lifeline' of the Nation. It has been proved on so many occasions that how the growth in infrastructure has fueled the growth engine of the progress and efficiency of Railways and that of

the nation. West Central Railway has excelled in accomplishing/commissioning several targeted infrastructural projects, remarkably even during the COVID Pandemic. The coordinated approach along with better planning, monitoring and high degree of quality work and supervision has paved



ZONAL RAILWAYS/PRODUCTION UNITS NEWS



Satna Rewa Doubling



Makronia - Lidhorakhurd Tripling

the way for modernizing infrastructure, increasing throughput, enhancing capacity and completing many safety works in West Central Railway.

In the field of New Line, Doubling and Tripling, West Central Railway has achieved substantial progress by commissioning 96 Km of NL/DL/TL in various critical sections capacity enhancement projects till February 21. The 48 Km 3rd Line - from Bhopal to Barkhera via Habibganj is categorized as 'Super Critical Project on HDN Route' and has been commissioned in 2020-21. With this, the Section from Bina to Bhopal and up till Barkhera has been tripled and will result in boosting the capacity and throughput of the section. Incidentally, the speed of the existing double line in Bina – Bhopal – Itarsi Section has also been raised to 130 Kmph in Dec 20 and thus, will aid in faster movement of high speed trains. The 'Coal Critical Section' of Kota – Bina – Katni has also been under the progress radar. In this section, 20 Km of Pilighata – Guna Doubling and 14 Km of Makronia – Lidhora Khurd Tripling has been completed in Dec 20 and several other projects are planned for commissioning shortly.

Electrification has been a mission element for the Indian Railways. In this arena, West Central Railway has achieved > 350 Km of Electrification along with commissioning of Traction Sub Stations in various sections – Itarsi-Jabalpur, Kota- Chittaurgarh, Vijaypur-Maksi, Shivpuri-Gwalior, New Katni Junction-Singrauli and by 31st March it will achieve 100% Electrification of the Railway.

Throughput enhancement and Safety works have been another priority area where West Central Railway has achieved several milestones. After being the 1st Railway over IR to close all Unmanned Level Crossing Gates way back in 2015-16, West Central Railway has closed 43

manned Level Crossing Gates and has constructed over 35 Limited Height Subway during 2020-21 thereby boosting the safety and enhancing/smoothing operations in the sections. Road Over Bridges is a critical area requiring immense coordination with the State and is a Long-Lead Item. With constant watch and tight supervision, West Central Railway has constructed 15 ROB's during 2020-21 and has achieved its stipulated target. IBS have also been another gear in the infrastructure growth engine of West Central Railway in which 07 IBS have been commissioned in critical sections of Bhopal – Itarsi, Itarsi – Jabalpur, Jabalpur – Katni, Itarsi – Khandwa High Density and Highly Utilised Networks/ Routes and RRI/Panel/Electronic Interlocking has also been commissioned in 13 Stations in 2020-21.

With a plethora of achievements in the Infrastructural Sector, West Central Railway is forging ahead in boosting the speed, efficiency and safety of train operations as a whole and is laying a strong foundation in long lasting operational benefits to be yearned in future. ■





Electric Loco Shed, Tughlakabad Awarded Best Innovation Award for the 2nd Time in a Row

Electric Loco Shed, Tughlakabad has been awarded the Best Innovation Award for the 2nd time in a row. Electric Loco Shed has been awarded the Best Innovation Award (2nd Prize) in 2020-21 for its Test Bench Set-Up TCN (CDAC) VDU designed and developed in-house for testing of the Cards for 3-Phase Locomotives and Arrest Transient failures beforehand. Earlier, it was also awarded Best Innovation Award in 2019-20 for its Battery cum AC Operated Dual Shunting Locomotive named 'Saarathi'.



Three phase Electric locomotives employ a distributed architecture for control and data communication using Micro Computer Automation System (MICAS) which was proprietary in nature. In order to sustain the control system in a rolling stock during its lifetime, i.e. over 35 years, it becomes necessary to update the technology and tackle the obsolescence. Indian Railways in association with CDAC, Thiruvananthapuram developed VCU (Vehicle control unit) with technology termed as TCN (Train communication network). RDSO has issued guidelines for testing of MICAS VCU cards but for TCN VCU there were no testing guidelines by RDSO. TCN VCU fitted locos were giving Transients faults which were resulting in failure of locos and without testing Jig/Bench. Loco sheds were facing problems in proper troubleshooting of locos. Electric loco shed, Tughlakabad developed test jig for testing

DIO cards of CDAC TCN based vehicle control unit. DIO (Digital Input Output) cards receives various digital signal (e.g. panto status, VCB status etc) and give desired output signals (e.g. VCB ON/Off command, Panto Raising command etc) based on the logic performed in processor cards. Using this test bench, all 4 cards can be tested simultaneously which saves a lot of time without compromising on reliability. It is very compact system and doesn't require any types of loop box or load. Transient Loco failures have been arrested by detecting faulty VCU DIO cards of TCN CDAC VCU in Three phase locomotives which improved reliability of locomotives on line along with fewer hours of detention, increasing loco outage and its earnings. By detecting line failure at shed level, Rs. 18.76 Lacs/month saved at Electric Loco Shed, Tughlakabad and shall be further useful as there will be increase of CDAC VCU 3 Phase Locos.

Another Innovation developed by the Shed was





the BATTERY AND AC OPERATED DUAL MODE SHUNTING LOCOMOTIVE – ‘SAARTHI’. Electric Loco Shed needs a shunting loco for placement of under repair locomotives in other non electrified repair bays for rectification work. Previously, healthy loco had to be used for shunting purpose. Further, due to extension of repair bays, the length of un-wired section had been approximately doubled (increased by more than 30 metres resulting in unwired section of more than 60 metres). As a result, it was extremely cumbersome to place loco in these bays. For placing an under repair Loco in any of these bays, more than two spare wagons / locos were attached as a means to push or pull the locomotive making it an unsafe and difficult operation. This not only increased the shunting time, it also involved more man power i.e. shunters as well as points man and hence the whole process was very tedious and time consuming. To facilitate the shunting work, a shunting locomotive, which can work in un-wired as well as wired section, was the need of the hour.

In the market such arrangements are available which pull or push the locomotives on rail and are operated by battery/diesel which cost more than ₹2.5 Cr. Hence, a WAM - 4 loco, which had completed

its codal life and was condemned, was modified by the shed with its own resources, so that it is able to work on battery in un-wired section as well as with AC traction under OHE. This was accomplished by modifying the internal circuitry, optimising the weight of the locomotive as well as ensuring ease of operation for the shunters. In this arrangement, only two traction motors, are being used in place of all the six traction motors either during working by battery (i.e. Bogie -1) or via OHE (i.e. Bogie-2). Thus there was lesser need of auxiliaries, TMs, and other circuitry. The complete circuit, modifications from previous to new design, equipments involved and instructions for operation by shunters were developed in-house. This has resulted in a safer, easier and reliable mode of operation improving the availability of manpower and also achieved saving in terms of both time as well revenue. to the tune of ₹1.2 Lacs / Month over and above the investment cost of ₹2.5 Cr. required for such equipment.

Thus, Electric Loco Shed has been very instrumental in achieving the Best Innovation Award twice with its sheer determination and dedicated hard work and shall continue to inspire many more for out of the box innovations beneficial for the railways. ■

High Speed Oscillation Trials – A Remarkable Exciting Feat by West Central Railway

A Trio of Development, Safety & Mobility

Indian Railways is forging ahead with the Speedy Introduction and Use of New Technology in the form of New Locomotive (Dual Traction High Power WDAP 71000 Locomotive 5000HP) , New Rolling Stock (Economy 3 Tier AC LHB Coach LWACCNE with 83 berths) so as to introduce new trains with increased speed, comfort, economy and safety intertwined with modernisation.

In order to introduce New Locomotives or Rolling Stock, Railway Board has laid specific directions/instructions in Policy Circular No. 6. As per this policy, Oscillation Trials are supposed to be executed/performed in a very detailed manner so as to arrive at a final Maximum Permissible Speed (MPS) duly recording all acceleration parameters and oscillograph results. These trials are undertaken by Research Design & Standards Organisation (RDSO) on various sections across Indian Railways depending upon the master data of section and it is pertinent to mention that for the purpose of the trials, the selected sections chosen by RDSO require high degree of maintenance of

track, bridges, signalling, OHE and associated assets. WCR has been the Leading Railway for conducting Oscillation trials in 2020-21. The test stretches for conducting Oscillation trials chosen by RDSO include Kota - Nagda and Kota - Mathura Sections of Kota division and Itarsi - Bhopal and Bhopal - Bina Sections of Bhopal division. These sections have exhibit one of the best performance for conducting Oscillation Trials and Test the Design Features of the New Locomotive and Rolling Stock. West Central Railway has emphasized and implemented the best maintenance practices through mechanisation of track maintenance and adopting Modern Track, Signalling and OHE maintenance procedures. It is worth mentioning that Mathura - Kota - Nagda Section (549 Route Km) of Kota Division of WCR is the chosen section of Indian Railways for all High Speed Trials.

Apart from this, Confirmatory Oscillograph Car Runs (COCR) runs have also been conducted in these sections for increase of speed of various Mail/ Express trains on West Central Railway and on



Indian Railways as a whole. The two trunk routes of Delhi-Chennai (Itarsi-Bina) and Delhi-Mumbai (Mathura-Nagda) have been raised to 130 kmph and with this West Central Railway has become the 1st Railway to achieve this target one year before the target date i.e. in Dec 2020 against the target date of Dec 2021.

The High Speed Oscillation Trials have been conducted as per the above policy on Kota and Bhopal divisions. It is a remarkable achievement and a matter of pride that an astounding no. of 65 Trial Runs at High Speed in the Speed Band of 130

to 180 kmph have been conducted successfully on Bhopal and Kota divisions. A Total Run of 8900 Kms of Oscillation Trials has been performed on WCR in 2020-21. It is worth mentioning that High Speed Trial at 180 kmph has been performed for 3-tier economy coach LWACCNE, which shall be very beneficial for introducing economical travel on Indian Rlys. in the near future. The Routes of West Central Railway have once again exhibited exceptional performance in conducting these trials, which indicates the high degree of maintenance and dedication of all staff and officers of WCR. ■

Technical Seminar on 'Construction of Underground Metro'

A technical seminar on 'Construction of Underground Metro' was held at Metro Rail Bhavan on 27 February, 2021. Shri Manoj Joshi, General Manager, Metro Railway inaugurated this seminar by lighting a lamp.

In his address, Shri Joshi expressed his hope that this seminar would be useful to give insights

to all important aspects of the Underground Construction. Senior officers of Metro Railway were present in this seminar in which technical issues like 'Top-Down Construction and Concrete Technology,' 'Circular Economy for Sustainable Development' were elaborately discussed. After the seminar, a technical quiz was also held. ■

Chittaranjan Locomotive Works : Rolled Out 7500th Electric Locomotive



Chittaranjan Locomotive Works (CLW) has always been a leader in electric locomotive manufacturers of India. Performance of CLW during the fiscal that just ended, has catapulted it into the largest loco manufacturer in the world. Shattering all previous records CLW created another history on the 25th January, 2021 by producing a whopping 7500th electric locomotive since beginning 1961-62.

Shri Rajesh Tiwari, Member (T&RS), Railway Board visited CLW and formally flagged off the 7500th electric locomotive in presence of Shri Satish Kumar Kashyup, General Manager / CLW from the workshop. Earlier he inspected the CLW workshop along with the General Manager. Shri Rajesh Tiwari had detailed discussion with Shri Kashyup and Sr. officers of CLW and reviewed the production

programme of current and the next FY.

Shri Tiwari congratulated and appreciated the motivated team of dedicated staff, supervisors and officers for this great achievement of CLW. He also appreciated the efforts of the General Manager for keeping its focus not only in production of electric locomotives but also on maintaining a clean, eco-friendly township. CLW has stepped into clean awareness campaign in and around its vicinity.

CLW's Annual performance

Chittaranjan Locomotive Works (CLW) produced 350th electric locomotive (WAG-9 HC, 33059) in 248 working days up to 11th March, 2021 of the current financial year 2020-21. Last 50 locos were manufactured in just 33 working days.





ZONAL RAILWAYS/PRODUCTION UNITS NEWS

In the first quarter of F.Y. 2020-21 production was slow due to COVID related restrictions. The supply chain of material was inconsistent due to national and statewise lockdown and restrictions. Yet with proper planning and management, CLW revamped production from second quarter and first 150 locos were produced in 129 working days. From third quarter of F.Y., CLW constantly performed

well and the last 200 locos have been produced in only 119 working days. Shri Satish Kumar Kashyup, General Manager/CLW congratulated the entire team of CLW and appreciated their efforts in successful production of 350th locomotive. With this trend in production, it is expected that, CLW will achieve another milestone of highest no. of locomotives produced in a financial year. ■

Banaras Locomotive Works : Inauguration of Disaster Management Training Room 'Manthan' in BLW

The newly constructed Disaster Training Center 'Manthan' was inaugurated by General Manager Anjali Goyal at BLW workshop under the 50th National Safety Week under the aegis of the BLW Safety Department. Speaking on the occasion, General Manager Goyal said that the Railway Protection Force, Civil Defense Organization, St. John's Ambulance Brigade and other organizations, including the Safety Department of BLW, always face calamity unitedly.

The 'Disaster Management Plan' prepared by BLW has been approved and appreciated by the National Disaster Response Force (NDRF) experts. The disaster management system of BLW remains intact, for this the support of the NDRF is also received from time to time.

On this occasion, fire fighting, relief and rescue work was performed live by Railway Protection Force, Civil Defense Team, St. John's Ambulance Brigade and Scouts & Guides in which fire was controlled by firefighters using stretchers and rope raised from very high altitudes and bringing the injured down without adequate means, providing first aid to them using various other methods like stretcher drive to transfer the injured and victims from accident site to another place for medical



treatment. On this occasion, Mr. Rajesh Kumar Rai, PCEE, DS Jangpangi, PCMM, V.K. Saxena, PCME, P.K. Singh, PCPO, Y.K. Shrivastav, PFA, Alok Kumar, PCSC, Santosh Kumar, PCE, Dr. Sujit Mallik, PCMO including a large number of departmental, field officers and employees were present. The welcome address and thanks to the guests were given by Mr. Nitin Mehrotra, Chief Safety Officer and the program was conducted by Mr. Amlesh Shrivastava, Senior Translator.

In the series of programs organized, the officers and employees present at the store and depot located in the workshop premises were trained on safety measures, and use of safety equipment and fire fighting. ■

Standing Tall : Ex-Railway Staffer's Yeoman Service

Malathy NP

Journalist, CPRO/O/MAS, Southern Railway



SHRI N. SUBRAMANIAN, aged 77, is a retired OS/Gr.I/S&T Department of Southern Railway. Since retirement in 2001, for the past twenty consecutive years, he has nurtured his passion for the noble cause of education at 'Grass Root Level' by providing a set of supporting study materials viz., Thirukkural, Dictionary, Atlas and Moral Poem Book, to all the first standard children joining afresh every year in Government schools of Tamil Nadu State located in some remote villages. He spends around ₹75,000 per year from his

own source of income (pension) for this humanitarian gesture. In July 2019, he made a significant donation of ₹1.1 Lakh to six schools towards School Patron Schemes/Endowment Prizes and to patronize many SC/ST children.

Shri Subramanian is a self motivated, conscientious and forward-looking person, and even after years of superannuation keeps himself busy by indulging in many philanthropic activities. He also spends his spare time in helping Railway Pensioners, particularly widows, aged and disabled ones, in getting their genuine pension-related grievances solved by concerned railway authorities for which he was felicitated by State Bank of India.

He was awarded the



Shri Subramanian with Shri John Thomas, GM, Southern Railway

prestigious 'Vidhya Seva Mani' from the seer of Kanchi Sankara Mutt for his altruistic service in serving poor school children. Shri N. Subramanian's yeoman service to humanity and his 'life after retirement' is a standing example to stimulate and ennoble our Railway Fraternity. ■

Shri N Subramanian is one of our oldest subscribers. The magazine has been carrying his articles since long. These articles are highly appreciated by our readers. Shri Subramanian is a genuine well-wisher of the magazine and in fact one of those few readers who would regularly offer their suggestions/feedback/comments for the development of the magazine. He has always been a great source of inspiration for the magazine. It is almost unbelievable that at the age of 77 he is maintaining this level of energy and enthusiasm. The magazine wishes him a long and healthy life.

The Editor

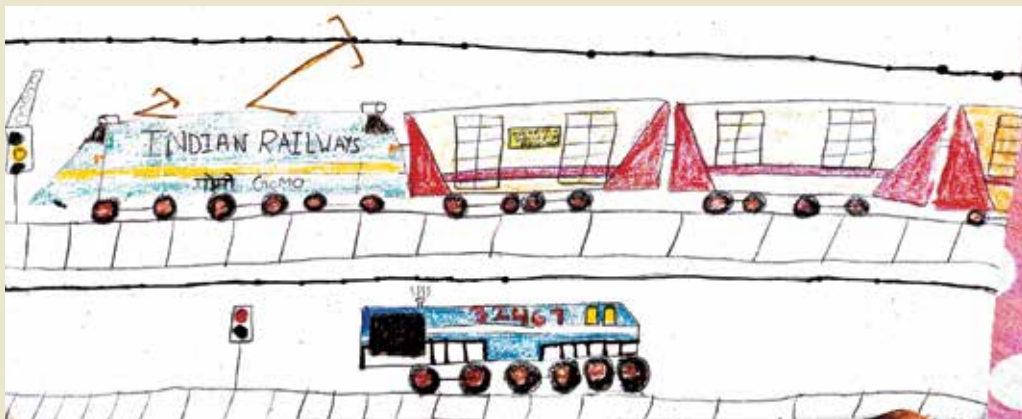
KIND ATTENTION, READERS

Due to some unavoidable circumstances, the Special Annual Issue of the magazine, which is usually published in the month of April, is being delayed this year. Annual issue 2021 will be published later this year.

CHILDREN'S PAGE



Rishita Sinha
VI Standard,
Age 11



Avinandan Banerjee
Class 1, Age 7



Eshwari Ramnathan
IX Standard, Age 14

Experience During the Pandemic

It is the general desire and anxiety for any student to welcome holidays to be free from 'school's' daily tight schedules. On the contrary, we are now made to anxiously wait for the school reopening at the earliest.

The lockdown was a sudden announcement in March 2020, when our Annual Examination was going on. This unprecedented situation was a rude shock to us as we could not complete it. Its extension for April, when we were supposed to enter our next higher class with few changes and new friends, was a great loss to miss the charm and thrilling time to know our new section, new classmates, new teachers, new classroom, etc., etc. Next, the month of May was usually our Annual vacation and so we did not find much difference. Finally our school attendance in June was totally blocked, it gave us a lot of mental stress and strain mainly on account of our physical absence from the lovely school environment that we are accustomed to, for years together, though we did video and phone calls.

Anyway, we started to understand the ground realities and by this time, our school too initiated 'online classes' and this gave us a great relief though it was quite new to us in a different way. The way in which it was taught to us by our loving teachers made us enjoy it and remaining to be so. We continue



Eshwari
Ramnathan
IX Standard
Age 14

to stay at home with no 'uniform', etc., but keep up the 'online' classes attentively. Of course, truthfully speaking, we missed a lot like personal touch and conversation with friends and teachers. All the papers in the world and all the words ever written are not enough in whatever ways I describe this loss. I feel that this 'Paradise is lost' once for all and surely, I can be fully happy when this 'Paradise is regained.'

However, till such time the 'Online' classes came into full-swing, we had a very good 'Quality Family Time' with my sister, parents and grandparents. We had the golden opportunity to spend a lot of time to their entire satisfaction by playing many indoor games of both older and modern days. They told their past reminiscences about themselves and ourselves. These aspects which we could not avail earlier, gave us a great happiness. I just term it a 'Pleasure of Convenience' out of 'Pressure of Inconvenience'. As we were completely forbidden to venture out for any reason, we had to spend all time only indoors following SOPs like hand sanitization, face mask covering and maintaining social distance as and when/wherever necessary. Yes, we scrupulously followed our Government's advice.

"Stay Home, Stay Safe." ■

EDITOR'S MESSAGE TO THE YOUNG READERS

Dear Children,

Congratulations on being promoted to the new class. A new academic year brings with it everything new – new books, new copies, new topics, new classroom, new class-teacher. The magazine in its endeavour to give a new feel to its readers, has introduced a Children's Page – a page fully dedicated to the creative artwork /literary work of the children of railway employees/subscribers of the magazine.

If you are below 14 and if any or both your parents are Railway employee(s)/Subscriber(s) of the magazine, you may send your poems, short stories, jokes, drawings and short quizzes (either MCQ or one-word answer) etc for publishing on this page. Please don't forget to attach (i) proof of your age (ii) details of your parents and (iii) scanned copy of your photograph. In case of quizzes, the responsibility for the correctness of the answers will lie with the sender although the magazine, on its part, will make efforts to verify the same.

So, get ready, pick up your pen/pencil/drawing materials and start sending to our email id : editorindianrailways@gmail.com before the pressure of the new session builds up!

With love,

The Editor.



HOME SWEET HOME: A Family and its Struggle (Rail Eco Park)

Shri Devendra Singh and Shri Dakshita Das

It was towards the middle of March and already summer seemed to have set in with its typical scorching heat. Out early for my morning walk in a moderately forested and relatively isolated trail close to my house, I spotted activity on the upper reaches of a Silk Cotton tree. I gazed upwards. Next, a screeching call attracted my attention and to my pleasant surprise it was a pair of Indian Grey Hornbill (*Ocyeros birostris*) trying to communicate with each other. Indeed, it was a nice sight to see them together.



In the next few days I would see the same pair flying around, on the lookout for a site to make a nest, most certainly in a tree hollow of the Red Silk Cotton tree (*Bombax ceiba*). Their painstaking survey was a sight to watch particularly when both would fly over the tree to assess the suitability of the space. I could imagine that the mating season and the imminent birth of the young ones was



adding urgency to seek out a space where the children could be kept safe from the vagaries of nature and interference by others.

This search and effort continued persistently for a few days, keenly observed by me daily on my walk, until one day the female ventured to explore and scrutinize the probable nesting site in the silk cotton tree from close quarters. The pair now paid repeated visits to the chosen nesting site on the tree one by one and tried to widen the small entry, their long beak pecking away at the trunk. This continued for a couple of days as the couple was



now building their home. My morning walks now became all the more enjoyable as I would relish this sight of the home makers!

What a spectacle it was! The female entered the hole. To my naïve eye, it seemed too small for her size but in a whisper, and seamlessly, she vanished inside while the male perched himself close by overseeing with a keen eye. She must have arranged the house inside with love and affection as all ladies do. After some time she decided to come out and it was a treat both to the eyes, mind and soul, in the manner that she maneuvered out through the small hole and came out literally part by part with very finely tuned skills.

It was certain that this was home to the pair of Hornbills and it was now time for them to start their family.

I wondered as to how a tree, that too a Silk Cotton, would have a natural hollow midway in its trunk which could be utilized by the Grey Hornbill to make a home to rear the new ones. Then came the thought, which flashes in my mind every other day that actually we know so little about our surroundings and nature...

Well, to return to the homemakers, they made innumerable rounds to the tree trunk to put it in order. One could hear some cacophony sometimes when common Mynas would be making rounds of the same tree but the Grey Hornbills were successful in shooing them off.

Time was ripe for mating and making babies. They mated, which could luckily be captured by the camera.



After a few days the female disappeared inside the nest and the male started sealing the tree hole. One could see the tip of the long beak of the mother-to-be through the small slit in the morning, communicating with her partner, asking for food. The male would fly around getting food and feeding



her diligently. Daily he would feed her many things besides leaves. Sometimes he would regurgitate to take out fruit and leaves and give them to the female. It was a great lesson about duty, hard work, love, affection, care, sacrifice, bonding, companionship..... you name it and it was there. Off and on a Myna could also be spotted daringly near the nest, only to be driven away by the female Grey Hornbill who would take out its beak from inside the hole to do so. This continued for about a month or so.

I was overwhelmed by the events of their daily life and would go daily to be part of this process. Sometimes you discover and realize yourself through the nature's prism and also through your passion and hobbies. It is so intricately woven by the creator in all of us and in nature.



I was waiting excitedly about the coming days. Sooner than I had expected, I heard the male being greeted with a chirping loving noise from inside the nest indicating that the new ones had arrived. More food for him to carry I guess! The holes remained cemented from the outside with just a small gap for feeding purpose. It was now the duty of the male to protect his family inside the hole. Only the beak of the female was visible from the small slit. It was a spectacle which shall remain engraved in the mind for ever.

Then came day that I found that the hole had been widened and a feeble looking female was sitting outside on the tree branch. The male joined her as well and both of them started communicating very loudly. The chicks were out! And the parents were still near the nest, standing guard.

Suddenly there was cacophony and one witnessed a fight between the Mynas and the



Hornbills. It was a very fierce battle. Apparently the Mynas were trying to drive away the Hornbills in the same way that they had been driven away a few months ago by them from that very tree. The Mynas were in large numbers and the fight continued for a while until one final day the Mynas drove away the Grey Hornbills to capture the space. It was such a proud moment as the victorious Mynas pose for the photo shoot while the female Hornbill, weakened by the process of nurturing her family, watched from a close-by branch! This was captured by the camera, thanks to the technology that the bigger and powerful lens can capture life's events without disturbing the process.

As they say there is nothing permanent in life: what was home once for Hornbills had now been captured by the Mynas. The tree was the same, surroundings unchanged; only time had changed to give shelter to a different species to rear young ones. There is nothing constant except constant change. I was wonder struck with the ways of nature.



Now it's the Mynas turn to propagate on the same spot. The story has continued and will continue whether we are there to observe, watch and witness it or not. We as humans can be more respectful towards nature as it is the one power which sustains us without making any demands thereby making life richer and richer: such richness which money can't buy. ■



Writers and Contributors

Writers are invited to contribute articles on subjects like

SHORT STORIES, TOURISM, HEALTH, YOGA, CINEMA, GARDENING, MEDITATION, COOKING, SPORTS, FAMOUS PLACES ABROAD, TREKKING etc.

in 800-1000 words/poems/quiz/puzzles.

Relevant pictures along with article may be sent only on Email ID editorindianrailways@gmail.com

A suitable remuneration shall be paid after its publication. -Editor



MUSSOORIE DEHRADUN

Shri Anil Saxena
Freelancer

“There is something in the air of the place, especially in October and November, that is conducive to romance”, quote Ruskin Bond. And this may be holiday saver for those who bemoan the crowds and construction in Mussoorie.

Mussoorie, Queen of the Hills, located some 290 km north of New Delhi, is among the most popular hill stations of the country. It is a captivating paradise for leisure travellers and honeymooners. A perfect summer resort and a

major educational and cultural centre has been rolled into one hub. Located on a 15 km long horseshoe ridge with the grand Himalayas as a backdrop, the colonial hill resort of Mussoorie spreads across at a height of 2,005.5 m above sea level. From this vantage point, Mussoorie offers superb scenic view of peaks of the Himalayas in western Garhwal. Mussoorie boasts of some of the most spectacular views of the Himalayas. Hill ridges, irregular in shape and partly wooded, form

Mussoorie Lake Mist



layer after layer to the horizon, where snow capped mountain peaks are visible as though you can touch them. From West to East, the mighty peaks of Bandar Poonch, Srikantha, the Gangotri group and the Chaukhamba present a mesmerizing panorama. 34 km from Dehradun, Mussoorie overlooks the majestic Doon valley to its south and the impressive Himalayas up north. The mountains beckon climbers, trekkers and adventure sport enthusiasts. Trekkers begin their journey into the popular trekking area of 'Har Ki Dun' with its snowscapes and verdant-forested slopes from Mussoorie. The holy River Ganga is visible from one end of the ridge and Yamuna from the other, a stretch of around 20 km in all, from Cloud's end in the west to Jabarkhet in the east. One of the most easily accessible hill stations in Northern India, during the peak tourist season, Mussoorie becomes a bustling resort with hordes of holiday-makers ambling down the central Mall. The suburban area of Landour, about 300 m away from the main town, is quieter and has managed to retain some of its old colonial charm. Surrounded by lush wooded expanses and winding lanes, it offers exclusive opportunities for quiet walks. It overlooks the sprawling Doon valley and the city of Dehradun, the gateway to Mussoorie and to entire Garhwal.

An Intriguing Past

Although Mussoorie, as a hill station, was established in 1825 by captain Young, it has quite an intriguing past. Mussoorie was never an official summer capital like Shimla – a hill station in the state of Himachal Pradesh which was the summer capital of the British Indian government or even like Nainital – the summer capital of the United Provinces Government in British India. Mussoorie always remained unofficial – for the affairs of the heart. It has always been a gossip place – with an air of informality and a tradition of romance – The Honeymoon Capital of India.

It was due to the conquest of the Garhwal and the Dehra in 1803 by the Gorkhas, under Umer

Singh Thapa that Mussoorie implicitly came into existence. It was natural after that, at some point of time the interest of British security would have clashed with the expansionist policies of the Gorkhas and although the immediate cause of the war was different, another war inevitably broke out on November 1, 1814 and Dehradun was evacuated of the Gorkhas by 1815 and was annexed to the district of Saharanpur by 1819.

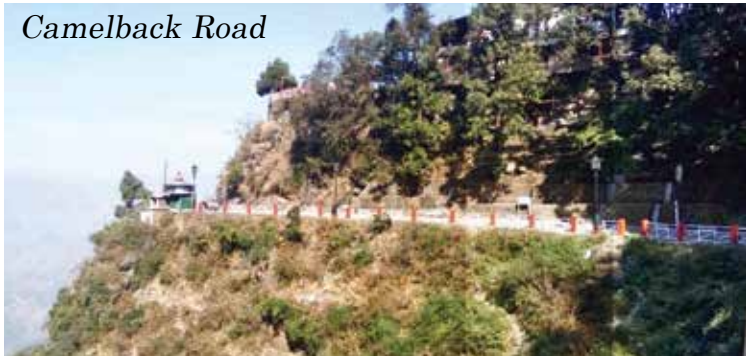
The history of Mussoorie town dates back to 1825 when Captain Young, an adventurous British military officer, together with one Mr. Shore, the resident Superintendent of Revenues at Dehradun, explored the present site and jointly constructed a shooting lodge. This laid the foundation of this holiday resort which now has few rivals. Its name is derived from a shrub locally called mansoor behind the house of the Captain. Some believe that perhaps that is reason behind the name of the town, which is also known as Mansoori among the natives of the surrounding area.

Before the British came, there were only shepherds whose animals grazed on the 'Mansur' shrub. It is natural to suppose that the officers located the hills and eventually climbed them in search of sport and recreation. The first house erected on the ridge of Mussoorie was a small hut built on the Camel's back as a shooting box by Mr. Shore, the then Joint Magistrate and superintendent of revenues of the Doon and Captain Young of the Sirmur Rifles in 1823. Soon Captain Young built his large residence called 'Mullingar' as his residence as the Commandant of Landour. The splendid climate and the good sport obtainable gradually attracted other Europeans. As the Doon and the hills to the north became better known in 1827, the Government established a convalescent depot for European soldiers at Landour. The town grew rapidly and a hundred years on, it had grown into a major settlement for the homesick British, away from the heat and dust of the plains.

In April 1959, after fleeing Chinese occupation of Tibet, the Dalai Lama decided to establish the Tibetan Government of Exile in Mussoorie, which eventually moved to Dharamshala in Himachal Pradesh. The first Tibetan school was established in Mussoorie in 1960. Today, some 5,000 Tibetans live in Mussoorie.

MUSSOORIE - A Romantic Town

Mussoorie is a wonderful place to unwind. Here you do what Mussoorie encourages you to do to your heart's content. The modern bungalows, malls and well-laid gardens located on the small hills around the area are enough to attract any tourist. The town has unavoidable romance in the air – an

Camelback Road*Gun Hill*

excellent breathing space for tourists and people who seek relief from the hot sultry conditions of the plains. Nature has gifted Mussoorie everything, which makes a place charming and cherubic.

Mussoorie offers a beautiful nature walk known as Camel's Back Road. This road takes its name from a hill shaped like a camel's hump. There is also Gun Hill where cannons were kept for the defence of the town. The oldest Christian church in the Himalayas, St. Mary's, is situated above Mall Road, and is currently undergoing restoration. Kempty Falls is a nice picnic spot. Company Garden (now Municipal Garden) is another popular tourist spot. During the season, the Company Garden presents a beautiful collection of flowers and plants. The Happy Valley has a small Tibetan temple. This was the first Tibetan temple built in India. The temple was constructed in 1960 by the Tibetan refugees. Lal Tibba is another tourist spot of Mussoorie. Beautiful Dhanaulti is about 24 kilometers from Mussoorie. Mussoorie also has India's largest roller skating rink.

The main promenade in Mussoorie is called, as in other hill stations, the Mall. In Mussoorie, the Mall stretches from Picture Palace at its eastern

end to the Public Library, Gandhi Chowk at its western end. During the British Raj, signs on the Mall expressly stated – 'Indians and Dogs Not Allowed'; racist signs of this type were common place in hill stations, which were founded 'by and for' the British. Motilal Nehru, the father of Jawahar Lal Nehru, deliberately broke this rule every day whenever he was in Mussoorie, and would pay the fine. The Nehru family, including Nehru's daughter Indira (Indira Gandhi) were frequent visitors to Mussoorie in the 1920s, 1930s and 1940s. They also spent much time in Dehradun, where Nehru's sister Vijayalakshmi Pandit ultimately settled.

An idyllic stroll through any of the meandering mountain roads of the town on a clear and sunny day will bring you to some of the well known and not so well known spots – each having its own tales to tell – Landour Bazaar, Chaar Dukaan, Lal Tibba, Gun Hill, the Camel Back cemetery, the Mussoorie Library, and of course the Hotel Savoy – an historical edifice in itself. You may be able to recognize any or all of the old houses and estates or you may meet some descendant of any of the many well – known families of Mussoorie.

The weather is generally bright and clear – except during the three months (June to August) of Monsoons, – when mists envelope the mountain slopes and paints the sky with a mauve glow while the woods around – of pine, cedar, birch, oak, rhododendron and deodar – erupt greener. There usually is a bright Christmas and the breathtaking view of the snow-clad Mussoorie gives it the name – the Queen among hill stations. There are popular picnic spots in and around the town – Kempty Falls in the west and Dhanaulti, further up beyond the town.

Landmarks

Mussoorie has some lovely and charming old houses and estates, usually with names derived from the native places of those who built and lived in them. Today these old houses and estates are owned by financially well-off Indians, many of whom follow the life styles of their former colonial





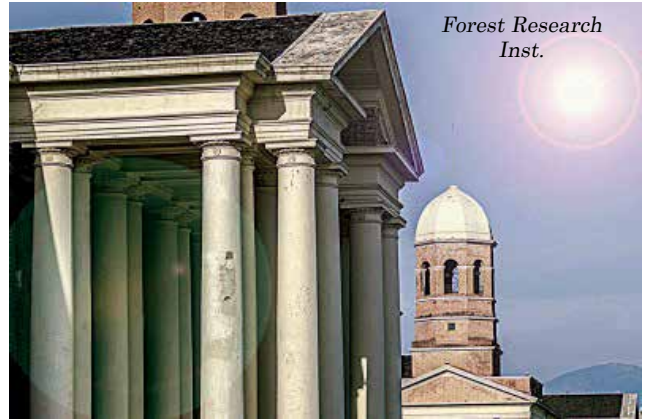
rulers. In most cases, the old names have been retained.

Some of these old graceful houses are – Captain Young’s Mullingar Mansion, the oldest existing building in Mussoorie, Houses of Irish pioneers – Tipperary, Killarney, Shemrock cottage and the Tara hall, the houses of Scot pioneers – Scottsburn, Wolfsburn and of course the houses of the English rulers – Connaught Castle, Grey castle, Hampton court and Castle hill. There evidently were a lot of fans of the legendary writer Sir Walter Scott as we find old estates of the name of Kenilworth, Rockeby, Waverly and also Abootsford – the name of Sir Scott’s own house in England.

There are quite a few well – known families in Mussoorie, who over the times have become a part of the history, culture and the landscape of this place – the Rajmata of Jind, Princess Sita of Kapurthala, the Gantzers, the Badhwars, the Barrettos, the Skinners, the Keelans, the Alters, Lala Banwarilal, Ram Chander and Brothers, Pooranchand and Sons and P.C. Hari’s family. Most of the shopkeepers of Mussoorie and Landour Bazaar are descended from the merchant who first came here with the British soldiers and settlers over 160 years ago.

At the Camel Back Cemetry, thousands of British graves cling to the steep slopes – a constant reminder of the British presence in Mussoorie. Here lie the hill stations’ first pioneers and settlers

as well as Generals and common soldiers, mem-sahibs, gentlemen and brewers. Here also lie John Lang, the Australian born novelist and Fredrick Wilson, better known as ‘Pahadi Wilson,’ who married a girl from Harsil. He was the first man to float timber down the Ganga river who lived a life which would have been the envy of kings.



DEHRADUN

Dehradun used to be quiet, small valley-town, famous for the basmati rice, lychees, and educational and research institutions such as the Forest Research Institute, the Survey of India, Rashtriya Indian Military College and Indian Military Academy.

Nestled in the mountain ranges of the Himalayas, Dehradun is one of the most beautiful cities in the sub mountain tracks of India, known for its scenic surroundings. The name Dehradun is a collection of two words ‘dera’ meaning camp and ‘dun’ meaning valley. It is also known as one of the oldest cities in India, it is believed that Lord Rama and his brother did penance here for killing Ravana, the demon king. Under the British, Dehradun became an elite town with many a fine institutions like Forest Research Institute, Doon School and Welham Schools for girls and boys, many more, like the ONGC and Wadia Institute of Himalayan Studies, were added in time. Dehradun has now become an important tourist destination. ■

CITY FACTS

State:	—	Uttarakhand
District:	—	Dehradun
Famous for/as:	—	Hill Station
Languages:	—	Kumaoni, Garhwali, Hindi, Gorkhali, English
Best Season:	—	Sep – June
Weather:	—	Summer 24 to 35°C,
Winter:	—	1 to 22°C
Altitude:	—	1826 m
Pincode:	—	248179, STD code: 013563

CITY FACTS

Population:	—	12,79,083 (2001 census).
Altitude:	—	960 m. Area: 300 sq km.
Climate:	—	Cold in winters, hot and humid in summers.
Season:	—	Round the year.
Clothing		
Summers:	—	Cotton clothes.
Winters:	—	Heavy woollens.
Languages:	—	Hindi and English.



INDIAN RAILWAY -

A Journey with Speed, Strength and Humanity

Shri K C Jayaraj

Sr. Engineer (IT), IT Centre, Western Railway
Churchgate, Mumbai 400020.

*“Gaadi bulaa rahi hai, siti bajaa rahi hai
Gaadi bulaa rahi hai, siti bajaa rahi hai
Chalanaa hi zindagi hai, chalti hi jaa rahi hai
Gaadi bulaa rahi hai, siti bajaa rahi hai.”*

Lined up with friends singing, imagining yourself as a train.

Could any of us have had a childhood where we did not run and play like a Railway engine? I believe, at least my generation would have had such a childhood.

Yes, the train was always a miracle in my mind when I was young (still there is no change...). Seen from a distance, it looked like long fat snake, with its stomach full of passengers, black smoke spitting out and screaming loudly.

In those days, the only time I got a chance to board a train was when I used to visit Guruvayur temple with my family. It used to take around five hours from Kannur to Kuttipuram station, enjoying all the scenic beauties through the window. Finally when we got off the train looked entirely different with hands, face and clothes completely covered with black dust and smoke puffed out by the engine.

Today it is confined to some corner of my mind as faded memories.

On April 16, 1853, India's first passenger train made its maiden voyage from Mumbai to Thane. To commemorate this, Indian Railways celebrates Railway Week from 10th to 16th April every year. In connection with this, railway related exhibitions and other arts and sports events are held at various places. In addition, various categories of service medals and cash awards are presented to selected railway employees who have rendered outstanding service that year.

On this occasion, I think it is appropriate to have quick look at the history of Indian Railways for the last 167 years.

The first passenger train with 14 carriages pulled by three engines named Sahib, Sindh and Sultan departed from Boribandar station in Mumbai and reached Thane station in 45 minutes, covering a distance of 34 kms. Since then, the journey has gradually grown to make Indian Railways one of the best railways in the world.

The company was established in 1852 as Bombay Baroda and Central India (BB & CI). In February 1862, the first narrow gauge railway in Asia was opened from Dabo in Gujarat to Miyago.

In the same year, BB & CI launched the world's first double-decker coach.

In 1887, a new station building and administrative office was opened in Mumbai at 'Victoria Terminus' (now renamed as Chhatrapati Shivaji Maharaj Terminus). In 1890, the Indian Railway Act was drafted. It was not until 1891 that a separate toilet facility was introduced for coaches on the trains. In 1895, the first locally made steam engine was manufactured at the Ajmer Workshop. On February 3, 1925, the country's first electric passenger train ran from Mumbai Victoria Terminus to Kurla Harbor Line Station. The first air conditioned coaches were opened to passengers in 1936. The Chittaranjan Locomotive Workshop was established in 1950 for the manufacture of steam engines. In the same year, the Indian Railways was divided into 6 Railway Zones for administrative convenience.

In 1952, the 'Railway Staff College' was established in Baroda for the special training of officers. The Chittaranjan Locomotive Works in West Bengal started operating electric engines in the same year as the Diesel Locomotive Workshop in Varanasi, Uttar Pradesh. The first Special Container Service (Freight) in India was launched in 1967 between Mumbai and Ahmedabad.

The country's first Metro Rail service was launched in 1984 in Calcutta.

The next year, a computerized ticket reservation system was introduced. The world's first women-only train departed from Churchgate Station in Mumbai on May 5, 1992.

To the amazement of the world itself, the dream of the Konkan Railway, which had always been a challenge to engineers and builders, overcame many obstacles and became a reality in 1998 under the leadership of the great genius Sri E Sreedharan (Metroman).

On October 11, 2008, the first train in the Kashmir Valley was given the green signal. On April 5, 2016, India's fastest Gatiman Express (160 km / h) set sail from Delhi to Agra.

Today, Indian Railways is the fourth largest rail network in the world and the second largest in Asia. Today in India there are around 68525 kms long railway routes spanning on about 123200 kms. of railway tracks. The Vivek Express which starts from Kanyakumari in Tamilnadu and reaches it's destination at Dibrugarh station in Assam covering 4286 kms in 82 hours and 30 minutes, is the longest running train in India.

Gorakhpur Railway Station having a length of 1366 mts. in Uttar Pradesh, is the longest railway platform in the world. Mathura Station is the largest junction in India, with rails stretching in seven different directions.

The Rajdhani Express is an executive train that connects the state capitals with the national capital, New Delhi. The Maharaja Express, the Oriental Express, the Palace on Wheels, the Deccan Odyssey, the Golden Chariot and the Fairy Queen are some of the major luxury trains in India for foreign travelers. Garib Rath is a fully air conditioned train that can be used by the general public at low cost. Nilgiris Express, starting from Mettupalayam in Tamil Nadu running at a speed of 10 kms per hour to cover 46 kms in 5 hours to reach Ooty station is currently the slowest running train in India.

Sri Venkatanarasimharajuvaripeta in Andhra Pradesh is the longest and IB in Orissa is the shortest railway station names in India. 11.215 km long Banihal tunnel in Peer Panchal area of Jammu and Kashmir is the longest railway tunnel. 4620 mts. long freight bridge across Vembanad lake connecting Edappally and Vallarpadam in Kerala is the longest railway bridge. The 359 mts. high Chenab Bridge under construction in Reasi district

of Kashmir will be the tallest railway bridge in the world when its work is completed.

There are 13453 passenger trains carrying 2.3 crore passengers and 9141 freight trains carrying 30 lakh tonnes of goods plying through 7349 stations daily (As per March 2020 statistics).

Indian Railways has the distinction of being the single largest employer in the world. Today, the company employs over 1300,000 people in 17 Zones such as Northern Railway, Western Railway and the Central Railway etc. Indian Railways has nurtured many talented sportsmen and sportswomen who have upheld the prestige of the country at the national and international levels. Many state-of-the-art hospitals are functioning under the Railways.

Today we are moving to solar power, evolving from a coal engine that used to emit thick black smoke dust, over time to a diesel engine and later to an electric engine. On July 14, 2017, India's first solar powered vehicle was dedicated to the nation at the Safdarjung station in Delhi.

The role of railways in the various spheres of each of our lives, be it cinema, healthcare, daily commute facilities, availability of essential goods, disaster relief and arts and sports is unique.

At a time when the deadly virus of Covid 19 is spreading across the world, Indian Railways is setting an example to the world by providing a number of specialized intensive care facilities for patients inside trains and by manufacturing a number of health-related equipments. Let us be proud to be a part of this noble giant mission with our heart and mind. I wish you all a very happy and enjoyable train journey through the length and breadth of this beautiful country. ■



THE RAILWAYMAN

In the pervading silence of the midnight
When I got up abruptly hearing
The sonorous voice of an express train
Passing through a nearby station
I opened my ear to hear that melodious sound
Reverberated like a lullaby sung by a loving mother
As if telling the passengers:
"Keep sleeping my children, I am here to care!"
Travelling miles and miles through

The deserts of Rajsthan or
Forests and mountains of Assam
Without encountering a piece of
railway track anywhere
When I catch the glimpses of the road signs
Of an approaching level crossing
I get ecstatic, as if I have found
My own home unknowingly!

When people say good things
About railways and railwaymen, I feel happy
And get hurt when they speak ill of it
Because, I love my Railways
Who provided me
The bread and butter to live life
A cradle to foster dreams
And a name to take pride in. ■

Shri Hemanta Kumar Mohanty
Dy. CVO(T), S.E.Railway

Railway Loco Pilot Who Set Formidable Standards of Valour on Footplate

Shri Sudhendu J. Sinha

Adviser, NITI Aayog Government of India

30-year-old Percy was humming to the tune of 'the Blue Danube' that he tapped his feet on, together with Edna, his wife, the night before. The Veronese Valpolicella with Bandel cheese made it all the more romantic. Percival Douglas Carroll was on the driving notch of Up Bombay-Calcutta Mail on March 20th 1959. Chakradharpur based Percy was known for his punctuality and people could set their watches with the arrival of his train. The station master of Chakradharpur, having received the line clear from Rajkharwan, the station in advance, lowered the Starter Signal. Percy set out. The station section was carefully negotiated and then he entered into the Block section and notched up the throttle raising the speed of his train. He was enjoying the lurch of the curve at the bend a few miles away. With a thorough road learning of the section, he knew each and every inch of the track was like the back of his hand and could announce his location, even blindfolded, from the scent of vicinity and the rustling of leaves. That stage of perfection, is aspirational to a loco driver, and comes only when the complete geometry of the track gets transported and etched into one's mind - all clear with no space for any confusion whatsoever. But the lady luck was not kind to him that tragic morning. As he was cautiously clearing the curve to his full sight he was completely petrified to see ahead wagons capsized and thrown off obstructing both

Percival Douglas Carroll RAILWAY LOCO PILOT



*Who set
Formidable Standards of
Valour on Footplate*

(Diving to the deep dark ocean floor, scaling the highest peaks, jumping off a precipice, or fighting a band of armed robbers alone are definite examples of courage and chivalry. Is a common man with exemplary commitment to his duty and a sense of sacrifice not capable of doing an act of hero? The men of grit and spine that galvanise them into action making them immortal in the annals of history constituting a glorious saga forever. Railways are full of such narratives. Here is one such story to sing of a Railway engine driver who set a formidable standards of valour on footplate.)

the tracks as a consequence of two goods trains that had crashed into each other only a little earlier. It was a major mid-section accident that the adjacent stations were not aware of or else he would not have been given authority to proceed into the block section. Both the firemen were frightened of all things that they were walking the green mile to death. When

death stares you as an inevitable certain then the test of courage begins - the test of fire that only men of brass and railways (not necessarily in that order) can sail through.

Percy was adored by all his colleagues seniors and juniors as he loved his engine and kept it spic and span and also treated his firemen well. He was a big hearted driver, more than what words could tell. He knew it for sure that his life could end but his sole concern was how to save the 500 passengers on board who had trust on railwaymen and railway systems that they were safe. Percy did a swift calculation. He could see through that the margin between his locomotive and the obstruction on the track was less than even the codal emergency braking distance. His test had begun.

He decided to go braking for all his life. He eased the throttle and applied the brakes. As he was moving closer to the wagons strewn all over the tracks and he knew that it was almost imminent to hit the fouling rakes.

He yelled to his firemen, "Save yourselves, jump for your lives!"

He remained at his post, trying to slow his train down as much as possible. His engine crashed into a couple of wagons and toppled over the embankment. He was caught under the wheels of the engine, but the carriages of his train held the tracks. Carroll who had enjoyed and taken pride of being on footplate was pinned down by the 'Black Monster' riding right

REPUBLIC DAY 1961

KIRTI CHAKRA



Posthumously
for 'Conspicuous Gallantry'



Edna Carroll receiving the Kirti Chakra awarded posthumously to her husband Percy Carroll, driver of the Bombay-Calcutta Mail, from President Rajendra Prasad on the Republic Day in 1961

over him. This turned out to be his final run. A Sindhi lady doctor on board who was just back from her medical training from the US was called to apply tourniquet and give the first aid that she did preventing his immediate death. Percy passed away on 22nd March, the other day, but with smiles and satisfaction on his face that no damage was done and all the 500 passengers on board Up Bombay mail were safe. His life ended but not before him winning the race.

Edna Carroll was right in front of President Rajendra Prasad. Dressed in all white she was sombre in memory of Percy. The citation was read out. "...By his presence of mind and quick action he saved many lives but sacrificed his own as he succumbed to the injuries which he received as a result of the impact. In remaining at his post when he could quite easily have jumped off his engine and saved himself. Shri Carroll displayed courage and devotion to duty of a very high order."

Edna was remembering, '... Brave when danger threatens us ...' from 'The Blue Danube' waltz by Austrian composer Johann Strauss, so close to the heart of Percy that mirrored him till his last.

By his exemplary, sacrifice Percy Carroll wrote a glorious saga of courage and devotion reverberating for all times to come – Railway man that he was, his valour on footplate. ■





FINDING YOURSELF

Whenever you think
That you have lost yourself,
Let your soul
Be bathed with water
Of the rivers of time!

If bathing doesn't help,
Let it be soaked,
And if the soaking efforts
Are rendered futile,
Let it be drowned.

At the bosom of the river,
You will find the secrets
To a invigorated you;
Confidences that had got buried
Unknowingly and unexpectedly
Will open up like petals of a bud!

No, you can never lose yourself!
When you reappear on the banks of the
river,
You will rediscover yourself once again,
Your spirits will be rejuvenated
And from it will be carved
A new 'you'! ■

DREAMS

Panting breaths,
Aching legs,
Unclear vision,
Shivering body,
Hands struggling to hold the dangling rope;
And yet, the dream of conquering
That lofty mountain peak,
Makes the mountaineers carry on.

Dreams are what
Define you and your existence.
A person without dreams
Is already dead,
And who likes decaying corpses?

I have filled up my eyes
With infinite number of dreams,
So that if one drops,
I pick up the other;
If another gets fulfilled,
I jump on to the next-
And my life moves on seamlessly
With happiness dripping from my lips
In the form of a beautiful smile. ■

NEELAM SAXENA CHANDRA

Adtl. Divisional Railway Manager, Pune Division

OUR BACKROOM BOYS



AJEET

The present transformation in the appearance and content of the magazine must not have gone un-noticed by our esteemed readers. Some of them have in fact sent encouraging messages or made phone calls appreciating these changes. The editor thought it would be criminal on his part to usurp all the credit by himself and not to publicly acknowledge the contribution of those who have played pivotal roles in bringing about the transformation.

If today the magazine is showing improvements on certain fronts, a large chunk of our thanks should be reserved for Shri Ajeet Singh Yadav and Shri Sachin



SACHIN

Gaur, both Sr Publicity Inspectors, PR Dte, Railway Board. Be it collection of photos or reports from field units, liaisoning with people both inside and outside Railways for materials, talking to celebrities for exclusive interviews, designing pages and selection of themes for the cover – these two fellows are always there. They were inducted in Board's PR Dte basically to look after the Social media handles of the Ministry. But due to their aptitude for creative and literary work the management have involved them in magazine work also. Both of them are young, smart, energetic and eager-to help type. They are well-informed, tech-savvy, creative, analytical and have wide contacts – qualities we have been looking for a while.

The real compliments for them would, however, be the appreciation of our readers. Please send your valuable opinion/suggestion/feedback about the new-look magazine to feedbackindianrailways2021@gmail.com. ■

Role of Physiotherapy in Diabetes

DR. Sangeeta Bhattacharjee (PT)

MPT Neurology, Certified Antenatal AND Post Natal Exercises and Fitness Expert, Certified Oncovaginal Rehab Practitioner, PGD Counseling and Guidance, FCED; Physiotherapist in SECR Bilaspur Central Hospital.

Diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Insulin is a hormone that regulates blood sugar. Hyperglycaemia (raised blood sugar) is a common effect of uncontrolled diabetes and over time leads to serious damage to different body's systems especially nerves and blood vessels.

FACTS

- It is a growing public health problem and is considered as one of the main threats to human health in the twenty-first century. It imposes a significant burden on patients, society and has a high attributable burden of disability.
- It is one of the leading causes of complexity of the illness, an increased risk of medical comorbidities like fatigue, recent weight loss, severe restriction in mobility and strength and increased chances of falls.
- **Diabetes is a major cause of Blindness, kidney failure, Heart attacks, Stroke and Lower limb Amputation.**
- Diabetes itself is not a high-mortality condition but it is a major risk factor for other causes of **Death**.
- WHO estimates that Diabetes was the **seventh** leading cause of death in 2016.
- **In 2016, an estimated 1.6 million deaths were directly caused by diabetes. Another 2.2 million deaths were attributable to high blood glucose in 2012.**
- With changing lifestyles and increasing obesity, the prevalence of Diabetes has increased worldwide.
- **Diabetes prevalence has been rising more rapidly in low and middle income countries than in high-income countries.**
- In 2020, according to the [International Diabetes Federation \(IDF\)](#), 463 million people have diabetes in the world and 88 million people in the [Southeast Asia](#) region. Of this 88 million people, 77 million belong to India.
- In India high prevalence of diabetes is reported in economically and epidemiologically advanced states such as [Tamil Nadu](#) and [Kerala](#).

- The type 2 diabetes mellitus is the most common type of diabetes and accounts for 90–95% of overall diabetes cases.
- According to the IDF estimates, **India has the second highest number of children with type 1 diabetes after the United States.**
- According to the DHS survey prevalence of Diabetics are similar in both male (12%) and female (11.7%) populations.
- The rising prevalence of diabetes is driven by a combination of factors - rapid urbanization, sedentary lifestyles, unhealthy diets, tobacco use, and increasing life expectancy.
- **Diabetes can be treated and its consequences avoided or delayed with diet, behavioural changes, Physical activity, medication and regular screening and treatment for complications.**

Types of Diabetes

- **Type 1 diabetes** (earlier known as insulin-dependent or childhood-onset diabetes) is characterized by a **lack of insulin production**.
- **Type 2 diabetes** (earlier known as non-insulin-dependent or adult-onset diabetes) is caused by the body's **ineffective use of insulin**. It often results from excess body weight and physical inactivity.
- **Gestational diabetes** is hyperglycaemia with blood glucose values above normal but below those diagnostic of diabetes. It is first recognized **during pregnancy**. Women with gestational diabetes are at an increased risk of complications during pregnancy and at delivery. It generally affects pregnant women during the **second and third trimesters**. According to the American Diabetes Association (ADA), GDM complicates 7% of all pregnancies. It can lead to serious health risks for both the mother and child. These women and possibly their children are also at increased risk of **Type 2 diabetes** in the future.
- **Impaired glucose tolerance (IGT) and impaired fasting glycaemia (IFG)** are intermediate conditions in the transition between normality and diabetes. **People with IGT or IFG are at high risk of progressing Type 2 diabetes.**



Diabetes Care

- As the diabetes epidemic grows in size and complexity, there is an increasing realization that Physicians alone are unable to provide the care required by people with diabetes. To help them live life to the fullest, people with Diabetes need to have an **integrated and interdisciplinary rehabilitation team** consisting a range of healthcare personnel, including Physiotherapists, Psychologists and Eye specialists. **Diet, Medication, Physical activity and Education** play a significant role for the prevention, rehabilitation and self-management of diabetes.

How Physiotherapy Effects in Diabetes?

There is no cure for diabetes, but many of its symptoms are physical. Physiotherapy can help not only to relieve these symptoms, but also to improve a person's condition and quality of life overall.

Physiotherapy (PT) has following effects in diabetes:

- PT is a **non Pharmacological way** to lower blood glucose and improve glucose tolerance in diabetic patients.
- PT mode of exercises enhances **insulin sensitivity** and **decreases insulin resistance** in diabetic as well as non diabetic persons.
- PT mode of exercises **increase exercise capacity** which is already reduced in Type 2 diabetes patients.
- PT mode of exercises **Improves exercise performance** that means reduced heart rate during regular work.
- PT mode of exercises **Stimulates insulin hormone** which further reduces blood glucose.
- PT mode of exercises Reduces glycosylated haemoglobin (**HbA1c**) which is a marker of glycemic control.
- Reduces the **risk of Cardiovascular diseases**.
- Reduces the **Cholesterol and Triglycerides**.
- Reduces the **accumulation of lipids (Fats)** in the muscles.

What Physiotherapist Do for Diabetes

Diabetic patients have many problems caused by diabetes itself and its associated complications (obesity, frozen shoulder, osteo arthritis, skin break down, foot ulcers, arthritis, back pain, other joint pains, etc).

Physiotherapist (PT) do **Assessment** before preparing exercise **Regime** in which

- » Patient describes their **current status in terms of their function, disability, symptoms**.
- » History of present condition and its possible risk

factors, such as smoking, hypertension, obesity, hyperlipidemia and family history.

- » Physiotherapist then ask for symptoms of **Neuropathic** (nerve related) complications such as numbness, tingling, **Joint and Muscle** related complications such as joint pain, muscle weakness, fatigue and **other complications** as this will all help to **find the Severity and Nature of the patients' current Diabetes state**.
- » Assessment also includes sensory integrity test, motor control and manual muscle testing (MMT), range of motion (ROM), balance test, endurance test, (Activity of daily living) ADL test and participation in social affairs.
- » PT ask about patients **diet, timing of medicines and insulin**, then prepare an Exercise Regime that is **individually customized**, to provide the patient **proper results in low duration of time with almost no further complications**.
- » Physical therapists can also **recommend assistive devices** such as braces and splints to enhance balance and posture if required.

PT Mode of Exercise

These exercises will begin as **simple, easier, low-pressure indoor exercises** and gradually build up to more challenging workouts over time as **strength of patient developes**. These exercises are Designed for the **Inpatients, Outpatients and Prediabetes**. Moderate to high levels of different modes of exercises like

- Active and Passive range of motion exercises.
- Stretching Exercises.
- Strengthening and Management techniques.
- Aerobic exercise.
- Cardio respiratory fitness exercises.
- Progressive Resistance exercises.
- Weight-training.
- Lifestyle therapy.
- Antenatal and Poatnatal Exercises (For Gestational Diabetes).

Physical activity guidelines **vary on intensity and frequency** while prescribing exercises. The frequency and intensity of exercises are designed based on an individual's observed capacity.

PHYSIOTHERAPY IS A USEFUL TOOL IN THE BATTLE AGAINST DIABETES FOR A NUMBER OF REASONS.

What can be Achieved by Physiotherapy Treatment

- Maintained and Improved functions by using a Range of Motion Exercises.
- Improved and increase Muscle strength, Joint mobility, Endurance and Power.



- should be avoided or else result in joint injuries. They can do cycling or swimming.
- Proper footwear and checking of feet is necessary after exercise.
- In patients with **Diabetic Autonomic Neuropathy** should avoid activities in hot and cold climates. They may get suddenly hypertension or hypotension if they do exercise. They should be well hydrated before exercise.
- In patients with **Diabetic Nephropathy (kidney problems)** brisk walking should be avoided otherwise it results in destruction of haemoglobin which results in anaemia.
- In **Diabetic patients with Heart disease**, exercise should be monitored and supervised by a Physiotherapist.
- Blood glucose should be monitored before and after exercise.

- Improved Balance and Stability.
- Prevention from falls and fall related injury.
- Maximize the level of Independence of Diabetic patients during Mobility and Activities of daily living. Ultimately, Physical therapy aims to improve the health-related quality of life of Diabetic patients.
- A common symptom amongst diabetics is fatigue, many people gradually become more sedentary and put themselves at risk of gaining weight. PT help in preventing this by getting people into the habit of exercising regularly and allows the patient to achieve a healthy weight.



PHYSIOTHERAPISTS ARE EXPERTS WHO CAN GUIDE AND SUPERVISE PATIENTS WITH DIABETES.

Precautions while Doing Exercises

- Site of insulin injection should be away from the exercising extremity. Both exercise and injection at same place results in more hypoglycaemia.
- In patients with **Diabetic retinopathy (eye problem)**, aerobic exercise and resisted exercise should be avoided. If they do, this may result in retinal haemorrhage.
- In patients with **Diabetic Peripheral Neuropathy (nerve problems)**, weight bearing exercises like walking on a treadmill

THERE IS NO TREATMENT / THERAPY INTRODUCED TILL DATE TO CURE DIABETES PERMANENTLY. YOU CAN LIVE A HAPPY AND HEALTHY LIFE ALONG WITH DIABETES BY DOING SOME LIFESTYLE ADAPTATIONS.

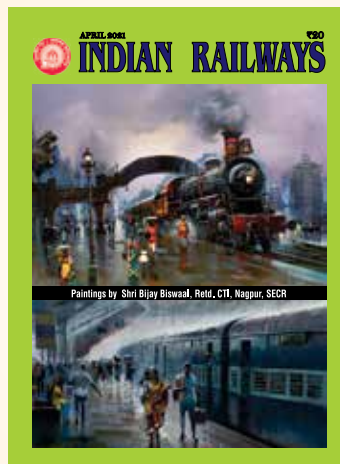
Guidelines for a Sound Exercise Program

- If the blood glucose level is less than 100 mg/dl or greater than 250 mg/dl, do not exercise.
- If blood glucose level is between 70 and 100 mg/dl, it is allowed to provide carbohydrate snack and then reassess the glucose level after 15 minutes.
- Good examples of carbohydrate snacks (10-15 grams of carbohydrates) are half a cup of fruit juice or cola, 8 oz. of milk, 2 packets of sugar, 2 oz. tube of honey.

- They are recommended to have a carbohydrate snack such as a glass of orange juice or milk at every exercise session.
- If faced with an unexpected and difficult situation, whether the patient is experiencing hyperglycemia or hypoglycemia, always give a glass of orange juice or milk, or a carbohydrate snack. This is the safest action because this can relieve hypoglycemia (if it is indeed) and cannot harm if it is hyperglycemia.
- There is always the risk that a patient could faint, or suffer from hypoglycaemia so it is important to ensure that patient never work out alone or with someone who does not understand his condition.
- When patients plan to come out of their house to go somewhere else, they are highly advised to wear the medical tag for diabetics.
- During prolonged exercise duration, 10-15g of carbohydrate snack is recommended for every 30 minutes.
- Exercising in a comfortable temperature is worthwhile. Never exercise in extreme temperatures (either hot or cold).
- For **Type 1 (insulin-dependent) patients**, it is not allowed to exercise during the peak times of insulin. Before exercise, coordinate with the referring Physician or Nurse-in-charge for the patient regarding the stability of the patient and the type of insulin administered.
- **Type 2 diabetics** are advised to have an average of 30 minutes of exercise duration per session.
- Always wear proper footwear and exercise in a safe environment.
- **Menstruating women** should have to boost insulin during menses, especially if they are not active.
- It is not reasonable to inject insulin close to the muscles to be exercised within 1 hour of exercise.
- Patients ought to eat 2 hours before they go for exercise. If they plan to exercise after meal, they should have to wait 1 hour prior to start.
- They should always bring their own portable blood glucose monitor.
- They should keep an eye on their glucose levels before and after exercise.
- It is also important to drink adequate amount of fluid before exercise.
- Make sure exercise does not contribute an unnecessary stress to the patient. Stress increases insulin requirements.
- A gradual progression from aerobic and resistance exercises is the key.
- Avoid exercising late at night.
- For the majority of individuals, it will be noble to plan for a **30 minutes per day exercise for about 3-5 days a week and at the same schedule/time, preferably.**
- It is advisable that you can exercise for 5-10 minutes a day, and work up to more time each week if you have not been very active recently.
- They can also vary their activity for 10-minute walk exercise after each meal.

LIVE BUT A HEALTHY AND HAPPY LIFE. ■

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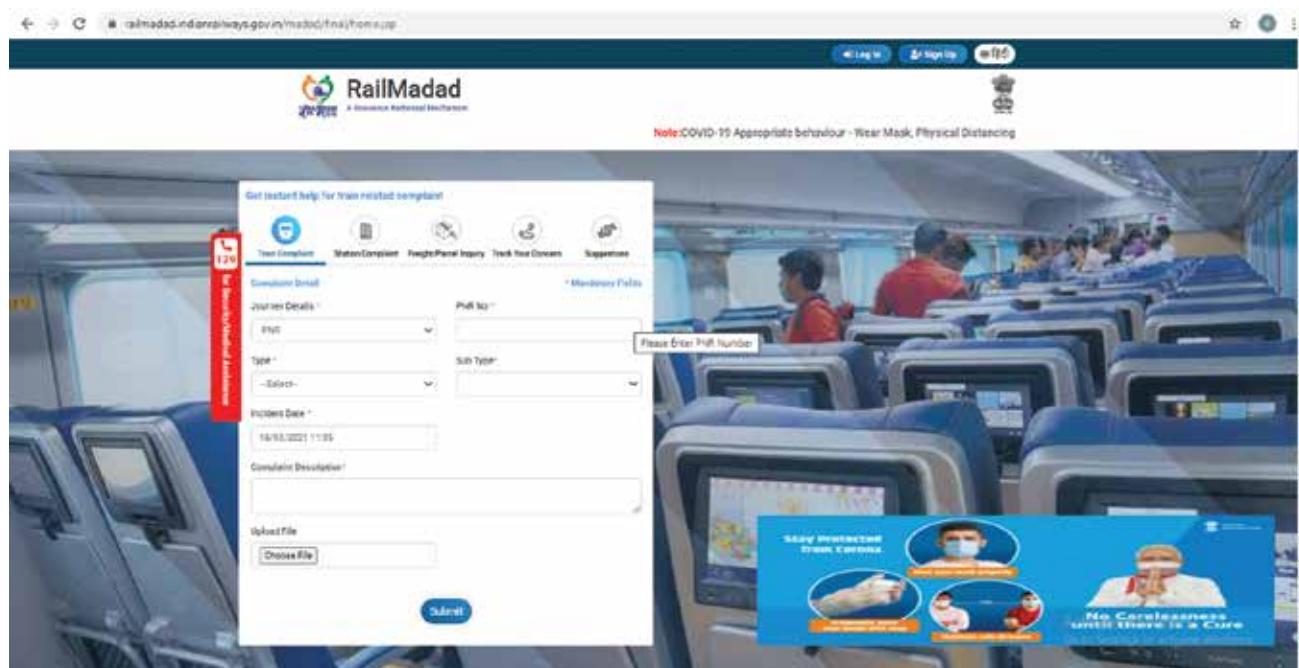
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Railmadad - Mission to Redress

K. Usha Rani
Chief Complaints Inspector, PG-CELL/MAS



Indian Railways as a public carrier has long been admired for its colossal Network. This Complex system has to rotate in perfect co-ordination to keep the wheels moving. So is the network of Public Grievance redressal mechanism in Indian Railways. Perfect system with empathetic people on the ground are needed to ensure an effective redressal machinery. This grid in Railways involves synchronization of many units, viz. Trains, Stations, Divisions, Depots, Service partners, contractors and the convolution continues.

Gone were the days when people would travel without water in coaches, proper food in pantry and light in their compartments. With advancement of Technology and progress in Economy, Passengers are expecting far better services from Railways and wouldn't compromise on the amenities they rightly deserve. So, perfection is the need of the hour.

Railways pledged to put in place a robust system that could effectively overcome the glitches in their current complaints management systems. Eventually RailMadad was introduced. This opened a new leaf in the complaints handling method of Indian Railways. Grievances lodged through different modes were brought into a single platform called 'RAILMADAD' and channelized through this portal to different controllers working at the Divisions for timely redressal of the grievances.

Complaints can be lodged into RailMadad through Web, App, SMS and helpline-139. On registration of a complaint, a unique complaint number is generated and the status of the grievance can be monitored. Grievances lodged in Social Media-Twitter and Facebook are also monitored by Team members and are registered as Complaints in RailMadad.

On 17th February while Mr. Sharma (name changed) was travelling by Train No.12602 in S10 coach, He heard an abnormal sound in the coach and felt that his berth was very jerky. He tweeted about the same @RailminIndia. The train was approaching Palghat station then. He was immediately contacted by the Railway authorities and simultaneously complaint was registered on his behalf in RailMadad at about 20.10 Hrs. At 20.23 Hrs. the coach was inspected by concerned authorities at Palghat Jn. and nothing abnormal was found in the coach. However, the passenger was accommodated in a different coach to ensure him a comfortable journey.

The Ticking Clock

Depending on the complaint's nature, urgency and complexity, the maximum time limit within which a case has to be resolved is pre-determined.

The grievance is expected to be resolved within the prescribed time limit. Complaints are categorized Train-wise and Station-wise with many headings and sub headings. The Time limit would vary from a minimum of 30 minutes to a maximum of 90 days. *This was a more sensible way of redressal.* The nature of complaint varies depending on the cause. A complaint on security aspect, such as Eve Teasing/ Molestation in a running train should be redressed within 30 minutes, whereas a complaint regarding non-working of fan could be redressed within a maximum time limit of 2 hours. The first response to a grievance is always crucial. *In RailMadad the first response is almost immediate.*

Responding to onboard complaint is a very challenging task. RailMadad handles this meticulously, as it is integrated with the National Train Enquiry System (NTES) and other platforms. Thus, when an onboard complaint is registered, both the Train Running Railway and Train Owning Railway is alerted and complaint is resolved within the earliest possible time.

The Escalation Matrix

The most important feature that makes RailMadad function most effectively is the incorporation of the SLA Breach feature (Service Level Agreement breach). If a particular Grievance is not resolved within the specified time limit the concerned Branch officer is alerted regarding the pending complaint (SLA-I). If found unresolved even after the first escalation the case automatically is brought to the knowledge of the Divisional Head for grievance redressal (SLA-II). Thus, it is ensured that the concerned department, resolves the issue within the prescribed time limits.

The Score-card

RailMadad, as a unified platform is not only a grievance redressal portal but also a Managerial tool to measure the efficiency of the subordinate units. The motto here is to put in place an effective system without Public complaints.

Each Division/unit is committed to rectify the deficiencies in their system and offer quality service to passengers. Feedback received from passengers are monitored carefully to ensure a foolproof mechanism.

Generation of reports was a herculean task in the pre - RailMadad days. Now reports are auto generated by the system and are available for analysis at any point of time – Zone wise, Train wise, Station wise and Department wise. Bottom performers are identified and steps are taken to resolve the cause for regular complaints. Complaints received through other modes like Tapal, e-mail,

CPGRAMS and those registered at stations are also uploaded into RailMadad for redressal and statistical purposes. The Average time taken to resolve the complaints is a wonderful tool to gauge the efficiency of a Division or Zone.

Divisions are encouraged to review their performance based on RailMadad Reports and formulate policies to make systemic improvements to reduce public complaints. This has also brought in a healthy competition among Divisions and Zones, wherein each unit strives to perform better in the next assessment period. *RailMadad has a disposal rate of 100%, Which means that no complaint is left unattended.*

The Innovative Move

Suggestions from various stake holders are received through the suggestion module of RailMadad. These are forwarded to concerned branch officers, who could use them as a guide to make future decisions.

Parcel and Goods facilitation module is yet another feather in the cap of RailMadad. This portal has been rightly used, to tap the potential of parcel and freight business. Parcel and Freight enquiries are routed to NR-cell of the concerned Divisions and customers are assisted in booking of Parcel and Goods. More than being a grievance redressal tool, RailMadad has become *a source for revenue generation here.* The data analysis regarding facilitation enquiries will be of great help to the Business Development units of Railways.

The Way Forward

The suggestions of the Divisions are well received by the Administrative Team of RailMadad, which has made this portal user friendly. With each passing day, upgradation and improvement to RailMadad is taking place as a continuous process.

As the name suggests, RailMadad has come to the rescue of thousands of passengers at their time of need and has boosted the image of Railways and the morale of its employees in a very short span of time.

RailMadad was awarded Silver-under category-II of National e-governance Awards 'for excellence in providing Citizen Centric Delivery' during the 23rd National Conference on e-governance held at Mumbai in February 2020.

RailMadad is monitored round the clock by dedicated and efficient team of Controllers, Inspectors, Officers and Engineers at the Divisional-level, Zonal-level, Railway Board-level and also at the Centre for Railway Information Systems. The consolidated Team effort is driving RailMadad portal to the realm of success. ■



An Integral Coach

GREATER COMFORT IN NEW ALL-STEEL COACHES

By K. SADAGOPAN,
Chief Administrative Officer,
Integral Coach Factory.

INAUGURATED on Mahatma Gandhi's birthday, October 2, 1955, by Prime Minister Shri Jawaharlal Nehru, the Integral Coach Factory represents a story of achievement, of difficulties overcome, of progress against obstacles, a saga of dogged team-work and patriotic endeavour on the part of thousands of workers of all ranks and grades spread over a period of years.

The project was sanctioned in 1952 and work on the construction of the giant Factory started almost immediately. On what was a barren stretch of waste land in 1952, there arose by 1955, huge factory sheds forming regular geometrical patterns on the one side and the attractive little colony of 400 houses presenting an equally attractive geometrical pattern on another side, the whole picture presenting a fascinating sight from the air.

When one enters the Integral Coach Factory, the view at close quarters is as fascinating and as cheerful as the distant view from the air. One is struck by the well-laid out and beautiful concrete roads bordered by lawns and flower

beds and the spotlessly clean workshop sheds with the machines arranged in neat rows.

All the service lines such as compressed air, water supply, electricity etc., are taken through underground channels neatly covered with chequered plate flush with the floor. The ventilation and lighting are excellent. Another novel feature adopted by the Integral Coach Factory, is in the design of the foremen's offices, which have been built with glass shuttering all-round and sited in such a way as to afford a full view of the shops to any person inside these offices and *vice versa*.

The cantilever construction of these Offices permits the space beneath to be used as storage space for tools and other shop equipment. The tools themselves are stored in neat and attractive looking tool cribs which have been manufactured to a special design adopted by this Factory. This design facilitates efficient storage, prompt issue and easy accountal.

The Factory has been equipped with the most modern plant and machinery.

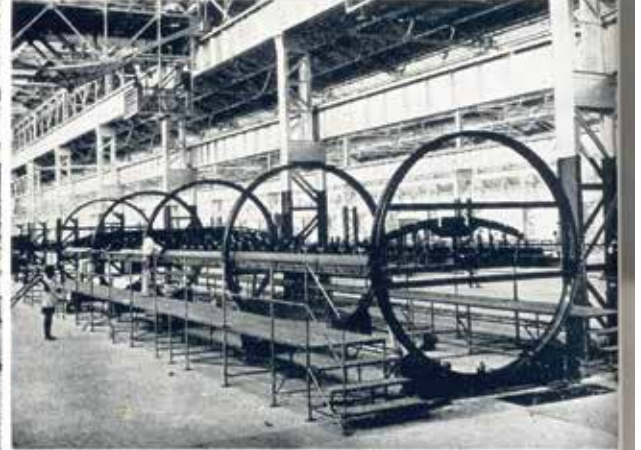
WHY PERAMBUR COACHES ARE BETTER

The coach manufactured in this Factory is of an entirely new type which has not yet come into full vogue in this country though it has been adopted as the standard for all broad gauge coaches in the future. It is a type which has attained wide popularity in the countries of the west and, though to the uninitiated it looks very much like any other railway coach, it has several exclusive features which make it a distinct improvement over the passenger coaches generally in use on the Indian Railways.

The conventional type of wooden or steel body consists of three major parts; first, the body proper consisting of the floor, the sides and the roof; second, a heavy steel frame on which the body rests and to which it is bolted; and third, the two bogies under carriages carrying the wheels on which the coach runs. In this design of the coach, it is the underframe that sustains the stresses resulting from the weight and push and pull of a train in motion and the body serves only as shelter for the passengers



The main Assembly shop.



The Roof Assembly Jig.

and is a dead-weight supported by the underframe and by itself, incapable of with-standing normal stresses and the severe shocks of a collision.

In contrast, in the present design, the underframe and the coach body have been welded into one integral unit in the nature of a large tube and it is this feature which gives the integral coach its special name. This method of integration of body and underframe, as the readers would surely know, is already in general use by automobile manufacturers who now build integral automobile bodies in preference to the older type where the body is separate and secured by means of bolts to the chassis.

In the new design, the integral coach body not only serves to shelter the passengers but also plays its part in bearing normal stresses, besides being very much more resistant to damage during collisions and accidents.

GREATER SAFETY IN ACCIDENTS

The safety factor has been enhanced by the adoption of exceptionally strong constructions in the two body ends which, combined with the integral body, eliminates the possibility of telescoping of one coach into another in a collision, thereby minimising the possibility of loss of life and serious injury in railway accidents.

In actual practice, it has been seen that when an integral coach is involved in a collision, all that happens is that the two ends of the coach in absorbing the shock, sustain some deformation and casualties, if any, are confined to those at the ends.

Taking this factor into consideration, the doors and lavatories have been located at the ends of the coach so that the nearest passenger is normally seated six to seven feet away from the ends, and is thereby assured of a considerable margin of safety even in the event of a serious collision.

The integral design has also resulted in another important advantage in reducing the weight of the standard coach from 42 tons to 35 tons. This has resulted in double economy first, economy in the use of steel and second, economy in motive power as more passengers could now be hauled

The all-steel, all-welded broad gauge passenger railway coaches now being manufactured at the Integral Coach Factory at Perambur, near Madras, have proved popular in several Western countries and have been adopted as the standard for the future in India. Each coach involves the manufacture of 1,000 different components, and work on their production has already begun. The target production of 350 coaches per year will now be reached in four years, instead of five.

with the same power, a factor which would make for reduction in overcrowding..

GREATER COMFORT

Another welcome feature which would interest the travelling public is the special type of window frames and shutters. In the conventional wooden body coach, the window shutters have some times an annoying habit of getting jammed either in the open or in the closed position and the passenger has to put up with the inconvenience of a closed shutter which

cannot be opened when he wants fresh air or an open shutter which resists every attempt to close when the rain or the sun is beating in.

These difficulties are caused by the tendency of wood to warp and swell, resulting in the shutter not moving freely in their frames. The special type of window frames and shutters employed in the Perambur coaches are constructed from aluminium extrusions and are fitted as complete window units. The shutters can be operated with ease and convenience and have been so designed as to ensure that they do not get jammed. The shutters and the doors have also been fitted with rubber seals at the edges just as in a motor car to prevent dust and rain from seeping into the compartment.

Another feature making for greater comfort is the fitting of shock absorbers as in a motor car. Travel in an integral coach would be as comfortable as in a motor car over a level road.

MANUFACTURE OF COMPONENTS

The production of these integral coaches involves the manufacture of about 1,000 components, and the Integral Coach Factory at Perambur has already started the manufacture of these components. The inauguration of production saw the starting of work on a small scale on an assembly with imported components and the scheme provides for the gradual setting up of production of all the components required for the coach in the Factory itself.

The targets for production originally envisaged five years to

reach the full target of 350 coaches per year on a single shift with all components manufactured in the Factory itself. Efficient team-work and careful planning, has, however, made it possible now to reduce this period to four years and the Integral Coach Factory which is already very much ahead of its target expects to contribute its mite in the drive of the Indian Railways towards self-sufficiency.

TRAINING FUTURE TECHNICIANS

A word about staff. A modern industrial unit like the Integral Coach Factory requires a large number of craftsmen capable of highly skilled and precise workmanship. The paucity of skilled workman of the right type and the right degree of skill has been the greatest handicap in the development of industries in this country.

The Integral Coach Factory has sought to overcome this handicap by training its workmen in a technical training school of its own, organised on the most modern and efficient lines. The pressing requirements of the Factory could not brook the time involved in recruiting raw men and training them to acquire the necessary skill.

During the phase of establishing full production in the Factory, partially trained craftsmen who are not in such short supply in the country, are being recruited and given intensive training to acquire the necessary degree of skill and master the intricacies involved in

the modern techniques of railway coach production.

These trainees have been given several facilities, including a three-storeyed hostel, play-grounds etc. As the trainees leave the training school and come on the rolls of the Factory as workmen, they will find conditions of work most congenial and all facilities for increased production available adequately.

STAFF AMENITIES

Reference has already been made to the clean and tidy atmosphere in the shops. A modern two-storeyed building equipped with steel furniture, stainless steel utensils, electric cooking equipment and other modern amenities, have been provided to serve as a canteen for the workmen. The canteen itself is managed autonomously by a committee which includes representatives of the workmen.

A modern four-storeyed, fully air-conditioned Administrative Office has been constructed for administrative staff. This building it might be remarked was constructed in the record time of one year. Other facilities to workmen include a small colony which has been provided with children's parks. Club house and nicely laid out roads.

The saga of the Integral Coach Factory is not yet over. It will grow from achievement to achievement and contribute its fullest share to the development of the



In children's park.

Indian Railways and help them to be of greater and greater service to the travelling public.

Integral Coach Factory Worker's Canteen.



FROM HERE AND THERE

CONCESSIONAL RETURN TICKETS TO SRINAGAR

The usual concessional return rail-cum-road and rail-cum-air tickets to Srinagar for first and second classes at the rate of single journey fares and for third class at the rate of one and a half single journey fares will be issued from April 1 to October 31, 1956.

The rail-cum-road concession tickets will be available for completion of the return journey within three months, but the return journeys must in any case be completed on or before November 15, 1956.

The concessional return fare for the road journey between Pathankot and Srinagar will be Rs. 27 per passenger and for the air journey between Pathankot and Srinagar it will be Rs. 75 for adults, Rs. 38 for children under 12 years and Rs. 8 for children under three years.

The rail-cum-road and rail-cum-air return tickets will be issued from about 100 stations on the Indian Railways.

BREAKING THE BOTTLENECKS

As a result of various steps taken recently, marked progress has been made in easing various transport bottlenecks in the country.

The average daily movement via Moghal Sarai during the four months ending February 1956, was 1792 wagons, as against 1604 wagons in the corresponding period of the previous year.

On the Ratlam-Godhra section, which serves the Ahmedabad Industrial area, the actual movements have increased from 490 to 630 wagons each way daily.

Transshipment via Sabarmati and Viramgam has increased from 88 and 51 to 120 and 92 B.G. wagons per day respectively. Traffic via Agra East Bank is now being accepted freely.

Similarly, movements via Ghorpuri have been stepped up and traffic to the extent to which capacity was developed, 85 wagons per day, has not been forthcoming.

Movement to the Southern Railway,

south of Bezwada, has been stepped up from 350 to 450 wagons and the quotas of traffic, both from the South Eastern Railway moving via Waltair and the Central Railway via Bezwada to Madras and beyond, have been increased substantially. Practically all the outstanding registrations upto Madras have been wiped out.

Transshipment capacity via Manduadih has been stepped up to 200. This is expected to off-set temporary short-falls at Bhagalpur and Mokamehghat caused by the vagaries of the river.

A plan is now being worked out to increase the transshipment capacity at Mokamehghat to about 250 B.G. wagons with effect from June 1956.

QUARTERLY SEASON TICKETS

Quarterly season tickets, both suburban and non-suburban, will be issued with effect from April 1, 1956 on Railways over which these are at present not in force.

These are the Northern, Eastern, South Eastern Railways and the old O.T. section of the North Eastern Railway.

This article of the then Chief Administrative Officer, ICF was published in the first issue of IR magazine in April, 1956

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