Garvita
NEWS BULLETIN
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From the Desk of Patron

It gives me great pleasure to know that a news letter is being published on 4th Railway Electrical Engineers' Day bringing out various developments in the field of Electrical Engineering on Indian Railways.

The role of Electrical Engineers on Indian Railways has grown many folds since the induction of first electric train 90 years back in 1925. Today about 66.5% Goods and more than 51% passenger trains are hauled using electric traction, which while adding to sectional capacity also reduces expenditure on fuel. This growth also puts up greater responsibility on our shoulders to further bring down the cost of electric traction and meet future challenges. Indian Railways has been granted the status of "Deemed Licensee" which empowers Indian Railways for many benefits which in addition to the provisions of the Electricity Act may be utilized to bring down the cost of Traction Power.

As a responsible citizen of this planet, we have to increase utilisation of renewable energy. In this sector solar and wind power offer great opportunities. We have to devise methods to harness this potential without much investment from Railways. Other provisions of the Electricity Act also need to be utilized to improve energy security and reduce the cost of Electrical Energy being used by Railway for Traction and Non Traction purposes.

One important aspect to focus is indigenization of technology. We will have to channelize our energy to spread the concept of "Make in India". While this will reduce our material cost, it will also boost up our economy.

We also need to streamline our resources to reduce failures of existing assets by continuous improvement in maintenance practices while reducing the maintenance cost.

I applaud the efforts of the organizing team to bring out this news letter which will act as a platform for serving and retired Electrical Engineers of Indian Railways to share their ideas and thoughts for future growth of Railways.

नवीन टण्डन 28/01/15

(Navin Tandon)
Member - Electrical

From the Desk of President

In the present era knowledge sharing plays a key role in progress of a society. I am pleased to note that on this 4th Electrical Engineers' Day, IREE is coming out with a 'News Letter' bringing out various key developments in the field of Electrical Engineering on Indian Railways.

This 'News Letter' will be seen as a great contribution of IREE for the growth of Electrical Engineers on Indian Railways.

Electrical Engineers in the coming days will have to play major role in running of trains as more and more EMU/MEMU including train sets will be introduced with increased Electrification which is presently 24891 route Km on I.R. Another key area will be meeting aspirations of public in ensuring quality services in Air conditioned coaches, the numbers of which is growing very fast.

Once again all the best to this 'News Bulletin' and I am sure that with time this will become a knowledge engine for Electrical Engineers of Indian Railways.

M Singh

(Man Singh)
Addl. Member, Electrical

From the Desk of General Secretary

We are pleased to bring out the 3rd addition of Garvita which was introduced on 2nd Electrical Engineers' Day on 3rd February, 2013.

Electrical Engineering is playing a pivotal role in Railways and is perceived to be Technical Engine of growth and transformation of Indian Railways towards a modern Reliable, Economical & Environmental Friendly mode of Transport System providing high speed, Comfort and Safety.

With the large pool of intelligent and hard working Electrical Engineers, on IR, it calls for sharing and propagating innovative ideas, involving modern technology at various levels. IREE is now coming up with this Bulletin covering important areas as under:-

- To promote/disseminate and share emerging technologies in the field of Transportation.
- Exchange Experience/knowledge in improving existing systems/ practices/work culture.
- Sharing knowledge/information on improving quality of living.

In addition this Bulletin also highlights the activities of Electrical Engineering Department through IREE joining hands with other professional bodies

I wish to call for all Electrical Engineers of Indian Railways to contribute articles for this bulletin so as to add to knowledge base of their colleagues.

(Sunil Goyal)
General Secretary/IREE &
Chief Electrical Engineer, Northern Railway

Know your Patron

Shri Navin Tandon, Member Electrical, Railway Board & Ex. Officio Secretary to the Govt. Of India is an outstanding officer of Indian Railway Services of Electrical Engineers of 1976 batch. He was awarded M.Tech from Indian Institute of Technology, Delhi.

Prior to this, he was General Manager, South Eastern Central Railway (SECR) where his innovative methods greatly helped achieve highest ever loading on SECR. Shri Tandon had also worked as Additional Member (Electrical), in Railway Board.

Shri Navin Tandon has vast experience of Indian Railway working & had earlier served as Additional General Manager, Eastern Railway, Chief Electrical Engineer, North Central Railway & South Western Railway, Sr. Dy. General Manager & Chief Vigilance Officer, North Central Railway etc. He was instrumental in bringing wide changes in Varanasi division of North Eastern Railway while working as DRM, Varanasi, N.E. Rly.

He has to his credit varied international experience. His training in Canada on computerisation of Railway & in Japan and USA on Rolling Stock Management etc. had enriched him on latest developments world over.

He took over as Member Electrical on December 31, 2014. Electrical Engineers of Indian Railway are proud to have him as their leader.

Know your President

Shri Man Singh, Additional Member Electrical, Railway Board is an outstanding officer of Indian Railway Services of Electrical Engineers, 1977 batch.

Prior to this appointment he had held many key positions in Railway. He had worked as Chief Electrical Engineer, Central Organization for Railway Electrification, West Central Railway and Southern Railways. As DRM, he motivated his team to make his Division the foremost division of his Railway. He also worked as Executive Director in Research Designs & Standards Organisation, Lucknow & as Chief Project Manager in Railway Electrification, Ambala.

He took over Additional Member Electrical in February, 2014. Electrical Engineers of Indian Railways look forward to work under his guidance.

Know your General Secretary

Shri Sunil Kumar Goyal, Chief Electrical Engineer, Northern Railway, Baroda House belongs to Indian Railway Services of Electrical Engineers, 1978 batch.

Prior to this, he was Chief Electrical Engineer, Western Railway (WR) where he was instrumental in conversion of DC to AC traction on Church Gate-Virar section, resulting in seamless operation of electric locos and huge saving. His contribution as Sr. Executive Director, in Research Designs & Standards Organisation, Lucknow had improved Electric loco reliability. As DRM, Jaipur, N.W. Rly, he had changed the face of Jaipur Railway Station. His tenure as Professor (Electrical Engineering) at Railway Staff College, Vadodara is still fondly remembered by probationers. He has keen interest in academics and while in service, he has completed MBA and submitted his thesis for award of Ph.D.

He is widely travelled to U.K., Germany & Switzerland for inspection and testing of EMU rakes. He took over Chief Electrical Engineer, Northern Railway and General Secretary/IREE in August, 2014.

Conference on "Emerging Trends in Train Protection and Electric Energy Management Systems"

26th July, 2014 at Manekshaw Centre, New Delhi

Institution of Railway Electrical Engineers and Institution of Railway Signal & Telecommunication Engineers jointly organised Conference on theme "Emerging Trends in Train Protection and Electric Energy Management Systems" on Saturday, 26th July 2014 at Manekshaw Centre, New Delhi. The conference was inaugurated by the Chief Guest Sh. Kul Bhushan Member Electrical, Railway Board & Patron IREE & IRSTE. Other dignitaries and special guests on the during inaugural session were Sh. A.K. Mittal, Member Staff, Railway Board, Sh. D.P. Pande, Member Traffic, Railway Board, Sh. Alok Johri, Member Mechanical, Railway Board, Sh. V.K. Gupta, Member Engineering, Railway Board, Smt. Rashmi Kapoor, Finance Commissioner (Railways).

In his inaugural address Chief Guest Sh. Kul Bhushan described the endeavour of Indian Railways to provide safe travel to the public. He emphasised the Train protection system on IR network to mitigate the risk of Signal Passing at Danger and over speeding by Motorman/Loco Pilots of trains leading to accidents. He also discussed about the opportunities of power exchanges, new developers in power sector, existing and new generators to understand the complexity of IR system and their participation in selling the power directly to railways.

Sh. A.K. Mittal, Member Staff, Railway Board, emphasised to exploit modern technological advancement in the field of Electrical and S &T systems to improve operational efficiency. Such modernisation holds the key to safety and productivity in all facets of train operations and passenger information.

Sh. D.P. Pande, Member Traffic, Railway Board, in his address stated that theme of the conference is benefitting given the scenario of tremendous growth in freight as well as passenger traffic on Indian Railways. As railways has to run trains with higher speed and heavier axle load without compromising on safety, and the Train Protection System shall play a key role in this direction. Also in the current scenario of burgeoning energy deficit,

Indian Railways need to focus on higher energy efficiency by an efficiency efficient Electric energy management system.

Sh. Alok Johri, Member Mechanical, Railway Board, stated that Corporate Safety Plan of Indian Railways has envisaged provision of Train Protection System on IR to avoid overshooting a Signal Passing at Danger and over speeding by Loco Pilots of Train leading to accident. The key challenges faced in implementation of ATP system on IR are mixed traffic, multiplicity of rolling stock, different types of signalling, inclement weather and outside interference impacting field equipment, besides high cost of equipment and reliability yet to be established.

Sh. V.K. Gupta, Member - Engineering, Railway Board, stated that Modern, Energy efficient and fast Railway transport system largely depends on the Electrical systems for train operations and advanced S&T systems ensure optimum utilisation of assets.

Smt. Rashmi Kapoor, Finance Commissioner (Railways) informed that Indian Railways consumes about 1.8% of the total country's generation with an annual expenditure of over Rs. 11,000 crores. She highlighted that this conference will deliberate on methods to be adopted to avail electricity at a competitive tariff and discuss about provision of cost effective Train Protection System for safe train operations.

The inaugural session was followed by two technical sessions and panel discussion.

The first Technical Session on the theme "Emerging Trends in Train Protection System" was chaired by Mr. M Suresh, President, IRSTE & Addl. Member (Signal) Railway Board, he also presented the Overview on the theme. Mr. Clive Barker, Head of Engineering for Ansaldo STS, India delivered presentation on "TPWS development on Indian Railways". Mr. Firth Whitwarm, Director of System Architecture Design for Thales Canada Transport Solutions delivered his presentation

on "Communication based Train Control System". Mr. Ola Bergman, Head of Railways Regulatory Affairs, Nokia Solutions and Networks delivered his presentation on "GSM-R-Technology & product evolution supporting highest reliability &safety requirements for ERTMS". Mr. Joshi Mahesh, ALSTOM Transport India & South Asia delivered his presentation on "Traffic Management System". Mr. Hiroyuki Hara, Chief Engineer (S&T) Hitachi India Pvt. Ltd. delivered his presentation on "Automatic Train Protection System" & Mr. Jean Pol Mura, Siemens India Ltd delivered his presentation on "ETCS as the TPWS for India a - the case of Kolkata Metro". Mr. S.B Bhamu, ED/Signal/Railway Board was Rapporteur during the session.

The second Technical Session with the theme "New Trends in Electrical Energy Management Systems in Railways" was chaired by Sh. Man Singh, President, IREE & Addl. Member (Electrical), Railway Board, he also presented the Overview on the theme. Mr. N.R. Dash, ED/RE/Railway Board was Rapporteur during the session. Mr. S.K. Saxena, ED/EEM, Railway Board delivered presentation on "Perspective of Indian Railways to procure power at economical teriff". Mr. Rajeev Mishra, Power Trading Corporation delivered his presentation on "Implementation strategy for Procurement of Power through Open Access". Mr. Mukesh Khanna, General Manager, Power Grid Corporation of India Limited delivered his presentation on "Power evacuation arrangement through Dedicated Railway Transmission network". Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency (BEE) delivered his presentation on "Energy Efficiency in India initiatives for Market Transformation". Mr. Anoop Kumar Gupta, Director Elect/DMRC & Mr. Mahendra Kumar, CGM/Elect/DMRC jointly delivered their presentation on "Solar Power, a sustainable energy source - an initiative of DMRC, at Dwarka Metro sector-21 station" & Mr. Rakesh Kumar, Director, Solar Energy Corporation of India delivered his presentation on "Harnessing solar energy by utilising roof top spaces of Railway building".

The concluding session i.e. a panel discussion chaired by Mr. N. Venkateshan, Former Member Electrical, Railway Board. Other dignitaries on dias during panel discussion were Mr. R.N. Nayak, CMD/PGCIL, Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency (BEE), Mr. Mahesh Mangal, Sr. ED (Signal), RDSO, Lucknow, Mr. Rajeev Malhotra, CMD, RITES, Mr. Deepak Amitabh, CMD, PTC & Mr. Clive Barker, Head of Engineering for Ansaldo STS, India. Various queries of the audience were answered the panel members alongwith technical discussion in the theme.

Mr. R.N. Rajpoot, CEE/Plg/NR & Organising Secretary, IREE proposed vote of thanks.

Total 600 persons participated in the conference which includes the high level delegation from India and abroad.

3rd Railway Electrical Engineers' Day

3rd February, 2014, New Delhi

3rd Railway Electrical Engineers' Day was celebrated on 3rd February, 2014 at Railway Club, S.P. Marg, New Delhi.

Sh. Kul Bhushan Member Electrical, Railway Board & Patron IREE & IRSTE was the Chief Guest on this occasion.

Workshop on 'Dedicated Freight Corridor – A Boost to Indian Railways'

11th April, 2014 at India International Centre, Lodhi Road, New Delhi

IREE in collaboration of IET-Delhi Local Network and DFCCIL organised Workshop on 11th April 2014 on the theme 'Dedicated Freight Corridor - A Boost to Indian Railways' at India International Centre, Lodhi Road, New Delhi. The Workshop was inaugurated by Chief Guest Sh. Kul Bhushan, Member Electrical, Rly. Board.

Guests of honour Sh. R.K Gupta, General Manager, Eastern Railway & MD/DFCCIL addressed the gathering and informed about the two main projects of Eastern and Western corridor being implemented by the DFCCIL and its relevance with a special comparison of railways and roadways. He also highlighted the Land Acquisition policy, advanced SCADA system, longer trains, high capacity 9000 HP & 12000 HP LOCOs, centralised control and mechanised maintenance being implemented by DFCCIL.

In his inaugural address Chief Guest Sh. Kul Bhushan Member Electrical, Rly. Board & Patron IREE informed the gathering how railways has successfully increased the freight transport 3 times in last two decades with the same network. He also presented views on cost effective transportation and the urgency of completing Eastern and Western corridor by DFCCIL & emphasised the need to adopt best power trading practices by REMC/PTC/PGCIL. Production of next generation Locos at CLW and successfull establishment of a new Loco factory at Dankuri was also informed by him.

Sh. Kul Bhushan also suggested the need of quick, efficient and pollution free transport with day by day increasing freight and passenger traffic. He also gave the overview of up-gradation of 1500 VDC traction system to 2×25 kVAC traction system.

The Technical Session on the subject theme was chaired by Sh. N. Venkatesan, Chairman, IET-Delhi Local Network & Former Member (Electrical) Railway Board he presented the Overview on the theme. Sh. M K Mittal, Director Finance/DFCCIL delivered presentation on "Financial aspects in DFC". Sh. P. Varshney, Sr. V. President & Sh. Anupam Vadhera/PTC delivered their presentation on "Power Trading in DFC". Sh. Neeraj Aggarwal, GGM/Civil/DFCCIL delivered his presentation on "Important initiatives taken in DFCCIL". Sh. R.K. Jain, GGM/DFCCIL delivered his presentation on "Electrification systems for DFC" and Sh. Arun Kumar, GGM/Signal delivered his presentation on "S & T Systems for DFC".

1st R.K. Vir Memorial Lecture on "Electrification & Challenges on Indian Railways"

4th January, 2014 at National Rail Museum, Chanakya Puri, New Delhi

The Institution of Rly. Elect. Engineers organised the 1st R.K. Vir Memorial Lecture on 4th January 2014 supported by IET and IEEE. Sh. N. Venkatesan, Former Member Electrical, Railway Board & Chairman IET/DLN, Professor Bhim Singh, Chair IEEE & HOD Electrical Department, IIT Delhi. Sh. V K Dutt, Former Additional Member/Electrical, Railway Board & Sr. Member IEEE and Sh. Mehtab Singh, General. Secretary/IREE and CEE/N. Rly and Sh. R.N. Rajpoot, Organising Secretary were the distinguished dignitaries on the dias.

Sh. N. Venkatesan, Chairman, IET-Delhi Local Network & Former Member (Electrical) Railway Board delivered the lecture on the Theme : "Electrification & Challenges on Indian Railways".

Shri R. N. Rajpoot, Honorary Secretary/IET proposed vote of thanks and Sh. Aman Rajput, Sececretary YP, IET/DLN was the MC & conducted and co-ordinated the entire event successfully.

165 persons which include the high level delegation such as Sh. Anand, Former Chairman, Railway Board, Sh. Sudesh Kumar, Former Member Electrical, Sh. A.K. Gupta, Director/DMRC, Principal advisor DMRC Sh. Satish Kumar and other officers & guests.

One day workshop on "Utilization of Solar Energy in Indian Metro and Rail Transportation"

10th January, 2015 at Metro Bhawan, New Delhi

IREE organised one day workshop on the Theme: "Utilisation of Solar Energy in Indian Metro and Rail Transport" at Metro Bhawan, New Delhi on January 10, 2015 jointly with DMRC, IET/DLN and GIZ & supported by The Institution of Engineers (India). Sh. Navin Tandon, Member Electrical, Railway Board graced the occasion as Chief Guest, Sh. Mangu Singh, MD/DMRC was Guest of Honour.

Sh. Anoop Gupta, Director (Electrical) welcomed the Chief Guest and other dignitaries, participants, delegates and speakers. In his welcome address Mr. Gupta, highlighted the initiatives taken by DMRC for utilisation of Solar Energy. He also informed about the new projects on Solar Energy likely to be implemented in near future in DMRC to cope up the increasing energy demand of the organisation and to reduce its energy dependence on the grid.

In his inaugural address Chief Guest Sh. Navin Tandon, Member Electrical, Rly. Board & Patron IREE informed the gathering how successful implementation of Solar Energy initiatives taken by Indian Railways. He emphasised on the cooperation in the field of Solar Technology among DMRC and Indian Railways. He also encouraged the technological developments in energy in the field of other non conventional energy resources. He also echo the slogan "Save Polar, Go Solar" as initially proposed by Mr. Aman.

The seminar was consisted of one Plenary Session and one Technical Session. The Plenary Session was chaired by Sh. V.K. Dutt, Former Additional Member/Electrical, Railway Board. Sh. Manuj Singhal, CEE/DMRC delivered lecture on topic "Use of Solar Energy in Delhi Metro" and Dr. A.K. Tripathi, Sr. Director, Ministry of New and Renewable Energy, Government of India delivered lecture on topic "Overview of MNRE initiatives on Solar Energy". Prof. Sukumar Mishra, Prof./IIT/ Delhi delivered lecture on topic "Rooftop PV system in Solar Power". Sh. A.K. Singhal, CEGE/Northern Railway delivered lecture on topic "Initiatives on Solar Energy by Northern Railway".

Sh. Sudhir Garg, CESE/Northern Railway presented the paper on topic "Green Initiatives on Rail Coaches- A case study of Northern Railway"

The Technical Session was on the theme "Use of Solar in Metro & Rail Transport" chaired by Sh. N. Venkatesan, Former Member (Electrical), Railway Board and Sh. Anoop Gupta, Director (Electrical) was Co-chairman of the session. Sh. Sandeep Goel, M/S GIZ delivered lecture on topic "Project Development & Business Models for Implementation of Solar Energy in Metro Corporations". Dr. Abhishek Asthana, Sr. Lecturer, Energy Engineering, Sheffield Hallam University delivered lecture on topic "Energy from Waste". Sh. Jai Prashanth Parakkat, M/S Sun Edition delivered lecture on topic "Design, Installation and operation of rooftop Solar photovoltaic plants. - A case studding - mechanisation - Sec-21 Metro Station - Sun Edison". Sh. Amitava Roy, AGM/BHEL delivered on topic "Solar PV installations by BHEL". The technical session was concluded with question-answer session.

At the end, Sh. R.N. Rajpoot, Honorary Secretary/IET thanked all the session chairmen, speakers, participants & delegates for gracing the occasion.

2nd R.K. Vir Memorial Lecture on "Solar Energy-Opportunities in Rail Sector"

4th January, 2015 at The Institution of Engineers (India), Engineers Bhawan, New Delhi

The Institution of Railway Electrical Engineering organised 2nd R.K. VIR Memorial Lecture on the Theme: "Solar Energy - Opportunities in Rail Sector" on 4th January 2015 supported by IET and IEEE. Sh. Navin Tandon, Member Electrical, Railway Board graced the occasion as Chief Guest.

Sh. Sunil Goyal Genl. Secretary/IREE and CEE/N.Rly delivered the welcome address on the 2nd R.K. Vir memorial lecture on the theme "Solar Energy - Opportunities in Rail Sector". He introduced the audience about the great personality of Late Mr. R.K. Vir as the veteran Railway Electrical Engineer who had been known as pioneer in Train Lighting System of Indian Railway and his work in various responsibilities. He also highlighted the importance of the theme and the works being executed by Northern Railway in the lecture.

Dr. A.K. Tripathi, Scientist, Ministry of New and Renewable Energy, Government of India delivered the keynote lecture on the Theme: "Solar Energy - Opportunities in Rail Sector". He highlighted the benefit

of solar energy and the various schemes brought by MNRE to promote the use of solar energy pace in Transport Sector.

Shri Navin Tandon, Chief Guest who had worked under Mr. R K Vir, highlighted the leadership & management Quality of Mr. Vir. Shri V K Dutt, Former Additional Member/Electrical, Railway Board & Sr. Member, IREE who was closely associated with Sh. R.K. Vir, Proposed vote of Thanks.

Use of Solar Power in passenger coaches (Green Initiative)

Existing train lighting in coaches is done through Self generating system or by End on generating system, which envisages generating equipment requiring high maintenance and consumption of fossil fuel. Keeping in line with aspiration & sensitivity to reduce carbon foot prints, N.Rly for the 1st time experimented feeding of lighting load in NG coaches over Kalka-Shimla & Kangra Valley sections with Solar PV units in 19 coaches since 2012. After success of these coaches, N.Rly has provided Solar PV units on one BG GS coach no. 20022 GSNR for technology demonstration. The technical evaluation based on trials proved that it is feasible to meet complete electric power requirement of lighting & fannage of a non AC coach even in summer through 6kWp capacity Solar PV modules fitted on the roof of the coach which can be easily provided on the area available over the roof & will cost about Rs 6.0 Lacs. This is possible as 6kWp PV modules can generate 19kWhp/day, however, power requirement of a non AC coach during peak summers with all fans & lights working for 12 hrs is only 13.5kWhp. On calculating the ROR comes about 5 years. The existing cost will further reduce in the due course due to competition & technology development.

To harness the benefits of solar power a system can be adopted wherein alternate coaches are provided with solar panels with no alternators but electrically connected to the next coach.

External 750V, 3Ø supply to EOG rakes during maintenance

Normally, primary maintenance EOG rakes are fed on power supply through power cars in Rajdhani/ Shatabdi trains. In this arrangement, DG sets work continuously, consumes HSD and creates noise & air pollution.

To save upon these external stationary 750V, 3Ø, 4 Wire AC supply had been provided using 2/4, 60kVA transformers at 6 coaching depots over DLI & FZR divisions. In this system, 415V, 3Ø, 4 Wire supply is being received through XLPE cable from local supply and same is stepped up on 750V, 3Ø, 4 Wire AC supply by 60kVA transformer which is connected to rake through suitable coupler. This is an innovative step taken by N.Rly as it is far better then going in for bulk transformer of 1MVA/500kVA due to following:

- This is able to provide lighting & testing of one AC coach & thereby meeting all maintenance power requirement.

- Existing cables are being used and no cables are to be provided resulting in negligible (App 7.00 Lacs) investment. However, in case of 1MVA/500kVA system complete substation has to be commissioned requiring very high investments.
- Only 60kVA transformers are being used which are fully loaded. However, 1 MVA/500kVA transformers will not be loaded fully. Also no load losses of 1MVA will be very high in comparison to 60kVA transformers.

This system saves approximately 25 Lacs/rake/ annum in terms of HSD oil besides benefits like no air & noise pollution. Cost for one time investment is about Rs 7.0 lacs. On calculating the ROR, it comes about 10 weeks.

Chairmen of Local Centres

Sh. G.R. Agarwal
Chief Electrical Engineer, CR

Sh. Dayal Dogra
Chief Electrical Engineer, ER

Sh. R.P. Nibariya
Chief Electrical Engineer, NER

Sh. B.P. Verma
Chief Electrical Engineer, NFR

Sh. R.K. Kulshrestha
Chief Electrical Engineer, SR

Sh. J.S.P. Singh
Chief Electrical Engineer, SCR

Sh. Vinod Kumar Agarwal
Chief Electrical Engineer, SER

Sh. D.K. Sharma
Chief Electrical Engineer, WR

Sr. ED/ TI
RDSO/Lucknow

Sh. D. Ramaswami
Director/IRIEEN

Sh. Hirendra Rao
Chief Electrical Engineer, CLW

Sh. Lokesh Narayan
Chief Electrical Engineer, CORE/ALD

Sh. M.K. Mathur
Chief Electrical Engineer, ECR

Sh. R.K. Gupta
Chief Electrical Engineer, ECoR

Sh. B.K. Sonwane
Chief Electrical Engineer, NCR

Sh. Anand Dev
Chief Electrical Engineer, NWR

Sh. Madhukar Meshram
Chief Electrical Engineer, SECR

Sh. S.S. Soin
Chief Electrical Engineer, SWR

Sh. A.K. Kapoor
Chief Electrical Engineer, WCR

Sh. Narottam Das
Chief Electrical Engineer, RCF

Sh. S.G. Hundekari
Chief Electrical Engineer, ICF/SR

Sh. Mahendra Singh
CEE, Metro Railway, Kolkata

IREE Governing Body

Patron
Shri Navin Tandon
Member Electrical
Railway Board

President
Shri Man Singh
Addl. Member Electrical
Railway Board

General Secretary
Shri Sunil Goyal
Chief Electrical Engineer
Northern Railway

Treasurer
Shri R.K. Atoliya
Chief Electrical Distribution Engineer,
Northern Railway

Organising Secretary
Shri R.N. Rajpoot
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