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# ieema journal

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## Powering the RAILWAYS



Sister BK Shivani

**IEEMA Event :**  
“Prarambh”:  
A Journey towards  
Self-Belief

**Highlight :**  
Discom Rating:  
Gujarat Discoms  
again score A+

**Case Study :**  
Pioneering Railway  
Electrification since  
Three Decades

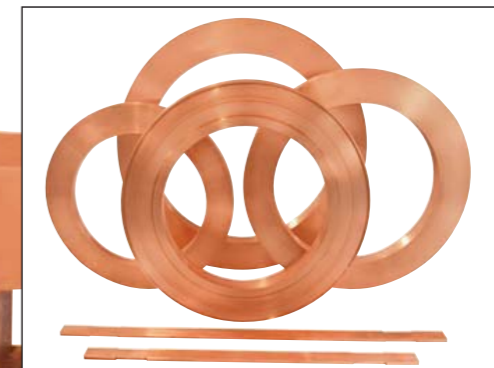
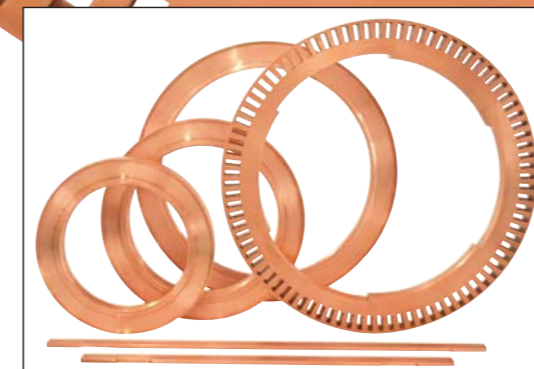
  
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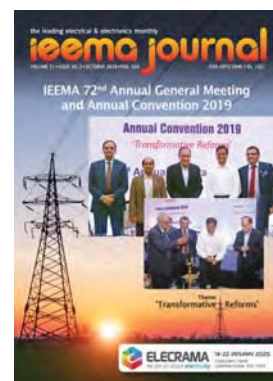
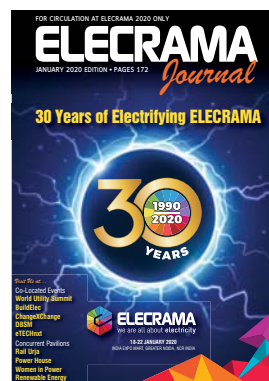


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your link to electricity

# Don't give Lightning and Surge Voltage a chance

OBO Surge Protection Devices



## Lightning arrester / Type 1 / Class B

- Up to 125 kA (10/350) conductivity
- For Industrial applications – pre-protected up to 500 A
- Patented high-performance carbon spark gap technology with LED indication
- Fail-safe operation through patented quick release mechanism



## Combination arrester / Type 1+2 / Class B+C

- Up to 50 kA (10/350) conductivity
- Lightning current and surge arrester in one device, ideal for use in residential buildings
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- Available with remote indication option



## Surge arrester / Type 2 / Class C

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- High-performance varistor systems
- Available with remote indication option
- LED street light protection SPDs available



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- Series installation in secondary distribution Systems
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- Surge protection device with Gas Discharge Tube (GDT) and diodes for precise clamping voltage



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- Product available for both Type 1+2 (Class B+C) & Type 2 (Class C)
- Available in 1000 & 1500V DC application with failure indication



## Isolating Spark gap

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Building Connections



### *Dear Friends,*

It has been an eventful month in IEEMA, with back to back meetings with the senior officials in various ministries to webinars being conducted. This month we organised the first in series of Tech-IT tutorials which got a good response from the industry, the other three are lined up back to back in the next month.

The inauguration of IEEMA's Women in Power Chapter event named 'Prarambh' - The Journey towards Self-Belief was also held in July. The event witnessed the presence of more than 1000 delegates and dignitaries & panellist divine BK Sister Shivani and Ms Seema Gupta, Director, Powergrid were guest speakers.

We conceptualized and launched IEEMA WIP Chapter with a dream to become a change agent to enhance the value of females in this country by investing in empowering them with education, life skills, sports, technical and professional skills and much more.

IEEMA's Women in Power Chapter aims to provide a platform for women to form a collaborative and strategic approach towards building strong pillars across the energy sector. This platform will bring together women leaders across the energy sector to work together on designing interventions in outreach and recruitment; mentorship and leadership; and professional development that can help bridge gender gaps.

IEEMA during the pandemic has been conducting a series of webinars to support and create awareness amongst its members on varied subjects. One such endeavour is organising for its members interaction with large organisations like BHEL, L&T etc to create



a win-win situation for both and understand the way forward. This engagement aims to have a committed and long term mutual engagement. An interactive session for our members was organised with L&T PT&D, where the topic of discussion was "T&D Business Scenario in India and Vendor Relationship Management with entire L & T divisions and team.

While we also organised an export readiness webinar for the benefit of our members on "Cost Effective Exports through Financing." On the international front, IEEMA also interacted with Embassy of Azerbaijan and Business Chambers of Vietnam and Myanmar for putting forward the avenues and areas of mutual interest for IEEMA members.

Talking about the Electricity (Amendment) Bill 2021 which would be cleared (likely) in the monsoon session of Parliament, between July

19-August 13s. The bill empowers consumers to choose their power suppliers, and like it did with the Telecom industry, private players would bring down cost and provide better service to all of us.

The Government expects private sector to own up 100% of electricity distribution in all urban areas in coming years; some 74% in rural-urban mixed areas.

India has a target of achieving a 450gw renewable energy capacity by 2030. Presently, the capacity is 89.63gw. Great work is needed and DISCOMs, presently, are the weakest link in the electricity value chain. It's time they are forced into financial discipline Bods. And it's time the monopoly in the industry is broken.

The month of August will see series of interactions being held with the Hon'ble Power Minister along with other ministries for discussing issues and concerns related to our members and the electrical equipment industry.

We need to build a lot of efficiency and meritocracy into the system, have a long term strategy and build on the development of the expertise the membership and IOT possesses.

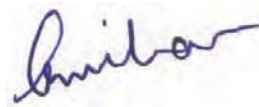
We dream big to aspire growth and talent..... we need to have IEEMA as a nodal agency for policy making for the Electrical and Electronics

industry.....we need to give a big thrust to electrical exports..... our members need to be aware of taxations matters, and financial options.....we need to align our entire membership to the growing and technology needs of not just the country but the entire globe.

The newly revamped website of IEEMA will be active from the month of August. The new website will be mobile compatible, easily accessible with well-planned information architecture and well-formatted content that is easy to read on any device. We will look forward to hearing your suggestions about the look and feel of the newly revamped website. You can provide your suggestions on [president@ieema.org](mailto:president@ieema.org) with a copy to [vineet.goyal@ieema.org](mailto:vineet.goyal@ieema.org).

With your wholehearted participation and support, IEEMA encompasses the Globe. And of course, your feedback is a guiding path for the NEC.

Thank you.



**Anil Saboo**

*Dear Members,*

It is my proud privilege to interact with you through this column for the first time. I am obliged and thankful to IEEMA National Executive Council for having put their faith in me. I have served IEEMA for more than 32 years now, having joined this great organisation in May 1989 as Technical Officer handling one product division.

Having seen the association grow over these years, it has also been an enriching and rewarding journey for me having worked with many stalwarts in the electricity ecosystem in the country be it from industry, policymakers in various arms of the Government of India, regulatory bodies including CEA and CERC, standards bodies including BIS, testing institutions such as CPRI and ERDA, various CPSU and state and private utilities etc.

IEEMA has been working closely with various arms of the Central and State Governments in terms of policy advocacy. I will endeavour to strengthen IEEMA as the bridge between our members and our stakeholders to see we proactively contribute towards nation-building.

Change is the only constant in this universe. Charles Darwin has very rightly said, "It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change that survives". The ongoing



pandemic has brought the biggest change for all of us, and we have to change to remain relevant.

I will be glad receiving your inputs and ideas on how we can change, rather transform our monthly Journal to make it more interesting and useful for our readers cutting across all sectors of the electricity ecosystem.

I look forward to have suggestion from all of you to take IEEMA forward for the benefits of members and growth of our country.

You can reach me on my email id [j.pande@ieema.org](mailto:j.pande@ieema.org) with your views & suggestions.

A handwritten signature in blue ink, consisting of a stylized 'J' followed by a horizontal line and a small flourish.

**J Pande**

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# ieema journal

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## From the President's Desk

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## Samvaad

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## IEEMA Event

### "Prarambh": A Journey towards Self-Belief

IEEMA "Women in Power Chapter" organised its first event named as "Prarambh"-A Journey towards Self-Belief. The event was inaugurated by Sister BK Shivani, Spiritual Leader and Motivator and witnessed an interactive session by Ms Seema Gupta, Director (Operations), PGCIL others present during the inauguration were Mr Anil Saboo, President, IEEMA, Mr Vijay Karia and Mr Neeraj Nanda, Vice Presidents, IEEMA and Ms Mira Parasuram, Chairperson, IEEMA WIP Chapter.

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## Cover Story

### Powering the railways

A lot of emphasis is given to Railway Electrification in recent years with a view to reduce the Nation's dependence on imported petroleum-based energy and to enhance the country's energy security, with a vision of providing eco-friendly, faster and energy-efficient mode of transportation.

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## Powering the Railways



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## Case study

### Pioneering Railway Electrification since three decades

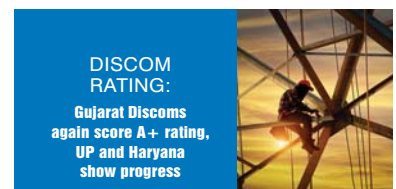


L&T has been engaged in Rail Track Electrification since 1980s. We have been associated with a number of technology development related initiatives of Indian Railways in Railway Electrification including first ever 2x25kV AC traction. In the past decade, our track record in this area has grown from under 7000 tkm to almost 19000 tkm of Railway Electrification comprising IR Mainline, WDFC and EDFC

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## Highlight

### Discom Rating: Gujarat discoms again score A+ rating, UP and Haryana shows progress



Gujarat utilities have topped the ranking of power distribution companies (discoms) by the Power Finance Corporation (PFC) for the ninth year on the trot, with all five Gujarat discoms being the only ones rated A+, the highest ranking. With this, the state has grabbed pole position in all the nine rounds of PFC rankings. Haryana and Uttar Pradesh discoms have progressed in their ranking since last year by jumping a rating above.

For suggestions and feedback please write to us on [shalini.singh@ieema.org](mailto:shalini.singh@ieema.org)

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## Events and Eventualities

### Case Studies on Transformer's Abnormal Situation (Part-7)

Last Few months the CASE STUDIES on TRANSFORMER's Abnormal situation is getting published under the section of EVENT and EVENTUAL series. Readers especially from field units are accepting this series because of its presentation approach is based on the actual situations, observations, action taken on the subject with recommendations for the future reference.



On Transformer's Abnormal Situation (Part-7)

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## Tech Space

### Testing of Transformers

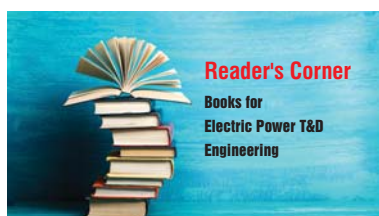
Apart from the mandatory tests specified, few special tests are done by transformer manufacturers. These are done to locate imperfections during manufacturing or as a signature test for future reference. Few of these tests carried out as pre-commissioning tests also. Methods of carrying out such tests are explained.

Apart from the mandatory tests specified, few special tests are done by transformer manufacturers.

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### Books for Electric Power T&D Engineering



A list of reference books is prepared for the use of practicing electric power transmission and distribution engineers, consultants and research professionals.

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- Indonesia to make biomass co-firing mandatory in power plants
- MN Dastur bags carbon capture project funded by US Department of Energy
- Germany hikes 2030 power consumption forecast by 9 per cent
- Eni signs deal for hydrogen production in Egypt
- Nepal inaugurates largest power project

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- Tamil Nadu to promote thermal power projects
- 350 EV charging stations installed under FAME India Scheme
- Andhra govt invites national agencies for energy-efficiency partnerships
- Delicensing power distribution on govt's agenda

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## Corporate News

- WRI India and CESL sign MoU to catalyze India's EV journey
- Hitachi ABB Power Grids commissions Raigarh-Pugalur UHVDC link
- Tata Autocomp delivers 64 200kW DC FAST Chargers for EV BUS CHARGING
- Adani Electricity Mumbai issues \$2-bn sustainability-linked bonds
- NTPC set to start commercial operations at second Nabinagar unit

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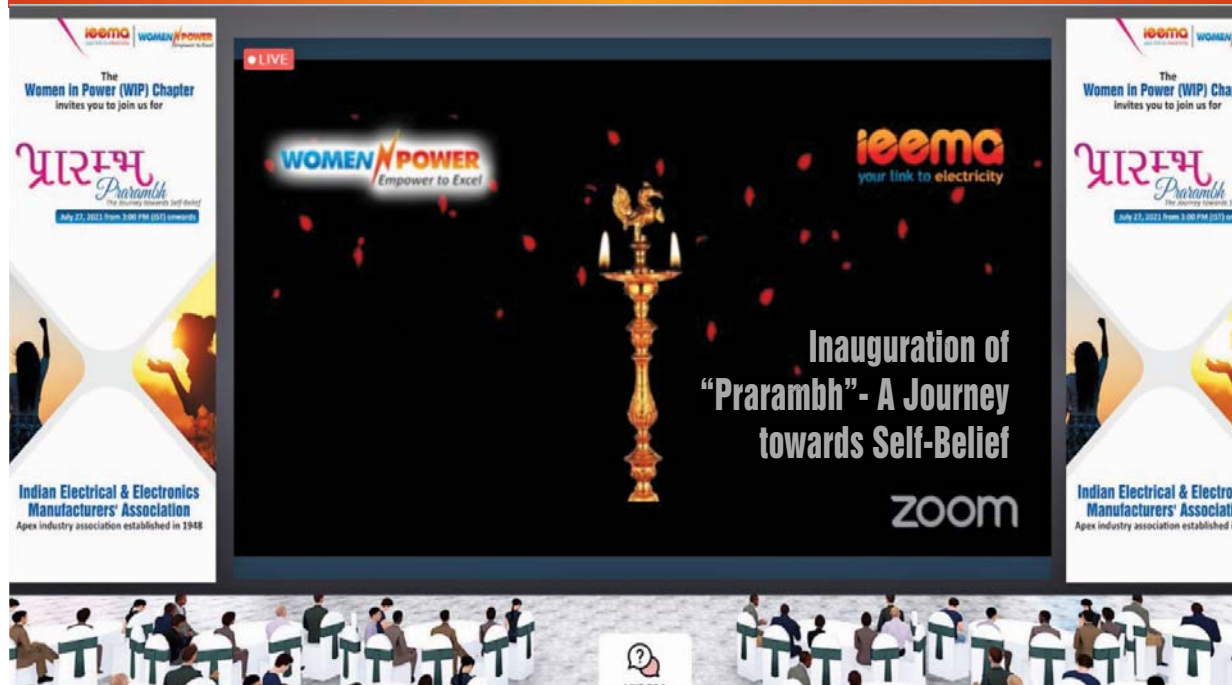
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## "Prarambh": A Journey towards Self-Belief



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WIP Chapter. The virtual event witnessed the presence of more than 1000 delegates.

The virtual event began with lighting of lamp by the dignitaries. **Mr Anil Saboo, President, IEEMA addressed the delegates stating**, “For the first time, ELECRAMA created a platform “Women Empower” to discuss challenges and experiences of women in power segment. Developed countries have about 50% women working, while core power sector in India has only 6-7% sector. When I was traveling around the world

for ELECRAMA 2020, I realized that developed countries had around 50% of women, while in India has only 6-7% of working women in the power sector. Although I am proud to share that IEEMA has about 60% of women working but clearly more needs to be done. It is with the vision to inspire women participation in power sector and to acknowledge the women leaders of the industry that we have created the Women Empower initiative.”

