

# CEEAMA E-NEWS

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*From Secretary's Desk*



**Hello Friends,**

CEEAMATECH 2020 is on the horizon and we all are excited to spend one full day on various sessions regarding a novel upcoming shop floor revolution Industry 4.0. The main speakers are now almost finalized along with main sponsors.

The delegate registration is gaining speed. I request all CEEAMA members to come forward and register to grab the unique opportunity to know the latest trends on shop floor automation and understand our role in it as electrical designers. The days' proceedings will also open up new business opportunities

for many of us. In case you are facing any problem in registration – please contact me or any GC member directly. Our event manager FAIR ACT will also offer ready help in case needed. Please find below contact details of Fairact.

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We request readers to write to [admin@Ceeama.org](mailto:admin@Ceeama.org) on the following related to CEEAMA E-NEWS for better communication and interaction among members and GC.

- 1) Feedback on this issue.
- 2) Suggestions for new topics you would want to be discussed in ENEWS.
- 3) Submit your article.

Please email us your thoughts about CEEAMA ENEWS to make it better and more useful for all of us.

Eagerly awaiting to see you on 8th Feb at CEEAMATECH event venue.

Goodbye for now.

**Narendra Duvedi**

Hon Secretary CEEAMA

*Article : Case Study on Failure of 24KV, 12.5KA High Current Bushings for Main Transformers*

*Past Event - Round Table Meet III on 3rd January 2020 at Pune*

*Upcomming Event: CEEAMATECH - 2020, 8th Conference on 8th February 2020, At Hotel Sahara, Mumbai*

## Knowledge sharing by CEEAMA DIRECTOR Mr. Vinayak Vaidya



**ISHRAE Thane Chapter** along with our associated organizations such as ISHRAE Mumbai, ASHRAE Mumbai, FSAI, IAQA, IGBC, GBCI, IPA, AICRA, H&RA & Awesome have successfully organized a full day seminar on **Urjavarani 2019-20** with theme **“Energy” Sustainability Roadmap for Healthcare and Hospitality** on **Saturday 11h January, 2020 at Hotel Satkar Residency, Thane.**

The objective of this seminar is to make aware attendees and update with latest trends and challenges in design / maintenance methods of energy efficient & sustainable hospital design.

One of the technical topics presented by Mr. Vinayak Vaidya Advisor & Mentor at Abhiyanta Consulting Engineers LLP, on Sustainability Aspect in Hospital Electrical Planning

This event was attended by more than **125 delegates**. All the sessions were interactive and well received by the delegates.

Mr. Vinayak Vaidya briefed on specific care to be taken in earthing protection design in hospitals, also explained terminology “Medical IT”, various renewable energy

sources Solar, Wind, Solar + Wind combination that can be specifically used in hospitals. He has shared his learnings and use of alternate energy source systems applied at Deenanath Mangeshkar Hospital (2 x 1200kW gas generator + heat absorption chillers + hot water). Overall, it was highly informative session.

The knowledge shared by Mr. Vinayak Vaidya was well received and appreciated by delegates.

**By Ms. Manjusha Deshpande**

President, Thane Chapter

ISHRAE

## Case Study on Failure of 24KV , 12.5KA High Current Bushings for Main Transformers of GTG and STG of Combined cycle plant of Tata Power at Trombay Mumbai.

Preamble:

Whenever Porcelain is used for bushings or bus post insulators, manufacturers seldom make provision of introducing a gasket between the metallic and porcelain. What happens when there is no gasket? It leads to a catastrophe. Let us go through one such case study.

Occurrence in brief:

24KV Transformer oil filled bushings were found to have developed cracks after six months of service of Unit # 7 GTG. Bushing oil were noticed in the turret. Spare bushings also had hair line cracks in the porcelain. All the bushings were sent to OEM ( CGL Nasik) for detailed inspection in presence of TPCL engineers ( including self ).

<p>* Surface area where Silicon RTVM compound was smeared before assembly.</p>	<p><b>Inspection:</b> After dismantling it was noticed that the metallic were in direct contact with porcelain and design constraints prevented use of gaskets. Blue check on the porcelain surface revealed that there were point contact of the metallic on the surface of porcelain. These point contact resulted in thermal stress, leading to failure of bushing.</p> <p><b>Suggestion by self:</b> When CGL team did not have any answer to prevent point contact and expressed their helplessness in introducing a gasket, I came out with a suggestion of smearing RTVM ( Room temperature vulcanizing media) silicon compound on the porcelain , and then assembling the bushing.</p>
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Observation:

After all the bushings were subjected to mechanical and electrical tests, which were satisfactory. One bushing was dismantled to see the surface of porcelain. RTVM compound had formed a beautiful gasket, there by preventing point contact. GM of CGL expressed his gratitude on the suggestion and expressed that RTVM would be introduced in their manufacturing process to save on porcelain failures.

Prepared by:

A V Prasanna.  
LFM - 087



## Round Table Meet III on 3rd January 2020 at Pune

### Lightening Protection as per IEC/IS 62305

CEEAMA has arranged it's 3rd round table conference with Industry expert in the field to share their thought on Lightening Protection using IS/IEC 62305. CEEAMA intent to use conclusions of RC meet to smoothen the process of change, create awareness of good practices among electrical engineering professionals and help the industry by producing reliable, safe and cost effective Electrical design.

Around 30 delegates from various industry stake holders attended the RC meet.

The program was sponsored by M/s Mersen India P Ltd Bangalore and they have presented benefit of surge protection along with their wide product range.



# One Day Conference on Relevance of **Industry 4.0** for Electrical Engineering Professionals



## CEEAMATECH-2020

8<sup>th</sup> Conference on Relevance of Industry 4.0 for Electrical Engineering Professionals  
8<sup>th</sup> February 2020 • Jade Ball Room, Hotel Sahara, Mumbai