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Azadi Ka
Amrit Mahotsav

सीएचटी न्यूज बाइट्स CHT

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उच्च प्रौद्योगिकी केन्द्र
पैट्रोलियम और प्राकृतिक गैस मंत्रालय, भारत सरकार
Centre for High Technology
Ministry of Petroleum & Natural Gas, Govt. of India



From the desk of the Executive Director



**Esteemed Readers,
Greetings!!**

I am very happy to share new edition of CHT News Byte covering various events and major activities carried out by CHT during July-Sept, 2023.

CHT, in its endeavor of promoting information sharing and knowledge dissemination within the energy sector, continues to organize various Activity Committee Meetings (ACM)/ webinars on the topics of interest and relevance to the industry. Following events have been organized by CHT since the last edition of the CHT News Byte;

1. **ACM on 'Crude Oil and its processing;**
2. **ACM on 'Innovations and Best Practices in the Maintenance of Rotary Equipment'**
3. **ACM on 'Innovations and Best Practices in Static Maintenance'**
4. **Webinar on 'ESG risks and scenario simulations by Amplo Global Inc'**
5. **Webinar on 'Hydroprocessing'**
6. **Webinar on 'Battery Technologies & Electrical Vehicles'**
7. **Webinar on "e-Fuels/Synthetic Fuels- A pivotal role in Achieving Net Zero Target"**
8. **Workshop (Hybrid) on 'Roadmap to achieve Net-Zero: Carbon offset projects'**

CHT celebrated Sawchhta Pakhwara, Independence Day, Hindi Pakhwara during 16-30 September and various activities like, Kavi Sammelan, easy writing, noting drafting, self-written poems, etc. were conducted.

CHT is organizing 26th Energy Technology Meet (ETM) during 9-11 October,2023 at Bharat Mandapam, Pragati Maidan, New Delhi in association with Engineers India Limited and Numaligarh Refinery Limited . The Meet for several years, has served as a platform to discuss solutions to the challenges that we face not only in India, but also elsewhere, in delivering affordable, efficient, clean and assured energy supplies to citizens. Over the years, the event has become a major event in this part of the world attracting large number of participants, licensors, catalyst suppliers and all involved in the business of energy.

The challenge for Indian Refining sector is to grow to meet rising need for energy in the country as well as to integrate more and more with Petrochemicals, Biorefining and Green Hydrogen. Therefore, the theme of the meet 'Emerging Energy trends and the future of Refining' is very relevant and pertinent in present times. I look forward to your continued participation and support in successful organisation of the event.

Your feedback and suggestions are most welcome.

**(Alok Sharma)
Executive Director, CHT**

Workshops/ ACM (Activity Committee Meetings)/ webinars

1. ACM on 'Crude Oil and its Processing'

Associate organizer: Chennai Petroleum Corporation Limited (CPCL), Chennai

Participants: ~100

Date and location: 13th & 14th July 2023 at Crowne Plaza Chennai Adyar Park, Chennai

Ms. Sujata Sharma, IAS JS (M&OR), MOP&NG, inaugurated the meet. Executive Director, CHT gave the meeting's theme address and shared views on crude oil and its derivatives used in different sectors like fuels, petrochemicals etc. He also mentions the integration of refinery-petrochemical and net zero

emissions.

Delegates from process licensors/ designer/ chemical manufacture namely, EIL, Technip, Schlumberger, HTRI, Sulzer, and Dorf Ketal and from the PSUs: EIL, BPCL, IOCL, HPCL, MRPL, NRL, OIL and private refiners like Nayara Energy Limited, HMEL presented their views on the topic. The topics are broadly classified in the following category Crude oil and its markets, Selection and procurement of crude oil, Experience sharing of turn around/processing Russian crudes/ opportunity crudes, Troubleshooting, Energy efficiency, Effective use & optimum utilization of various plants etc.

31 papers were presented in the 1.5 days event where participants are actively interacted with the speaker after the presentation. Mr Ramesh Babu, GM, tech CPCL concluded the event with the key takeaways from the event.



2. ACM on "Innovations and Best Practices in the Maintenance of Rotary Equipment"

Associate organizer: BPCL, Mumbai Refinery

Participants: ~95

Date and location: 17th & 18 August 2023 at Acre's Club, Chembur- Mumbai.

Mr P K Bhowmick ED (Projects & Advisory), BPCL-Mumbai inaugurated the meet. Executive Director, CHT gave the meeting's theme address and shared views importance of rotary equipment in reducing carbon foot prints towards net zero and energy transition challenges, etc., and Mr. R. C. Agarwal Director CHT also addressed the gathering and shared his rich experiences in Maintenance of Rotary Equipment.

Total No. of papers presented: 24

Eminent speakers and experts from vendors namely, SIEMENS ENERGY GE, SUNDYNE, SULZER, ENCON ENGINEERS, ARMSTONG INTERNATIONAL, VOITH TURBO PVT LTD and from the PSUs: EIL, BPCL, CPCL, IOCL, HPCL, MRPL, NRL & Private refinery Nayara Energy Limited shared

their plethora of knowledge on the Rotary Machineries. Various topics such as Selection Guidelines for Rotary Equipment, Optimizing Health of Rotary equipment from Asset Performance Management (APM), Efficiency Reliability operating envelope (EROE), Role of Machine Learning, Artificial Intelligence in optimizing the performance, Application of Digital tools for improvement and reliability were covered during the meet. They also discussed several case studies, learnings, troubleshooting & experiences.

The event was held in an engaging environment, fostering valuable discussions and exchange of ideas and insights for innovative solutions and enhanced industry performance. Effective of Use of APM solution, Features of APM Integrated Condition Monitoring System, Use of Magnetic couplings for reduced speed application, Use of non metallic wear rings, replacement and inspection philosophy for flow dividers, etc. are the few takeaways.



3. CHT Activity Committee Meet on “Innovations and Best Practices in Static Maintenance”

Associate organizer: HPCL, Mumbai Refinery

Participants: ~ 90

Date and location: 28th & 29th July 2023 at Acre's Club, Chembur- Mumbai.

The two-day event was a first-of-its-kind on static maintenance gathering that brought together industry experts and professionals in the field of static maintenance from various organizations to explore and exchange insights on innovations in static maintenance practices.

Event was inaugurated in presence of Shri P. Raman, Director-CHT, Shri S. Bharathan, Director- Refineries, HPCL, Shri Libu Mathew, ED-MR and other senior officials of HPCL. In his inaugural speech, Director- Refineries, HPCL delved into the realm of knowledge, stressing the paramount importance of technical proficiency in the modern industrial context. He articulated his conviction that possessing a strong foundation in technical knowledge is not just beneficial, but essential for professionals in the field. The ever-evolving technological landscape demands continuous learning and adaptation, and he urged the engineers to stay abreast of the latest advancements to remain at the forefront of their craft. He also placed significant emphasis on the pivotal and indispensable role that Maintenance Engineers play within the industry.

26 Nos. of presentations were made on various innovations and best practices in static maintenance, by various organizations such as HPCL, EIL, IOCL, BPCL, NRL, HMEL and Nayara Energy. The meet was hailed as a grand success, underscoring the industry's dedication to innovation and continuous improvement in maintenance practices.



4. New R&D Proposals

7 New R&D proposals were received at CHT, Presentations of PI's is scheduled in Oct'23. R&D proposal submission date extended from 31st Aug'23 to 30th Sep'23.

5. 97th SAC Meeting:

97th Scientific Advisory Committee meeting was held on 03rd Jul'23 via Video Conferencing mode. 6 proposals were recommended for approval of Executive Committee. The proposals would be put up for approval in 36th EC meeting which is scheduled in Nov'23

6. 35th EC Meeting:

The 35th Meeting of the Executive Committee (EC) of CHT held on 05th Jul'23 at CHT, under the Chairmanship of Smt. Sujata Sharma, Joint Secretary (M&OR), MoP&NG.

A detailed presentation was made by CHT on the progress and status of various activities/ initiatives taken up by CHT, including following;

1. Special studies like Performance Benchmarking of Refineries and Pipelines
2. Establishing Hydrogen Test Loop & Enhancement of Hydrogen Corpus Fund (HCF)

3. Refining Capacity Expansion plans (by 2030),
4. Refineries Shutdown Schedule, 2023-24,
5. Refinery Performance Improvement Programme (RPIP) for PSU Refineries,
6. Reduction of water Footprint in Refineries,
7. Petrochemical Benchmarking Study.
8. Status of various activities related to dissolution/ Asset and Liabilities and status of activities transferred to CHT
9. Audited Accounts of CHT for 2022-23

EC approved 7 R&D proposals recommended by Scientific Advisory Committee (SAC) advised to resubmit 2 proposals in next EC and also recommended 1 proposal for approval of GC.

7. Webinar on “ESG risks and scenario simulations”

This webinar was conducted on August 1, 2023 by Carbon U turn Technology Pvt. Ltd., a carbon management solutions company in India and their partner Amplo Global, a company in the United States that specializes in assessing ESG performance and climate risks.

ED-CHT welcomed the presenter and the participants from the entire Oil & Gas sector of India and wished participants to get benefited from the presentation and discussions.

Following topics were touched upon during the webinar:

1. The importance of ESG performance and climate risk management for oil companies
2. How to assess your ESG performance and identify areas for improvement?
3. How to mitigate climate risks and build a more sustainable future?

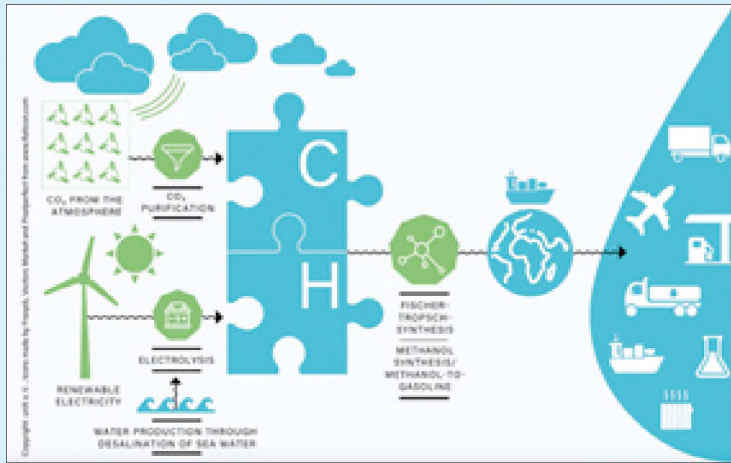
Webinar was a valuable resource for oil companies looking to improve their ESG performance and mitigate climate risks. Webinar was organised in hybrid mode which was attended by more than 120 participants from India and abroad.

8. Webinar on “e-Fuels/Synthetic Fuels- A pivotal role in Achieving Net Zero Target”

Date: August 2, 2023

Participants: 120

ED-CHT welcomed the presenter and the participants from the entire Oil & Gas sector of India to this webinar and wished participants to get benefited from the presentation and discussions. A total of four Presentations from M/s Topsoe India Pvt. Limited, HPCCL, R&D Bangalore, IIT Bombay, and IISc-Bengaluru were presented.



For better subject understanding prominent topics like Relevance & prospects of e-Fuels for India, Cost analysis and challenges in e-Fuels, E-Fuels Market Overview, New Technologies for e-fuels production, Improving the cost-effectiveness of E-Fuels, Improving and building upon the sustainability of E-Fuels, improving transportation and safety of E Fuels were presented.

9. Webinar on “Hydroprocessing”

Participants: 158

Date: 25th September, 2023

The objective of the webinar was to share knowledge on latest development/ innovation in Hydroprocessing Technology & Catalyst, Best Practices adopted in Hydroprocessing Units Operation & Maintenance and Indigenous development of this technology & Catalyst towards Atmanirbhar Bharat.

In his Welcome address, ED, CHT emphasised the importance of this widely used technology in the refining sector and need to know the latest development/innovations & various issues associated with the technology and catalysts. He urged participants for their active participation and get maximum benefit from this webinar.

Presentations made by M/s Honeywell (UOP), IOCL (R&D), Topsoe & IOCL, Gujarat Refinery.

10. Webinar on ‘Battery Technologies & Electrical Vehicles

Participants: 247

Date: 8th September 2023

ED-CHT welcomed the presenter and the participants from entire Oil & Gas sector of India to this webinar and wishes that listeners gets benefited from the presentation and discussions. Eminent speakers from Automobile sector, Battery manufacturing industry and Academia have shared their knowledge on the subject. The topics covered are as follows: 1. Challenges in Adoption of EV in India by Mr Aditya Khandelia, Managing Director, BCG. 2. EV technology opportunities and advancements by Dr. Arun K Verma, IIT-Jammu. 3. High for strategic defense needs by Mr V.Ravichandran, Head (R&D) HEBL.

11. Workshop (Hybrid) on “Roadmap to achieve Net-Zero: Carbon offset projects”

Date: 11th August, 2023

Participants: 120 from India and abroad

The workshop was conducted by Shri Rohit Kumar, Secretary General of, Carbon Market Association of India (CMAI).

ED-CHT welcomed the presenter and the participants from the entire Oil & Gas sector of India and wished participants to get benefit from the presentation and discussions.

WHAT IS CARBON CREDIT?

Any process of activities avoiding emission in comparison to Business as Usual (BAU) scenario or removing GHG emissions from the atmosphere that are measurable or quantifiable are carbon credit.

1 carbon credit = 1-ton CO₂e emission reduction



CMAI

The role of the carbon market mechanism, National / Regional ET, Voluntary Carbon Market and Green Credit Programme (GCP) were touched upon during the workshop. The workshop was a valuable resource for companies that will be environmentally conscious and follow sustainable practices.

12. India-Japan Deeptech Innovation & Clean Energy Seminar

JETRO (Japan External Trade Organization) and NEDO (New Energy and Industrial Technology Development Organization) Japan organized a seminar on India-Japan Deeptech Innovation & Clean Energy on 20th July 2023 at New Delhi. The seminar was co-hosted by FICCI and TERI. The objective of the seminar was to foster partnership through sharing knowledge, experiences, and expertise between India and Japan in field of Deeptech innovation and clean energy. ED CHT participated in the Panel Discussions



13. PM JI-VAN Yojana:

3rd Steering Committee Meeting on PM JI-VAN Yojana was held on 2nd Aug' 23 to consider and deliberate 2G ethanol projects recommended during 97th meeting of SAC. Steering Committee approved 2 Commercial scale 2G ethanol plants & 2 Demo Scale plants for financial assistance under PM JI-VAN Yojana.

14. Dissemination Workshop of PCRA/CHT funded project

CSIR-CMERI, Ludhiana conducted a dissemination workshop on 26th Sep 2023 as a part of the ongoing project titled Design and Development of Inline Biomethane Enrichment and CO2 Separation System.



15. GTE Proposals Processed

A total of 25 proposals were received by CHT for recommendation from Oil & Gas PSUs to go for GTE during the period July-Sept 2023 (BCPL-1, BPCL-4, GAIL-1, HPCL-1,

IOCL-13, MRPL-3, NRL-2). After review, 5 proposals were withdrawn by the companies, 3 were returned to companies with comments and the balance 17 proposals were technically recommended for GTE approval by MoPNG. NO Proposal is currently pending currently with CHT for review /recommendation

स्वच्छता पखवाड़ा

पेट्रोलियम एवं प्राकृतिक गैस मंत्रालय, भारत सरकार के दिशा-निर्देशों के अनुपालन में उच्च प्रौद्योगिकी केंद्र ने 01 – 15 जुलाई 2023 के दौरान स्वच्छता पखवाड़ा मनाया। स्वच्छता पखवाड़ा को सफल बनाने के लिए सीएचटी ने स्वच्छता से संबंधित अनेक कार्यक्रम आयोजित किए। सीएचटी अधिकारियों के बच्चों के बीच स्वच्छता पर ड्राइंग/पेंटिंग प्रतियोगिता, सीएचटी अधिकारियों की पत्नियों के बीच स्वच्छता बेस्ट आउट ऑफ वेस्ट प्रतियोगिता, संविदा कर्मियों के बीच स्वच्छता पर भाषण प्रतियोगिता जैसे विभिन्न प्रकार के कार्यक्रम आयोजित किए गए। सीएचटी अधिकारियों के बीच स्लोगन व अन्य प्रतियोगिताएं आयोजित की गयी। नोएडा सैक्टर – 18 नुकड़ नाटक आयोजित किया गया, लाल बहादुर शास्त्री बाल वाटिका गोविंदपुरम, गाज़ियाबाद में अनाथालय के बच्चों को और जूनियर हाई स्कूल, दादरी, गौतम बुद्ध नगर, यूपी के बच्चों को स्वच्छता किट (स्कूल बैग, पानी की बोतल, मास्क, सेनिटाइजर, हैंड टॉवल, डेटॉल साबुन, बिस्कट और चिप्स आदि से युक्त) वितरित की गई। इस अवसर पर ओआईडीबी भवन के चारो ओर वॉकथॉन का आयोजन किया गया जिसमें कर्मचारियों ने स्वच्छता के बारे में जागरूकता फैलाने के लिए बैनर और हैंडआउट निकाले। स्वच्छता पखवाड़ा के दौरान आयोजित की गयी प्रतियोगिताओं में विजेता प्रतिभागियों को श्री आलोक शर्मा, कार्यकारी निदेशक सीएचटी द्वारा 15 जुलाई 2023 को स्वच्छता पखवाड़ा के समापन दिवस पर पुरस्कार वितरित किए गए।



स्वतन्त्रता दिवस

15 अगस्त 2023 को सीएचटी कार्यालय में स्वतन्त्रता दिवस समारोह का आयोजन किया गया। सीएचटी कार्यालय के सभी अधिकारियों एवं सभी कर्मचारियों के साथ मिलकर श्री आलोक शर्मा, कार्यकारी निदेशक महोदय ने सुबह 9 बजे ध्वजारोहण किया। इस अवसर पर श्री आलोक शर्मा साहब ने उच्च प्रौद्योगिकी केंद्र द्वारा किए गए कार्यों की गति विधि के बारे में सबको अवगत कराया।



हिन्दी पखवाड़ा

उच्च प्रौद्योगिकी केंद्र में 16 सितम्बर से 29 सितम्बर 2023 तक हिन्दी पखवाड़े का आयोजन किया गया जिसका शुभारंभ श्री आलोक शर्मा, कार्यकारी निदेशक, सीएचटी ने किया। हिन्दी पखवाड़ा अवधि के दौरान अनेक प्रतियोगिताएं जैसे अहिंदी भाषी अधिकारियों के बीच लघु कथा पाठ प्रतियोगिता, अशुद्ध वाक्यों को शुद्ध करके लिखने की प्रतियोगिता, हिंदी भाषी अधिकारियों के बीच नोटिंग दू झापिंग प्रतियोगिता, हिन्दी कविता प्रतियोगिता सभी प्रतियोगियों के लिए, अधिकारियों के बच्चों के बीच वॉक एवं स्लोगन, तथा संविदा कर्मियों के बीच वॉक प्रतियोगिताएं आयोजित की गयीं। हिन्दी पखवाड़े की प्रतियोगिताओं में सभी ने उत्साहपूर्वक भाग लिया। समापन समारोह के उपलक्ष में श्री आर. सी अग्रवाल जी ने हिन्दी में काम करने की प्रेरणा दी। सीएचटी कार्यालय में द्वितीय बार कवि सम्मेलन भी आयोजित किया गया, जिसमें जाने-माने कवियों ने हिन्दी पर अनेक कवितायें सुनाईं। श्री आर. सी अग्रवाल, निदेशक, महोदय द्वारा समारोह के समापन और हिन्दी कार्यशाला में विजयी प्रतिभागियों को पुरस्कृत किया गया और सभी प्रतिभागियों का होसला बढ़ाया।



“ऊर्जा संक्रमण” पर तकनीकी कार्यशाला

उच्च प्रौद्योगिकी केंद्र के 37वें स्थापना दिवस पर जानकारी साझा करने के लिए सीएचटी के उद्देश्यों के अनुपालन में, 24 अगस्त 2023 को “ऊर्जा संक्रमण” पर सीएचटी में एक तकनीकी कार्यशाला आयोजित की गई थी। कार्यकारी निदेशक महोदय श्री आलोक शर्मा साहब ने श्रीमति वर्षा सिन्हा,

सचिव (ओ.आई.डी.बी) और श्री आर. रामचंद्रन, सदस्य (एस.ए.सी) जी का स्वागत किया। कार्यशाला का उद्घाटन श्रीमति वर्षा सिन्हा, सचिव (ओ.आई.डी.बी) और श्री आर. रामचंद्रन, सदस्य (एस.ए.सी) द्वारा किया गया। श्रीमति वर्षा सिन्हा, सचिव (ओ.आई.डी.बी) और श्री आर. रामचंद्रन, सदस्य (एस.ए.सी) जी ने अपने कार्यकाल का अनुभव सीएचटी के अधिकारियों के साथ साझा किया।

