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# सीएचटी न्यूज बाइट्स CHT

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सत्यमेव जयते

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!!**

**India is committed to achieve energy sustainability by 2047 and net zero by 2070. With increasing electrification of economy including mobility & building sectors and decarbonisation of industry, the energy mix shall transition to renewable electricity, biofuels and green hydrogen. In the interim period, low carbon options like gas and CCUS shall play its role.**

**Driven by a range of factors, the deployment of renewables in different sectors will occur on different timeframes and scale for different reasons including availability, techno-economic consideration, regulatory push, etc. Therefore, all renewable resources should be viewed as a complement to other alternative energy sources rather than a standalone solution. In the period of transition even role low carbon options cannot be ignored.**

**Coal gasification has received greater interest in recent years as a way to displace energy imports for countries with large domestic coal reserves but insufficient oil or natural gas reserves. India fits this description and as such is looking to significantly expand coal gasification in the coming years.**

**Keeping this in view One-day Workshop held at CHT in Feb,2023 chaired by Dr Anil Kakodkar, Chairman, Scientific Advisory Committee on Hydrocarbons of MoPNG (SAC) to understand;**

- **Status of Gasification technology for high ash Indian Coal**
- **To finalise Approach paper on Gasification of High ash Indian Coals and CCUS**

**The workshop was attended by Thermax Pune, Jindal Steel and Power, CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad, L&T and EIL.**

**The draft paper was presented in the meeting of SAC held at CHT on 24th May,2023 and is under finalisation based on the deliberations held by SAC.**

**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. This edition also brings out the major takeaways from the following events organized by CHT since the last edition of the CHT News Byte;**

1. **ACM on 'Green Hydrogen and Hydro processing;**
2. **ACM on 'Fluidized Catalytic Cracking Unit;**
3. **Webinar on 'Petrochemicals & Polymers'**
4. **Webinar on 'Digitalization - Practices and Innovations in the Energy Sector';**
5. **Webinar on 'Oil & Gas Pipeline -Operation, construction and safety;**

**Like every year, CHT celebrated World Environment Day on 5th June in which various activities organised. International Day of Yoga was also celebrated with participation of all officers and staff.**

**CHT, as technical wing of MoP&NG, is committed to improve its services to the industry and soliciting your suggestions in this regard.**

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

## 1. ACM on 'Green Hydrogen and Hydro processing'

**Associate organizer:** BPCL, Bina Refinery

**Participants:** ~95

**Convenor:** Mr. N Chandrasekhar, CGM (OPERATIONS), BPCL- Mumbai Refinery

**Date and location:** 20th & 21st April-2023 at Bhopal.

Mr. Rajeev C, CGM Technical Services, BPCL-Bina inaugurated the meet. Mr. Alok Sharma, Executive Director, CHT gave the meeting's theme address and shared views on green energy transition. Ms. Asawari Kelkar GM Technical Services, BPCL-Bina Refinery, then offered the vote of gratitude.

In all 25 papers spread across 6 technical sessions, covering

diverse topics related to energy Transition and crucial topics like Green Hydrogen were presented during ACM. Of these, 10 papers were presented by process licensors, catalyst suppliers, equipment manufacturers, and engineering firms including Honeywell UOP, Technip Energies, Halder Topsoe, ART, Chevron, KBR, EIL, Dorf Ketel, Axens; and 15 papers were shared by Indian refineries, highlighting their experiences with operation and maintenance, troubleshooting, and challenges faced. Additionally, R&D institutions and CHT presented one paper each.

The event was held in an engaging environment, fostering valuable discussions and exchange of ideas and insights for innovative solutions and enhanced industry performance. At the end of Day-2 Mr. N Chandrasekhar concluded the event with the key takeaways from various presenters. Mr. D Kiran Kumar, Additional Director, CHT gave the vote of thanks to the participants and the Host BPCL-Bina Refinery.



## 2. ACM on 'Fluidized Catalytic Cracking Unit'

**Associate organizer:** HMEL, Bhatinda Refinery

**Participants:** ~ 80

**Date and location:** 10th & 11th May-2023 at Guru Govind Singh Refinery.

Mr. Krishan Tuteja, Vice President, Operations, HMEL inaugurated the meet. Mr. Alok Sharma, Executive Director, CHT gave the meeting's theme address. Mr. Ramesh Chug, VP Technical Services, HMEL, then offered the vote of gratitude.

In all 27 papers were presented spread across 6 technical sessions. Several renowned licensors, catalyst suppliers,

equipment manufacturers, and engineering firms including Honeywell UOP, KBR, EIL, GTC Sulzer, Albemarle, W R Grace, Lummus presented 12 papers covering diverse topics related to FCC, and decarbonizing FCC. 13 papers were shared by Indian refineries, highlighting their experiences with operation and maintenance, troubleshooting, and challenges faced. Additionally, R&D institutions and CHT presented one paper each.

Overall, the ACM was a resounding success in terms of achieving its objectives and bringing the refining community together to address pressing challenges in the industry.



## 3. Webinar on 'Petrochemicals & Polymers'

**Participants:** 247

**Date:** 12th April 2023

Experts from different organization & academia delivered the presentation on topics i.e. Global Outlook on petrochemicals &

polymers with a focus on India (M/s S&P global), Sustainable Polymer: Related technological Advancement (IIT Guwahati), Catalyst Innovation for Sustainability (M/s Grace), Best practices adopted in Petrochemical Plant Operation & Maintenance (IOCL Panipat), Process Solutions for Enhanced Yield of Petrochemical Feedstock from Refineries (M/s Axens), Ways to Crude to Chemicals (M/s Lummus Technologies). During Q&A, 30 Questions received from participants.

## 4. Webinar on 'Digitalization - Practices and Innovations in the Energy Sector'

Participants: 180

Date: 12th May 2023

Shri Alok Sharma, ED-CHT, welcomed all the dignitaries and participants and highlighted the crucial role of digitalization in

transforming the energy sector. He also emphasized the key areas of focus for further advancements.

During the webinar, speakers from six organizations, namely M/s Aspentech, M/s Axens, M/s Gail (India) Limited, M/s KBR, M/s EIL, and M/s Aveva, shared their valuable insights and experiences regarding innovative practices in the energy sector. The session covered topics such as digital twins, Industrial Internet of Things (IIoT), digital solutions, and e-log books, which garnered significant attention from the participants.

## 5. Webinar on 'Oil & Gas Pipeline - Operation, construction and safety'

Participants: 180

Date: 23rd June 2023

Shri Alok Sharma 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. Dr. S. S. Gupta highlighted the key challenges

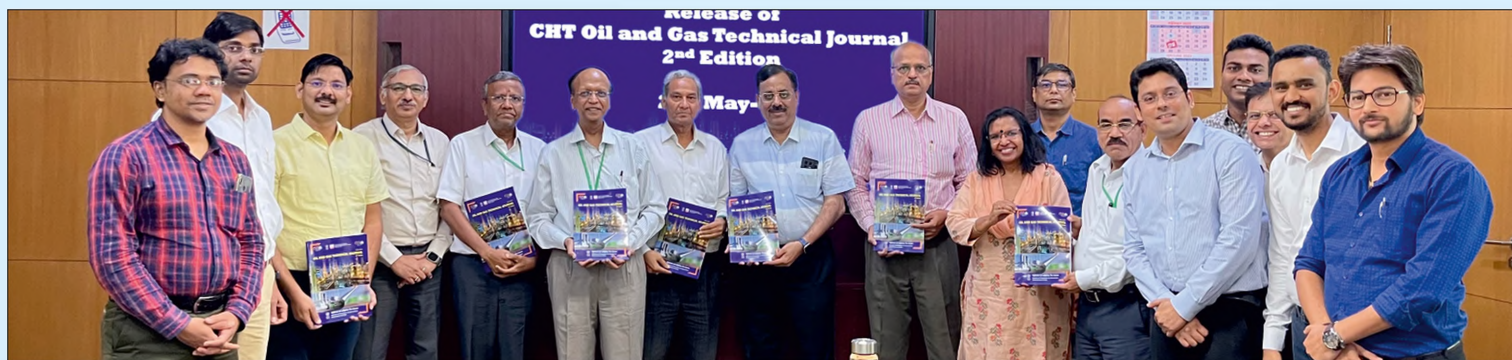
in attending the leak in LPG pipeline. He emphasised that all industries to come together for develop standard SOP for attending leak in LPG pipeline. Four topics related to design & construction in offshore Pipeline, Challenges in measurement in Gas Pipeline, Risk management in LPG Pipeline and safety practices in pipeline construction discussed.

Total four Presentations were done from M/s Engineers India Ltd., M/s Pipeline Infrastructure Ltd., M/s GAIL India Limited and OISD.

## Release of 2nd edition 'Oil and Gas Technical Journal 2023'

ED, CHT along with other CHT officials released Oil and Gas Technical Journal's 2nd edition on 25th May 2023, marking a significant step in the industry's knowledge sharing. The major goal of the publication is to showcase the most recent breakthroughs, advances, and best practises in Oil & Gas sector. This highly anticipated publication aims to provide professionals with a comprehensive resource that delves into the latest advancements, emerging trends, and critical research within the realm of oil and gas.

For engineers, managers, and other professionals working in the oil and gas sector, we think this publication will be an invaluable resource. Top Oil industry officials and thought leader's contribution has added significant value to the knowledge bank of the oil and gas industry. CHT commend authors for their dedication and commitment in advancing the technical aspects of the domain.



## 96th SAC Meeting

96th Scientific Advisory Committee meeting was held on 24th May 2023 via Video Conferencing mode. 7 proposals were recommended for approval of Executive Committee. The proposals would be put up for approval in 35th EC meeting which is scheduled for 5th Jul'23.

## New R&D Proposals

9 New R&D proposals were received at CHT, 5 of which would be presented to SAC for recommendation in its 97th meeting scheduled for 3rd July'2023. R&D proposal submission date extended from 31st May 2023 to 31st Aug 2023.

## PM JI-VAN Yojana

CHT had floated RFS-IV to provide financial assistance for 6 New Commercial & 7 Demo proposals. The last date for bid submission was extended to 15th May 2023. 11 bids were

received under RFS-IV.

Select Committee (SC) meeting for evaluation of RFS-IV proposals was held on 29th May 2023 and recommendation of the same would be presented to SAC in its 97th meeting scheduled for 3rd July 2023.

## Signing of MoA Following MoAs were signed for approved R&D Projects



PEM Fuel Cell Project: HEB/IOCL/GAIL on 24<sup>th</sup> April 2023



Solid Oxide Fuel Cell Project: CGCRI/ARCI/HPCL on 3<sup>rd</sup> May 2023



The International Organization for Standardization's Technical Committee 193 (ISO TC 193) Technical Group 1 (TG-1) was formed to discuss eventual future steps regarding standardization and liaisons with other committees and organizations in order to cover blends of hydrogen and natural gas, and to deliver a strategy with appropriate (prioritization of) proposals to ISO/TC 193' significant contributions in advancing technology standards. Shri Alok Sharma, ED-CHT was convenor for this prestigious TG-1 Group Comprised of experts and stakeholders from around the globe. Various online meetings were arranged to achieve the targets given to TG-1 Dr. SS Gupta Advisor, CHT gave various

presentations on “% H2 blending in different countries” which was highly appreciated by the TC-193/TG-1 committee members. Likely impact in the related ISO Standards were also assessed by the group. In its final recommendations TG-1 proposed to keep a cap of 20% Hydrogen blend in the natural gas in ISO/TG/193, considering the emerging trend in various countries. A cap of 20% Hydrogen blend in ISO/TG/193 is likely to impact other ISO standards in the related field accordingly. TG-1 successfully completed its task assigned to it last month in June. An Appreciation letter was issued by the ISO-TC 193 committee for ED-CHT and his team members for successfully completion of the task assigned to it on time.

### पर्यावरण दिवस 5 जून, 2023

उच्च प्रौद्योगिकी केंद्र, कार्यालय में 5 जून, 2023 को पर्यावरण दिवस मनाया गया। इस दौरान श्री आलोक शर्मा, कार्यकारी निदेशक महोदय व अन्य अधिकारियों के द्वारा ओ.आई.डी.बी के प्रांगण में वृक्षारोपण किया गया। श्री आलोक शर्मा, कार्यकारी निदेशक ने सभी अधिकारियों/ कर्मचारियों से अपील की कि वह भी अपने आस-पास एवं कार्यालय स्थल पर अधिक से अधिक पौधे लगाएं जिससे वातावरण तो शुद्ध होगा ही तथा हरियाली भी होगी।



इस दिन मुख्य अतिथि के रूप में श्री जे. पी. ओझा, चेयरमैन, पर्यावरण प्रभाव आकलन, पर्यावरण मंत्रालय, भारत सरकार का सी. एच. टी. कार्यालय में स्वागत किया गया। उन्होंने आदि कल से आ रहे पर्यावरण और मानव के रिश्ते का उल्लेख किया। औद्योगीकरण और बदलते नई जीवनशैली के कारण पर्यावरण पर विपरीत प्रभाव का वर्णन किया। बदलते पर्यावरण में अगले 5 वर्षों में 1.5 डिग्री तक तापमान बढ़ने की बात कही तथा इसके दुष्परिणाम की चर्चा की। इस अवसर पर वाद-विवाद व स्लोगन प्रतियोगिता का भी आयोजन किया गया, तथा पुरस्कार भी वितरित किए गए।



### अंतर्राष्ट्रीय योग दिवस

भारत सरकार के तेल एवं प्राकृतिक गैस मंत्रालय के दिशा-निर्देशों के अनुरूप उच्च प्रौद्योगिकी केंद्र में दिनांक 21 जून 2023 को नौवां अंतर्राष्ट्रीय योग दिवस मनाया गया। इस अवसर पर सभी अधिकारियों एवं कर्मचारियों ने सीएचटी कार्यालय के प्रांगण में योगाभ्यास किया, जिसके लिए बाहर से एक योग शिक्षक का भी प्रबंधन किया गया। जिसके साथ सभी अधिकारियों एवं कर्मचारियों ने विभिन्न प्रकार की योग क्रियायें की जैसे कि अनुलोम-विलोम, आँखों के व्यायाम, सूर्य नमस्कार, ताड़ासन योग, वृक्षासन योग, सुखासन योग आदि। इन में से कुछ क्रियाएँ कार्यालय में प्रतिदिन की जा सकती हैं तथा योग का लाभ उठाया जा सकता है।



### GTE PROPOSALS PROCESSED DURING APR-JUN 2023

During the period April - June 2023 CHT has received 43 proposals (36 exempted & 7 non-exempted) from the Oil & Gas PSUs (BPCL, CPCL, GAIL, HPCL, IOCL, MRPL & NRL) for review and recommendation, out of which 28 proposals were

recommended, 12 proposals were returned with comments on review, 2 proposals have been withdrawn by companies and currently only one proposal is with CHT under review.

