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सीएचटी न्यूज लेटर

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,

Heartiest Greetings for the New Year 2021!!



In this edition of the Newsletter, the major important events included are Presentation of Swachhta Awards: Swachhta Pakhwada Awards 2020 & Swachhta Hi Seva 2019 Awards to Oil & Gas PSUs by Shri Dharmendra Pradhan, Hon'ble Minister of Petroleum & Natural Gas and Steel, Executive Committee Meeting of CHT, 90th Scientific Advisory Committee Meeting, Signing of Memorandum of Agreements between IOCL & CHT under PM JI-VAN Yojana, Meeting of constituted committee for finalizing Innovation Awards - 2020, Setting of Catalyst Manufacturing Unit, Review meeting by MoP&NG of on-going 2G Ethanol Plants and CBG Plants, Meeting for Crude oil storage facilities, Business opportunity in petrochemicals & Data Coordinator Seminar by M/s Solomon Associates for Refineries and Pipelines Performance Benchmarking Study – 2020 cycle. This is to inform all that in view of the prevailing COVID-19 situation, the 25th Refining & Petrochemicals Technology Meet (RPTM) stands postponed to the third quarter of 2021.

New Year 2021 brings with it, new opportunities, renewed vigour, new commitments, new strategies with focus to manage risks, hope & optimism to dispel the pessimism bought about by the pandemic. The hydrocarbon sector in our country particularly the Energy Sector has bounced back and shall continue to improve further. Economic growth projections remain optimistic for this year despite the ongoing threat posed by the pandemic. My best wishes to all for meeting the future challenges in the times to come.

Your views, suggestions and ideas to improve the CHT Newsletter further are solicited.

(K.K. Jain)
Executive Director, CHT

Shri Dharmendra Pradhan, Union Minister for Petroleum & Natural Gas and Steel, commends Oil PSUs for Swachhta Campaign

Shri Dharmendra Pradhan, Minister of Petroleum & Natural Gas and Steel, presented Awards during “Swachhta Awards Distribution Ceremony” to the best performing Oil & Gas Sector CPSEs on 14th December 2020 at Shastri Bhawan, New Delhi in the presence of Secretary, PNG, senior officials of the Oil & Gas CPSEs. The Swachhta Pakhwada 2020 award was presented to the Oil & Gas PSUs for having undertaken exemplary work during July 1-15, 2020.

The Swachhta Hi Seva 2019 Award was distributed based on the efforts made towards the Campaign “Say No To Single Use Plastic” during 11th September 2019 to 27th October 2019 to pay homage to Mahatma Gandhi on his 150th Birth Anniversary.

Speaking on the occasion, Shri Dharmendra Pradhan said that Prime Minister Narendra Modi has made 'Swachhta', a



Shri Dharmendra Pradhan, Union Minister for Petroleum & Natural Gas and Steel, presented Awards to the winners of the Swachhta Pakhwada Awards 2020 & Swachhta Hi Seva 2019 Awards (seen in the centre). Also seen in the pic are Shri Tarun Kapoor, Secretary, PNG, along with Award winners from IOCL, BPCL, HPCL, ONGC & Shri K.K. Jain, Executive Director, CHT

Jan-Andolan which is drawing wide participation from society, urban and rural areas alike. He appealed to intensify this cause. "As India completes 75 years of its independence in 2022, we must realise the dream of a Swachh Bharat", he further added. He suggested to PSUs to build state-of-the-art toilet facilities at all pilgrim centres and major places of tourist attractions in the country.

Following Awards were presented - Swachhta Pakhwada Awards 2020: First Prize – IOCL, Second Prize – BPCL, Third Prize – ONGC, Outstanding Contribution – HPCL; Swachhta Hi Sewa 2019 Awards: 1st Prize – HPCL, 2nd Prize – BPCL, 3rd Prize -IOCL.

Shri Dharmendra Pradhan, Minister of Petroleum & Natural Gas and Steel, complimented all the winners of Swachhta Pakhwada 2020 and Swachhta Hi Seva 2019.

Executive Committee (EC) Meeting of CHT

The 30th Meeting of the Executive Committee of CHT was held under the Chairmanship of Shri Sunil Kumar, Joint Secretary(R), MoP&NG through Video Conference on 10th December 2020. The meeting was attended by Secretary, OIBD; DS (BR/OR), MoP&NG; Dir (R), HPCL; MD, CPCL; MD, NRL; MD, MRPL; Dir (T), EIL; ED(O), IOCL; ED I/C(R), BPCL; ED (Trg., R&D and Start-Up), GAIL; Dir(T), NRL; Dir, CSIR-IIP; CGM(T), CPCL; Head (R&D), EIL. Shri K.K. Jain, ED-CHT, made a detailed presentation on the progress and status of various activities / initiatives taken-up by CHT since the last EC meeting. The presentation covered the progress on Refinery Performance Improvement Programme (RPIP) of PSU Refineries; Performance Benchmarking Study of PSU refineries through M/s Solomon Associates for long Term/Calendar Year 2020; Feasibility Study by M/s LanzaTech for Ethanol Production from Off-gases; Mandatory Energy Audit (MEA) by PCRA; e-Office Implementation in CHT/OIBD/OISD/PCRA; Reduction of Water Footprint in PSU refineries; Feasibility Study for manufacture of Reference Fuel under Make in India by EIL & IOC R&D; Performance Benchmarking Study of Pipelines through M/s Solomon Associates for 2020; Standardization of inputs for Nelson Complexity Index (NCI); Additional Crude Oil Storage; Initiative Under ATMA-NIRBHAR



Shri Sunil Kumar, Joint Secretary(R), MoP&NG chaired the 30th Executive Committee Meeting of CHT held online on 10th December 2020.

BHARAT in the areas of Petrochemicals; Status of Catalyst Manufacturing Unit & CHT Budget.

MoA signing under PM JI-VAN Yojana

Two separate Memorandum of Agreements (MoA) were signed between IOCL and CHT on 1st December 2020 at CHT Office, for providing VGF of Rs. 150 Crore and Rs. 15 Crore respectively under PM JI-VAN Yojana, to one Commercial and one Demonstration 2nd Generation Bioethanol Plants being installed by IOCL at Panipat, Haryana. The Commercial project MoA was signed by Shri K.K. Jain, ED-CHT and Shri Santanu Gupta, CGM I/C (AE & SD), IOCL. The Demonstration project MoA was signed by Shri K.K. Jain, ED-CHT and Shri Shailendra Kumar Sharma, ED(TPF), IOCL. Earlier, MoA for Commercial Project was signed with HPCL in November 2020 with Shri J. S. Prasad, ED (Biofuel).



The Commercial project MoA was signed on 01st December 2020 by Shri K.K. Jain, ED-CHT and Shri Santanu Gupta, CGM I/C (AE & SD), IOCL.



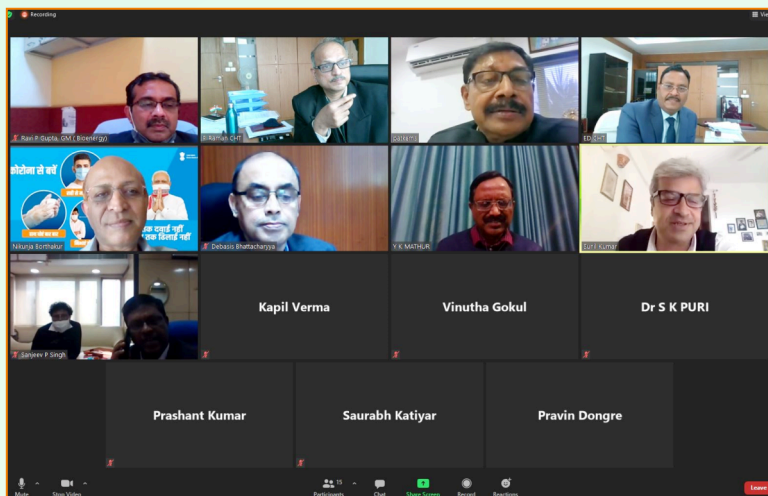
The Demonstration project MoA was signed on 01st December 2020 by Shri K.K. Jain, ED-CHT and Shri Shailendra Kumar Sharma, ED (TPF), IOCL.

Scientific Advisory Committee Meeting

90th Meeting of the Scientific Advisory Committee (SAC) on Hydrocarbons of MoP&NG was held under the Chairmanship of Dr. Anil Kakodkar through Video Conference on 01st December 2020. Shri K.K. Jain, ED (CHT) welcomed Dr. Kakodkar, Chairman, SAC, Shri Sunil Kumar, JS (R), MoP&NG, other esteemed members of the SAC and special invitees. During the meeting, SAC deliberated on the new proposal received from SAIL for VGF under PM JI-VAN Yojana. SAC also discussed the reasons / issues for poor response to RFS (RFS issued twice) under Phase-1 of PM JI-VAN Yojana and recommended the further issuance of RFS based on amended PM JI-VAN Yojana for both Commercial as well as Demonstration projects.

Review Meeting of On-going 2G Ethanol plants and CBG plants

Shri Sunil Kumar, Joint Secretary (Refinery), MoP&NG reviewed progress of the On-going 2G Ethanol and CBG plants on 29th January 2021 through virtual meeting. Officials from IOCL & IOC-R&D/ BPCL/ HPCL and ABRPL participated in the meeting.



Shri K.K. Jain, ED-CHT gave brief presentation on the progress. During the meeting, Shri Sunil Kumar, JS(R), MoP&NG advised to utilise the Budgeted amount for the year 2020-21 by expediting the work.

Innovation Awards

Sectoral Innovation Council for Petroleum and Natural Gas was constituted as a part of the National Innovation Council initiative to drive innovations in the Petroleum and Natural Gas Sector and to provide executable and implementable policy inputs and initiatives. The Sectoral Innovation Council recommended awarding innovations in Refining Sector, with the objective to promote innovative scientific endeavour in the country by encouraging and rewarding excellence in original invention/Innovation.

MoP&NG has instituted Innovation Awards which aims at recognizing the hidden creative talent in individuals or group in industry/ R&D system that could be harnessed for the benefit of the Nation. The Innovation Awards are conferred in the following three categories;

- Best Indigenously developed Technology
- Best Innovation in Refinery
- Best Innovation in R&D Institute

Applications for the above awards were invited from both public and private sector units. A total of 37 nos. nominations in all the three categories were received from refineries. These include innovations in catalyst, energy optimization, Process troubleshooting, environment issues, digitalization and development of new technologies. On 4th & 6th January 2021, presentation of the applications was done before the constituted Award Committee via video conferencing for evaluation. The Innovation Awards will be presented in the upcoming 25th RPTM.

Setting up Catalyst Manufacturing Unit

Refining industry in India has made rapid strides in terms of refining capacity as well as development & adaption of state-of-the-art refining technology. In terms of refining capacity, it is 4th largest in the world with installed capacity of 249.4 MMTPA, which shall increase to 667 MMTPA by 2040. The refining industry employs many catalytic processes where catalyst play major role. The newer developments in process technologies are also centering around new and efficient catalytic systems. Indian R&D organizations/ institutes have also developed process technology that competes with the best in the world. However, there is no major catalyst manufacturing facility in India and the country is mostly dependent on catalyst import.

Current estimated catalyst market in India is around 8 TMTPA for Fixed Bed Hydroprocessing, 40 TMTPA for FCC Catalyst and Additives which is valued at about Rs. 2800 Crore per year. By the year 2025 requirement is set to increase to 18-21 TMTPA for Fixed Bed, and 70 TMT for FCC catalyst per annum. The industry is considering setting up a number of Ebullated Bed Resid Hydrocracking units, which will result in new demand of 10-15 TMTPA for EB catalyst.

For a long time, a need has been felt to set up a catalyst manufacturing plant in India to make India Self Reliant aligned with Govt's initiative of Make in India and ATMA NIRBHAR BHARAT.

Considering the above, MOP&NG constituted a committee on 30th October 2017 to finalise the approach for setting up a catalyst manufacturing unit in Joint Venture with suitable established catalyst manufacturer. Subsequently, the Working Group on Refineries, in its meeting on 12th June 2018, approved the approach for setting up the plant as strategic initiative and advised the Committee to propose business model. Accordingly, Expression of Intent dated 27.12.2019 was published by CHT to gather market intelligence and discussions with reputed vendors. The response to EOI was good and 8 parties showed interest in different areas of catalysts.

The subject was further discussed in EC of CHT on 24th June, 2020. While showing willingness to partner in JV with the prospective partner, BPCL & HPCL both expressed that a firm proposal including business proposition may be put up for taking a final decision. EIL also expressed willingness to explore joining such a venture. It was advised that deliberations be held with individual bidders through a committee of ED level representatives to formulate the business proposition and roadmap including partnership aspect by PSUs. Accordingly, a committee was reconstituted by MoP&NG on 6th August 2020 with following Terms of Reference for setting up a Catalyst Manufacturing Unit in India:

1. To formulate business proposition and roadmap including partnership aspects by PSUs after deliberation with individual bidders including type and capacity of plant (s),

requirement of raw materials, utility and land, expected cost of plant.

2. Evaluation of information and recommending signing of NDA with prospective partners, if required.
3. Suggest path forward
4. Presentation to EC on broad proposal.

On the basis of above interaction and inputs received, five parties namely M/s Halder Topsoe, Sud-Chemie, ART, AXENS and POROCEL were identified. The second round of discussion were completed in January' 2021 with five short listed prospective partners. The discussions ranged from Type of catalyst, investment, area and utilities required, marketing/sales aspects, scale up of catalyst recipes developed by Indian PSUs and toll manufacturing, Policy issues, Structure of JV, etc. These deliberations will further help PSUs to develop Joint venture and M/s HPCL will now lead further discussions with the prospective partners.

Study on Additional Strategic/Operational Crude Oil Storage

Creation of petroleum reserves is one of the several contingency measures being adopted so as to meet the energy security mandate of the country. As mandated by MoP&NG, to carry out detailed study on all aspects in respect of Common Crude oil Storage Facilities in the country, the committee comprising of members from IOCL, BPCL, HPCL, EIL and CHT had detailed deliberation on the subject including meeting with ISPRL on Strategic Storage and also with Private Operators' viz. Aegis Logistics Limited, Adani Ports & Special Economic Zone Limited (APSEZ), East India Petroleum Limited and Vopak India Private Limited for their willingness to participate in the project, access to Land, capability, models offered, financial implications of various models etc. The study outcome was shared during the meeting convened under the chairmanship of Secretary, MoP&NG on 14th December, 2020 in presence of all stakeholders. The detailed study report was finalised incorporating the views/comments offered during the above meeting and submitted to MoP&NG on 31st December, 2020.

KOM of Stage-2 of Development of Scheme for Production of Reference Fuels

On 23rd December 2020, a KOM was held virtually on 23rd December 2020 to take up the Stage-2 of the project for Development of Scheme for Production of Reference Fuels (Diesel & Gasoline). Shri P. Raman, Director, CHT, Shri Ravi Kant Gupta, SGM (R&D), EIL and Shri Sarvesh Kumar, GM (IOCL-R&D) attended the KOM.

Study on Business opportunity for India in Petrochemicals

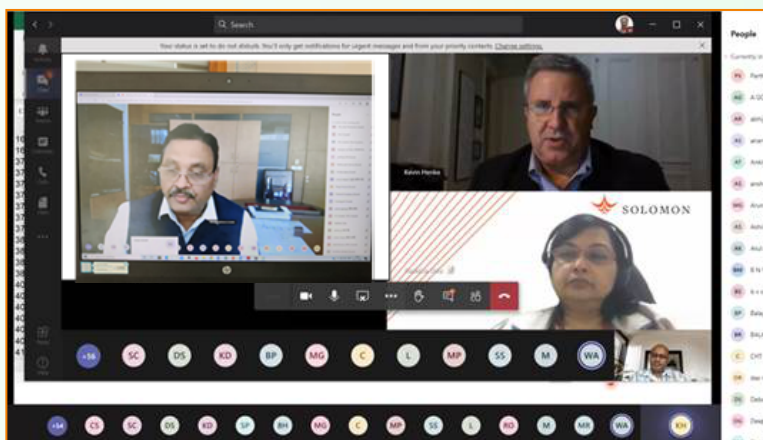
Shri Sunil Kumar, JS(R), MoP&NG constituted a committee to undertake a detailed study on Business opportunity for India in Petrochemicals. As Department of Chemicals and

Petrochemicals (DCPC) has already undertaken comprehensive study on supply - demand of petrochemicals in India, it was decided that the scope of the proposed study shall be confined to plans of the refineries for petrochemicals. The refinery expansion plans were obtained from refineries and demand for petroleum fuels were based on projection from the "Report of the Working Group on Enhancement of Refining Capacity by 2040" of January 2017.

The committee deliberated and identified major Petrochemicals based on consumption in terms of volume, value, import, growth and Capacity in India including projected capacity addition for the identified petrochemicals. Also, the committee highlighted Petrochemical Indian Outlook, feedstock availability & management, global perspective and technological advancements with respect to petrochemicals. The detailed Report was submitted by the committee to MoP&NG on 21st January 2021.

Refinery Performance Benchmarking

Data Coordination Seminar for Refinery Performance Benchmarking for the year 2020 cycle was held via video conferencing on 3rd and 4th December 2020 for 16 Indian PSU Fuel Refineries and 4 Indian PSU Lube Refineries. The programme was inaugurated by Shri K.K. Jain, ED-CHT in presence of delegates participating from Refinery, Solomon and CHT, which was followed by technical sessions for two consecutive days.



Shri K.K. Jain, Executive Director, CHT (see top left) inaugurated the two-day Online Data Coordination Seminar for Refinery Benchmarking 2020 cycle on 03rd December 2020. Also seen in the pic are Mr. Kevin Henke & Ms. Radhika Ojha from M/s Solomon Associates.

Pipelines Performance Benchmarking Study – 2020 cycle

Data Coordination Seminar for Performance Benchmarking Study - 2020 cycle for Crude Oil, Multi-product Liquid, LPG & Gas Pipelines and SPMs was held via video conferencing on 12th & 13th January 2021.

The programme was inaugurated by Shri K.K. Jain, ED-CHT on 12th January 2021 in presence of delegates from IOCL, HPCL, BPCL, OIL, GAIL, Solomon and CHT, which was followed by technical sessions.