ETHYLENE PRODUCERS' TECHNOLOGY SUBCOMMITTEE (TSC) MEETING

Date: Thursday: June 16, 2022

Time: 4:30 to 5:30 PM CDT

Location: DoubleTree by Hilton at Greenway Plaza, Houston.

Attendance:

In person

Muhammad Imran, Sanjeev Kapur, David Spicer, Bala Devakottai; Jack Buehler, Robert Krinock, Aivars Krumins, Mark Whitney, Michael Tallman, Tiong-Ee Ting, Timothy Zygula

Via Teams

V.K. Arora, Jason Hamilton, Greg Kehrier, Bill Charlton, Rob Fox, Charles Polito

Agenda:

1) Anti-Trust Statement Read by Jason Hamilton

No activity of the Committee shall involve the exchange, collection or dissemination among competitors of information, or be used for the purpose of bringing about or attempting to bring about any understanding or agreement, written or oral, formal or informal, express or implied, among competitors with regard to costs, prices or pricing methods, terms or conditions of sale, distribution, production quotas or other limitations, on either the timing, or volume of production, or sales, or allocation of territories or customers.

2) Five Minutes on Safety – Discussed precautions for hot summer days.

3) Election of New Members:

3.1 Kaleb Rollins

Kaleb was elected as a member of the Technology Sub-Committee. Following is his bio:

Kaleb Rollins EPC BIO

I am currently a Senior Production Engineer with 6 years of experience in the Hydrocarbons business working within Ethylene and Propylene facilities. 5 years of process automation experience and now broadening my knowledge working within the Production engineering space. I am excited to utilize new technologies to achieve superior safety, reliability, and profitability. I aspire to have a longechnical career within hydrocarbonsand would like to join the technology team at EPC to help broaden my knowledge base and connections within the industry.

3.2 Omar Hamid

It was proposed that Omar will be a good fit for environmental sub-committee. Aivars Krumins will follow up. Following is his bio:

Omar Hamid, Group Manager/Renewable Fuels, Advisian.

"At Advisian/Worley, my interest/focus come from a couple of different angles listed below.

- Use of green feedstocks (in steam crackers, ethanol dehydrogenation, and FCCs)
- Low carbon fuels (e.g. blue hydrogen firing)
- CCUS

- Electrification
- Circular economy
- Carbon accounting/certification

My relevant background highlights for ethylene:

- Presented paper at 34th EPC on "Green Ethylene by Steam Cracking of Renewable Feedstock"
- Alternate feedstock experience from renewable fuels plants (HVO hydroprocessing and biomass gasification)
- Decarbonization roadmap studies for steam cracking plants (confidential clients)
- Blue (SMR & ATR) and green (electrolyzer) hydrogen plant design studies to produce fuel grade hydrogen
- Previously SME for SPYRO/kinetic modeling
- Experience with steam cracking heater design/modeling, RTO and APC applications

It's been a while since I've registered for the EPC conference, but moving forward in my current role, I expect to attend regularly."

4) 2022 EPC Attendance and feedback

- EPC attendance was 70% of the pre-covid number.
- Technology sessions were well attended including the Distillation Tutorial session on Thursday.
- There was an issue/ complaints of parallel papers/ sessions on energy transition and decarbonization. A better review and coordination is required to ensure that this kind of overlap doesn't happen in future sessions.

5) Nomination/Election of Chair/Co-chair and Session Chairs.

- a. Jason and Muhammad volunteered to continue as sub-committee chair and co-chair for year 2022-2023. It was suggested that volunteers to shadow chair and co-chair for transitioning into this role. Further discussion will be done in next session.
- b. Sessions chair/co-chair nominations to be finalized in next meeting after finalizing the sessions details.

6) Planning for 2023 Session and Sub Committee Members Participation

- a. Following sessions were planned in 2023. Further discussions will be in next meeting:
 - Typically there are three sessions organized by Technology Sub Committee i.e. Fundamentals, Tutorial and any other subject of high interest.
 - Decarbonization, circular economy and energy transition are areas of high interest and most likely Technology Sub Committee will continue to organize sessions in these areas for next couple of year.
 - A decarbonization session was planned on Thursday. This is an area of interest and will result in high attendance on Thursday (the last day of the EPC).
 - A Tutorial session for caustic wash and including spent caustic treatment is long due and will be a good fit for 2023 session.
 - Nominations of Sessions chairs and co chairs will be discussed in next meeting.
- b. It was sought to have better participation from the members. Following actions were recommended:

- Inform chair/ co chair if unavailable for the TSC meeting.
- As per the main committee rules, 50% attendance is required to maintain membership. Similar rule is applicable for TSC sub committees too. Refer to the attached documents regarding main and Technology sub committee rules and guidelines. It is suggested that all members review these existing committee/TSC guidelines and ensure better participation.
- A commitment was sought from all members for better participation.

Future Meeting Dates

June 16, 2022 Aug 11, 2022 Oct 13, 2022 Dec 8, 2022 Jan 26, 2023

March 12-16, 2023 EPC Conference is in Houston, TX