

ETHYLENE PRODUCERS' TECHNICAL SUBCOMMITTEE MEETING

Date: Tuesday: December 1, 2020

Time: 4:30 to 5:30 PM CDT

Meeting Minutes:

Members: Jack Buehler, Tiong-Ee Ting, Bala Devakottai, Sanjeev Kapur, Robert Krinock, Aivars Krumins, Ravi Lal, Humera Rafique, Mark Whitney, Tim Zygula, Jason Hamilton, Muhammad Imran, Deborah Lee; Jose de Barros

1. Reading of the Anti-Trust Statement :

Anti-Trust Statement Read

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

3. Review of Abstracts

Fundamentals Session – Jack and Bob

- **Reviewed Abstracts. With Jack and Bob. The following recommendations were made, but ultimately we will leave it up to Jack and Bob to come up with the 6 – 7 paper session lineup.**
- **We want to move Bellos paper into session (was put into environmental session by mistake).**
- **Waste Plastics**
- **RDR Reactor Paper, we want to move to next year since they should have new pilot plant data then.**
- **Low emissions Ethylene Furnace Technip...in.**
- **End of steam age paper seems like a case study and probably does not belong in the fundamentals session. Agreed to pull paper or combine with LEEF above.**
- **Catalytic Coking Paper include.**
- **Shell Paper on Furnace Modernization...move to Operations Session if they will accept it, if not we will accept it. Jack will check with Richard Rolke.**
- **Would like to include one of the UofGent papers.**

Commissioning and Startup Session

Chair: Mark Whitney

Co-Chair: Michael Tallman

Papers Set:

1. **Mega Crackers: Challenges and Road Ahead**
2. **Case Study: Converting a 15+ Years Old out of Service Idled Cracker to a Profitable Process Unit**
3. **Reducing Flaring during Startup of Steam Cracker Unit**

4. ZPC 1400KTA Ethylene Plant Startup
 5. Cold Piping Event during New Plant Startup: Do You Have All the Details You Need for Your PHA?
4. Joint Session with Distillation Session focused on distillation (Bala D and Muhammad and Tim Z)
- a. They have 5 papers.
 - i. Sulzer – Distillation fundamentals
 - ii. Nova Chemicals Startup related issues with startup issues
 - iii. BASF Condensate stripper Revamp
 - iv. BASF Sulzer C2 splitter Revamp
 - v. FRI New Downcomer they have developed

May have issues if the session is not in person, some legality concerns that need to be worked out. AiChE to decide if the session will be in person or virtual sometime in December. We may want to push back if it is virtual to move to later in the year for in-person.

Next meeting on Dec 10, 2020.

ETHYLENE PRODUCERS' TECHNICAL SUBCOMMITTEE MEETING

Date: Thursday: October 15, 2020

Time: 4:30 to 5:30 PM CDT

Action items denoted in **bold underline**.

Meeting Minutes in Green

Location: WebEx

Members: VK Arora, Jack Buehler, Tiong-Ee Ting, Bala Devakottai, Rob Fox, Sanjeev Kapur, Robert Krinock, Aivars Krumins, Ravi Lal, Darren Le Geyt, Humera Rafique, Mike Tallman, Mark Whitney, Tim Zygula, Thomas Wieslaw, Jeff Elam, Hannah Murnen, Jason Hamilton, Alex Mihinel, Muhammad Imran, Deborah Lee

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Attendees:

Jason Hamilton, Hannah Mumen, Mike Tallman Jack Buehler, Jose de Barros, Mark Whitney, Muhammad Imran, Ravi Lal, Rob Fox, Bob Krinock, Sanjeev Kupur, Tiong-Ee Ting, CK Arora, Bala Devakottai, Humera Rafique, Aivars Krumins, Darren Le Geyt, Deborah Lee

Meeting Minutes:

5. Reading of the Anti-Trust Statement :

Anti-Trust Statement Red

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6. Vote/Potential New Members:

Committee voted unanimously for Jack to continue as a member and co-chair following his retirement from Shell. Deborah Lee was unanimously accepted as a member of the committee.

a. Jack Buehler – Retirement and continuation as Co-chair for 2021 Fundamentals Session

b. **Deborah Lee (Shell)**

To follow up on my email of September 22, Deborah Lee would like to join the EPC Technology Committee as the Shell Representative backfilling for me. Deborah is a colleague and well qualified to help our committee. I have included some biographical information on Deborah.

For the logistics will we vote on Deborah as new Shell rep and on me as staying on the committee at the start of the next meeting on October 15 and then Deborah can join in on the meeting after the vote?

Experience:

Deborah is Technologist in the Base Chemicals group within Shell's Project & Technology Organization. Deborah provides technical expertise for the Heavy Olefins and Aromatics units within the United States and Canada including Butadiene Extraction, Isoprene Recovery, Pygas Hydrotreating and Aromatics Recovery technologies. Since joining Shell over 10 years ago, Deborah has held several positions at the Pulau Bukom Manufacturing Site in Singapore including the process/start up engineer for the SCOT/BUGIS projects which introduced 4 new refining units to the site, and the Furnace/Hot Side technologist for the Ethylene Cracker Complex. She has supported multiple unit Turnarounds and enjoys the complexities of start up/shutdown support, process safety evaluation and project development.

Education:

Deborah holds a Bachelor's Degree in Chemical Engineering from McMaster University in Hamilton, Ontario.

7. Five Minutes on Safety
Safety Topics : 1) Boarded up windows/emergency escape 2) Day Light Savings Time and children waiting for school buses.
8. Review/Modify Proposed Sessions for the 2021 Conference: 18th April Dallas, TX.
 - i. **Fundamentals 2021 Session Chair and Co-Chair Interest expressed by Bob Krinock and Jack Buehler**
Jack reviewed potential papers (see attached email) and the group discussed them as well.

Bob also mentioned that there is a possibility of a couple of papers from Pitt, one on using nanoparticles as a ODHE catalyst, and the other on the topic of mixed plastics to ethylene. Both topics might be too academic & more suited to the Fall Annual AIChE mtgs, but they would none the less consider the Spring mtg.



Potential abstracts
for EPC Fundamentals

- ii. **Possible topics include commission, start up and lessons from startup in general. Startup of large/newer assets. (Mark W and perhaps co-sponsor/chair with Operations sub-committee)**
Patti Summers has agreed to co-chair joint session with operations sub-committee. Mark Whitney will send out meeting minutes.

1. **Session Added – Mike Tallman**

a. **Two Papers for consideration (Indorama and KBR)**



Abstract - Indorama



Abstract - Indorama
KBR Low Flare Startup KBR Restart Idle Plant.

- iii. **Tutorial focused on distillation (Bala D and Muhammad and Tim Z)**

Bala has been in contact with Kister. He is going to continue to have dialog to define session and set ground rules. Group believes 2 to 3 papers should be sufficient. The session/tutorial should be limited to 2-3 hours.

- iv. ~~Furnaces may be a good topic has not been covered in a while. Topics should include potentially new items.~~

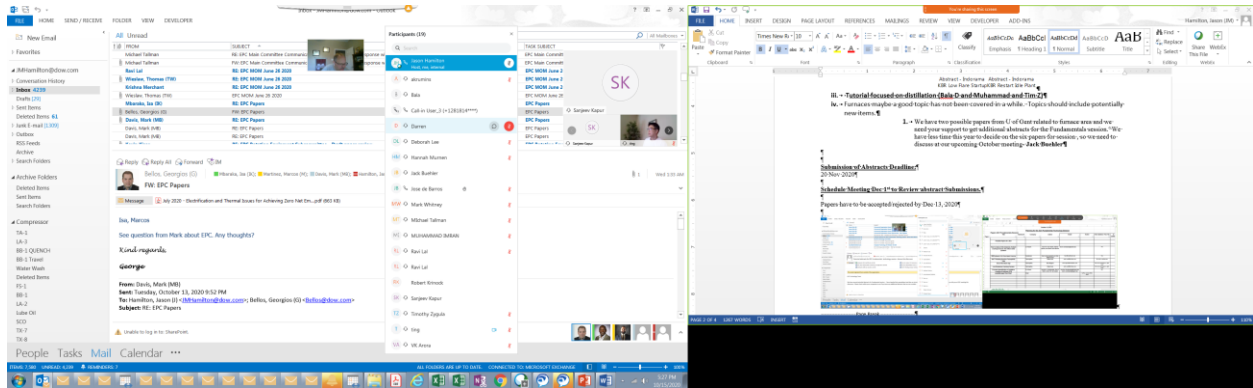
This is not going to be a separate topic, it has been incorporated into the fundamentals session.

Submission of Abstracts Deadline:

20 Nov 2020

Schedule Meeting Dec 1st to Review abstract Submissions. 4:30PM

Papers have to be accepted/rejected by Dec 13, 2020



MOM September 10, 2020 ETHYLENE PRODUCERS' TECHNICAL SUBCOMMITTEE MEETING

Date: Thursday: September 10, 2020

Time

: 4:30 to 5:30 PM CDT

Action items denoted in **bold underline**.

Location: Zoom Platform

Members: VK Arora, Jack Buehler, Tiong-Ee Ting, Bala Devakottai, Rob Fox, Sanjeev Kapur, Robert Krinock, Aivars Krumins, Ravi Lal, Darren Le Geyt, Humera Rafique, Mike Tallman, Mark Whitney, Tim Zygula, Thomas Wieslaw, Jeff Elam, Hannah Murnen, Jason Hamilton, Alex Mihinel, Muhammad Imran

Present: VK Arora, Jack Buehler, Tiong-Ee Ting, Bala Devakottai, Rob Fox, Sanjeev Kapur, Robert Krinock, Ravi Lal, Mike Tallman, Mark Whitney, Tim Zygula, Hannah Murnen, Jason Hamilton, Muhammad Imran

Distr: Above + ethyleneproducerscommittee@gmail.com

AGENDA

9. ending of the Anti-Trust Statement :

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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.

10. Five Minutes on Safety
Peak of Hurricane Season. Electrical Safety.

Generator Safety:

Placement: Every year including this one it seems at least one family dies due to improper generator placement. Never place a generator inside a structure such as your garage. Generators should be placed outside on level ground preferably concrete. They should not be located within 6 feet of a window or doorway.

Back-feeding through an electrical socket or to the breaker panel is dangerous and may be illegal. If you want to feed your whole house from a generator have a qualified electrician install a transfer switch.

11. Discuss 2020 Virtual EPC Conference
 - a. Successes?
 - i. The ability to watch topics after the fact the most successful aspect of the format.
 - ii. Playback option operated more smoothly than live session
 - b. Failures?
 - i. Late feed back to the authors and sub-committee.
 - ii. Communication Issues: Confusion concerning paper submission. AIChE was communicating directly to authors and often did not copy session chairs.
 1. Why were authors asked to re-submit papers?
 - iii. There were some difficulties logging on to live-sessions initially. This improved for most later in the week.
 - iv. No flexibility in timing.
 - c. Improvements?
 - i. Chairs should be copied on all communication from AIChE to Authors.
 - ii. A live count of how many people are attending would be nice.
 - iii. It would be good to have the ability to have questions and answers post-session as well.
 - iv. A method to defer time from one presenter to the next would be nice. Some presentation were shorter than the allowed time, while others would have benefited from a little extra time.
 - v. Networking was a bit awkward for most. While the lounge experience was not bad, attendance was very light. Perhaps some on-line training on how to use the site prior to the actual virtual conference would be good.

12. Review/Modify Proposed Sessions for the 2021 Conference: 18th April Dallas, TX.
 - a. **Fundamentals 2021 Session Chair and Co-Chair Interest expressed by Bob Krinock and Jack Buehler**
 - b. **Possible topics include commission, start up and lessons from startup in general. Startup of large/newer assets. (Mark W and perhaps co-sponsor/chair with Operations sub-committee)**
 1. One possible paper from Indorama/KBR.
 2. **Action item: members approach others to solicit for papers Technip, Sasol, Dow, Shell, Lummus/WestLake, Lummus/Shintech, etc.**
 - c. **Tutorial focused on distillation (Bala D and Muhammad and Tim Z)**
 1. Existing format is OK. Kister input for ethylene specific issues. Revamp papers done in the past.
 2. A couple of papers talking about fundamentals
 3. A couple of papers talking about practical problems
 - d. Environment and waste to chemicals topics.

1. Probably difficult to get papers/disclosure.
- e. Furnaces maybe a good topic has not been covered in a while. Topics should include potentially new items.

Next TSC meeting will be scheduled for Oct 15th, 2020.