

ETHYLENE PRODUCERS' TECHNICAL SUBCOMMITTEE MEETING

Date: Thursday, Sept 15, 2016

Time: 4:30 to 5:30 PM CDT

Final - Minutes of Meeting

Location: Doubletree by Hilton Hotel Houston, TX

Members: VK Arora, Jack Buehler, Alain Chepda, Heath Chisholm, Bala Devakottai, Rob Fox, Sanjeev Kapur, Robert Krinock, Aivars Krumins, Ravi Lal, Darren Le Geyt, Humera Rafique(call-in), Krishna Merchant, Alberto Morales, Mike Tallman, Mark Whitney, Greg Yeo, Tim Zygula,

Present: VK Arora, Jack Buehler, Bala Devakottai, Rob Fox, Sanjeev Kapur, Robert Krinock, Ravi Lal, Krishna Merchant, Humera Rafique, Mike Tallman, Mark Whitney, Greg Yeo

Absent: Alain Chepda, Heath Chisholm, Aivars Krumins, Darren Le Geyt, Alberto Morales, Tim Zygula

Distr: Above + ethyleneproducerscommittee@gmail.com

AGENDA

- I. Reading of the Anti-Trust Statement
- II. Five Minutes on Safety (5 mins)
- III. Approval of Aug 4 minutes....
- IV. 2017 EPC Conference Planning
 - a. Fundamentals - **Jack B / Bob K**
 - b. "Large Capacity Plants & Their Constraints"- **Sanjeev K, Krishna M and Mark W**
 - c. Environmental /Flare Regulations - **Aivars, Greg and Mike**
- V. TSC – Other New Business?

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Actual Sept 15 Mtg

1. Reading of the Anti-Trust Statement

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

Group discussion on start of school year safety. The AM/PM rush hour gets more congested with school buses, kids walking & parents picking up & dropping children at schools. Be sure to slow down in School Zones, look for children walking to/from school, there are long car lines of parents picking up kids after school.

3. Approval of Aug 4 minutes.... The Aug 4 minutes were approved without any changes

4. 2017 EPC Conference Planning

A - Fundamentals – Jack reviewed the spreadsheet with the “Main Fundamentals Session” backlog. No actual paper abstracts had been submitted yet.

1. Jack- Kevin Van Geem has suggested 3 possible papers that he could submit abstracts for:
 - a. IMPROOF: 7 million euro project to design the furnace of the future (high emissivity coating combined with oxy fuel combustion, 3D reactor coils and novel materials). Companies involved: DOW, Schmidt and Clemens, Emissshield, Technip)
 - b. Novel 3 D reactor coil design: we have patented a new reactor design for steam cracking reactors, I can illustrate how we have done it, and how we have experimentally validated this
 - c. Novel reactor for oxidative coupling of methane: reactor fabrication and modeling
2. Ravi - Technip is looking into submitting 2 papers (Partial decoking/cracking in a twin cell furnace-yes, “Three Lane” paper – Ravi will follow-up on
3. Impact of High Emissivity Coatings – still waiting on a reply about interest
4. Greg – has been in contact with Texas A&M students, about ethylene related academic papers.
5. OCM/ODH Technology- Rafique believes that Siluria is interested in submitting a follow-up paper, she will verify.
6. C2 Splitter at BASF – Tim Z could not attend. Depending on abstract content, this paper could be moved to the Distillation Session
7. New Class of anti-foulants – Mike T will follow up with Dorf Ketel
8. Membrane Separations – Bob K to check with M Brayden/Dow on interest in a paper on new updates

B - Large Capacity Plants

Sanjeev/Mark W/Krishna – Sanjeev will have a kick-off paper. They have 5 – 6 potential papers now from equipment vendors.

They would like to have a paper from an operating company.

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C - Environmental /Flare Regulations

Aivars/Greg - Aivars could not attend the mtg, but submitted a large list of potential papers that are being followed up on.

1. **Environmental Consultant** – Overview on current/future requirements. Need to identify speaker and a back-up. Request for people on our committee to check with their environmental people for recommendations for consultants.
2. **KBR/Indorama** – they will present a paper on Wet Air Oxidation for treating discharge of sulfidic streams and identifying solutions for handling them.
3. **Lyondell/Bassell w/ Halder Topsoe** – Paper discussing SCR solutions (HT) and operating experience (LYB)
4. **Linde** – Flameless Thermal Oxidizers. While the paper is not necessarily from an ethylene plant, but the experience would be applicable to an ethylene plant.
5. **CB&I** – Environmental Challenges with Ambient Air Quality Standards. Paper will focus on PM10 vs PM2.5, what is the current practice and what will need to be done in the future. The paper will also discuss secondary contributions to PM10/2.5 associated with SCRs.
6. **Flare Emissions Regulatory Update/John Zink** - Robert heard JZ's presentation at a JZ seminar in Beaumont this past July where they made a presentation on this subject for refineries. At the time, they indicated that they are willing to modify this presentation to suit ethylene producers. We went back to them today to confirm if they are interested and to get a copy of the presentation that they did make.
7. **Emissions Credits (Consultant – Mike Taylor)** – The paper would provide a useful overview on planning and costs for emissions credits. Brandon Lithgoe from Williams has heard him speak and thought it was quite good and believes it would be beneficial.

5. TSC – Other New Business?

1. Greg - Most universities are aligned to submit papers to the Fall AIChE mtg & not the spring mtg.
2. The AIChE abstract submission cut-off date is Oct 26, but in practice papers can be accepted after that date.

6. Future Planning Sessions...

* ~~June 9, 2016~~

* ~~August 4, 2016~~

* ~~Sept 15, 2016~~

* Oct 27, 2016

* Dec 1, 2016

* **Jan 26, 2016**

AIChE EPC

March 26 to 30, 2016

11/20/2016

PERSONAL AND CONFIDENTIAL

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Major milestones leading up the conference will be confirmed but are roughly:

Abstracts must be uploaded	October 26, 2016
Session chair accept/reject/order papers	mid November 2016
Extended abstracts must be uploaded	mid March 2017

7. Adjourn

Minutes prepared by:

RJ Krinock (Technology Subcommittee Chair) – Sept 30, 2016