

ETHYLENE PRODUCERS' TECHNICAL SUBCOMMITTEE MEETING

Date: Thursday, Aug 13, 2015,

Time: 4:30 to 5:30 PM CDT

Location: Doubletree by Hilton Hotel Houston, TX

Members: Jack Buehler, Thomas Emmert, Robert Krinock, Aivars Krumins, Ravi Lal, Greg Yeo, Tim Zygula, Alain Chepda, Greg Dunnells, Sanjeev Kapur, Krishna Merchant, Richard Prickett, Mike Tallman, Chell Chellappan, Darren Le Geyt, Alberto Morales

Present: Thomas Emmert, Robert Krinock, Aivars Krumins, Ravi Lal, Greg Yeo, Tim Zygula, Alain Chepda, Sanjeev Kapur, Krishna Merchant, Chell Chellappan

Absent: Greg Dunnells, Darren Le Geyt, Alberto Morales, Richard Prickett, Mike Tallman

Distr: Above + ethyleneproducerscommittee@gmail.com

AGENDA

- I. 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.
- II. Five Minutes on Safety
- III. Approval of Previous Meeting Minutes –June 18, 2015
- IV. Open action Items from last mtg –
 - a. Feedback to Greg Yeo on ideas for EPC Joint Session themes/topics.(all)
 - b. New members discussion. Greg will get feedback from the main EPC committee and share it at the next mtg (Greg)
 - c. Members to report back to Jack B., on the status of any paper/authors that they investigated, at least 1 week before our next mtg on Aug 13, if they have not already done so.
- V. New business
- VI. Calendar for 2015 – 2016 - Upcoming Meeting Date Reminders:
 - * 24 September
 - * 29 October
 - * 10 December
 - * 4 February (if needed)
 - * Call for papers closes 2 November (may be extended) and Sessions should be final early December.
 - * 2016 AIChE Spring Meeting / EPC Conference dates are 10-14 April 2016. Hilton Americas & George R. Brown Convention Center, Houston, TX
- VII. Review Action Item List
- VIII. Adjourn

August 13 Mtg.

I. Reading of the Anti-Trust Statement

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II. Five Minutes on Safety:

Discussed recent rains, and some people have discovered that their windshield wiper blades are damaged from the extreme summer temps & do not clean well. Need to check our windshield wipers, routinely and replace if brittle or cracked. The extreme heat here in Houston quickly causes windshield wipers to get brittle & crack.

III. Approval of Previous Mtg Minutes

The March 26, 2015 meeting minutes were accepted & approved, with addition of mentioning about Sanjeev's Panel/Paper Mega Projects session.

IV. 2016 EPC Conference Planning

- **General** – Greg commented that company members need to reach into their organizations more aggressively to find papers. He had received little input on session ideas so far. He emphasized the need for good ideas, good papers & members not just being spectators at the mtgs.

- **Fundamentals Session Paper ideas**

Bob K reviewed Jack's spreadsheet on Fundamentals papers. We made some progress on locating papers. Vacations in Europe slowed down many responses. Updated spreadsheet attached.

- **Possible Joint sessions with other subcommittees**

Feedstock Flexibility – Alain Chepda & Thomas Emmert have agreed to lead up the session of feed flexibility. Discussed that operating companies will possibly be reluctant to reveal their feedstock flex limits. Could need to rely on technology companies, or consultants for papers. Possible general topic areas:

1. Furnace strategies (feeding Ethane vs. Naphtha to a furnace)
2. Light feeds to quench
3. Gas Separation issues
4. General pitfalls

MACT Session – Strategy to comply, PM2.5 – how to validate, firing, decoking

Mega Projects – Sanjeev submitted a draft for the Mega Project session, as follows.
"Innovations in managing capital cost of Ethylene based Petrochemical Investments

The changing energy market dynamics can have significant impact on the economics of new investments, even in a cost advantaged feedstock scenario, as the cost of production curve flattens. Owners are under pressure from financial institutions and/or shareholders to improve the capital costs and efficiency. This poses a challenge and an opportunity for engineering and construction businesses to come up with design, procurement and construction approaches that deliver these mega projects cost efficiently and meeting the business objectives. Ethylene Producers Committee (EPC) of North America is planning to sponsor a session during 2016 conference in Houston (as a part AIChE's Spring Meeting from April 10 – 14, 2016). This session will invite industry leaders to participate in panel

discussions to share their thoughts and ideas for delivering these facilities cost efficiently. The session will be kicked-off with one or two presentations providing contextual background and to stimulate discussion."

Sanjeev has begun discussions with various contacts for possibly papers, and/or short topics that companies would be willing to discuss. This past 2015 session on "Technology Trends" went well with a few lead-in papers followed by some seeded questions. Linde has committed to one paper? Fluor paper maybe? He would like to get some operating companies to discuss ~ 5 minutes on any topic related to mega projects issues.

Other Sessions/Ideas

Greg will check with Separations Section for thoughts on a joint session, as well as discussing with Environmental committee in AIChE on MACT related session

VII. TSC – New members topic

Greg proposed to the main committee draft guidelines, on bringing in new members in sub-committees, that are neither employed by a operating company, or a technology provider company. He was going to bring this up at the main EPC committee mtg on Aug 13.

VIII. Calendar for 2015 – 2016 - Upcoming Meeting Date Reminders:

Planned future mtg dates are as follows:

- * 24 September
- * 29 October
- * 10 December
- * 4 February (if needed)
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X. Review Action Item List

- a. Sub-committee members should feedback to Greg Yeo any ideas for EPC Joint Session themes/topics/papers.
- b. Ravi to check on "Methane to Olefins Pilot Plant" staff for interest in presenting a paper on their technology.
- c. Greg will check with Separations Section for thoughts on a joint session
- d. Tim will follow-up on with Lamar on a possible paper related to Start-Up times for ethylene plants
- d. Members to report back to Jack B., on the status of any paper/authors that they investigated, at least 1 week before our next mtg on Sept 24, if they have not already done.

XI. Adjourn

Next Mtg Sept 24, 2015

Minutes prepared by RJ Krinock (Technology Subcommittee Chair) – Sept 2, 2015