ETHYLENE PRODUCERS' TECHNICAL SUBCOMMITTEE MEETING

Date: Thursday, Oct 29, 2015, 4:30 to 5:30 PM CDT, and

Thursday Nov 12 Session Voting Results, 2:00 to 3:00 PM CDT

DRAFT

Location: Doubletree by Hilton Hotel Houston, TX

<u>Members:</u> Jack Buehler, Chell Chellappan, Alain Chepda, Bala Devakottai, Greg Dunnells, Thomas Emmert, Anthony Hakim, Sanjeev Kapur, Robert Krinock, Aivars Krumins, Ravi Lal, Darren Le Geyt, Krishna Merchant, Alberto Morales, Mike Tallman, Greg Yeo, Tim Zygula,

<u>Present:</u> Buehler, Chepda, Emmert, Kapur, Krinock, Krumins, Lal, Morales, Tallman, Yeo, Zygula, Halim, Devakottai

Absent: Dunnels, Chellaappan, LeGeyt, Merchant

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 (5 mins)
- III. Approval of Previous Meeting Minutes –Sept 24, 2015
- IV. Session Planning Status
 - a. Feedback from Main EPC: (5 min)
 - b. Technology Fundamentals: Jack Buehler / Bob Krinock (10 min)
 - c. Feedstock Flexibility: Alain Chepda / Thomas Emmert (10 min)
 - d. Mega Projects: Sanjeev Kapur (5 min)
 - e. Discussion on paper selection/voting after session submission are closed
 - e. Subcommittee Member Attendance & New Members...(10 mins)
- V. New business (5 min)
- VI. Calendar for 2015 2016 Upcoming Meeting Date Reminders:
 - * 10 December
 - * 4 February (if needed)
 - * The AIChE general call for papers was extended to Nov 16, with Sessions expected to be finalized in early December.
 - * 2016 AlChE 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

Oct 29 Mtg.

I. Reading of the Anti-Trust Statement

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II. Five Minutes on Safety:

Greg reviewed a historical story about the early investigations into the spread of disease at John Hopkins Hospital ~ 1846. A study investigated diseases picked up by babies & mothers in the delivery wards. Baby/mothers who had their childbirth handled by nurse-mid-wives had far fewer complications than those who were delivered by Dr's. One of the Dr's investigating the situation concluded that, that many of the Dr's did dissections in the morgue, before going to the delivery area. These Dr.'s in general had not washed their hands, before delivering babies and there was some link between the morgue & no hand washing that was causing the disease spread in the delivery area. The Dr.'s conclusions, although correct, were not accepted by the larger group of Dr.'s at John Hopkins. The particular Dr. who suggested the theory, lost his standing at John Hopkins, because he could not convince the remainder of the group. We discussed some parallels between this story & safety in our own plants & organizations. When it comes to many things, being right is not enough, we must also be able to influence change with human behavior in our organizations.

III. Approval of Previous Mtg Minutes

The Sept 24, 2015 meeting minutes were accepted & approved.

IV. 2016 EPC Conference Planning

- Fundamentals Session Paper ideas – J Buehler/R Krinock

As of Oct 29, we have 8 abstracts for the main Tech session. We agreed to send out voting spreadsheet on Nov 9 & would include all papers with abstracts at that point in time. We would have a phone call mtg on Nov 12, to discuss main session voting results. We agreed to limit the main session to 6 papers this year. 11 abstracts were eventually submitted in time for voting.

Feedstock Flexability - Alain Chepda & Thomas Emmert

They have 7 proposed papers & 5 uploaded. Session plans are:

- 1. Solomon or IHS paper
- 2. CB&I on Feed & by-products
- 3. Linde warm section
- 4. Technip cold section
- 5. Nova/KBR feed flex
- 6. BASF/Total Revamp Pitfalls

Mega Projects - S Kapur

Have a main speaker, Ron Conn from CP Chem, will also have a backup in Ron is unavailable. Panelists would be Sr Management from KBR, Linde, Fluor, CB&I & Technip.

VII. TSC - New members topic

Agreed that we would solicit a short bio from prospective new members, & then plan on voting at the Dec 10 mtg on new members.

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

Planned future mtg dates are as follows:

- * 10 December
- * 4 February (if needed)
- * The AIChE general call for papers was extended to Nov 16, with Sessions expected to be finalized in early December.
- * 2016 AIChE Spring Meeting / EPC Conference dates are 10-14 April 2016. Hilton Americas & George R. Brown Convention Center, Houston, TX

X. Review Action Item List

- 1. Send out voting abstract list on Nov 9 and plan for post voting discussion mtg on Nov 12 Jack B / Robert K
- 2. Get bios on prospective members: Aivars K, Thomas E, Robert K

XI. Oct 29 Adjourn

Abstract voting phone mtg on Nov 12, & next regular Mtg on Dec 10, 2015

XII. Nov 12 Vote mtg & discussion

<u>Fundamentals of Technology Session</u> - 11 paper abstracts were voted on, vote results are attached below.

			November 9, 2015			
		Planning for the	2016 Fundamental	s and Innov	ation Se	eeion
Papers Fundamentals Session		rianning for the	2010 i dildamental	s and innov	ation oc.	331011
Title	Abstract#	Company	Author	ment	Totals	
Abstracts submitted	~	. ,	•		↓ ↑ Totals	
Dow Catalytic Dehydrogenation: The Future of on-Purpose Propylene Production	T4 440643	Dow	Matt Pretz ^ ph 979-238-5662			
A New Era in On-Purpose Butadiene (OPBD) Technology	T4 439934	UOP - TPC	Cliff Maat-TPC; John Senetar - UOP		24 51	
Boost Ethylene and Propylene Production with Air Liquide's MTP Process and Technip's Ethylene Technology	T4 441257	Techip, Air Liquide (Lurgi technology)	Jean-Francois Fournier - Technip; Martin Gorny – Air Liquide		54	
Dmto and Beyond: Dicp's Sustainable Innovations in Technologies for on-Purpose Production of Light Olefins from Methanol	T4 443779	Dailan Institute Chemical Physics(DICP)	Zhongmin Liu	I a t	71	
C2 Front-End Hydrogenation Improvements	T4 442504	Shell and CRI	Pascal Coenen		85	
Full Furnace Simulation and Optimization with COILSIM1D	T4 440711	Univ of Ghent	Kevin van Geem		92	
PARTIAL DECOKING AND PARTIAL CRACKING IN A TWIN CELL FURNACE – DESIGN AND OPERATIONAL CONSIDERATIONS	T4 441747	Technip	Harry Wang	Ask them if they want to go to general session		
Introducing a new class of anti-foulants for multiple ethylene plant applications	T4 441244	Dorf Ketal	Kyle Mankin; 'Ramaswamy;	Ask them if they want to go to	93	:
Improving Temperature Measurement and Control Using the Exactus Optical Thermometers	T4 440798	U of Gent, BASF	Kevin vanGeem	t Ask them if they h want to go to i general session	128	,
Recent Developments and Current Insights in Ethylene Flare Technology: The Impact of Burner Design, Vent Gas Variability and Ancillary Equipment	T4 440527	Honeywell	M. Martin ; B. Beck	f general I a r	134	
Computational Fluid Dynamics Simulation of Multi-Point Ground Flare Fields for Detailed Radiation and Plume Estimation	T4 444130	Honeywell	A. Cruz and M. Martin	f general I a	140	

We will keep the 6 highest vote getting papers for the main "Fundamentals of Technology" session. Mile Tallman had offered to co-chair an additional session, if felt we had enough good papers to present. It was decided that the remaining 5 papers as a whole, would not constitute a complete coherent EPC session on their own (papers are on greatly different topics & the sessions where they might best fit are alsofull now). Current session logistics also created some scheduling concerns: i.e. the EPC traditionally has wanted to avoid putting any session opposite the "Safety" session, & the only other time slot would put a 2nd "Fundamentals" Sponsored session opposite an existing Fundamentals session – not desired either. Tim Z, mentioned that all sub-committees were in similar situation to ours, that is - being over supplied with abstracts.

Two general papers will be offered directly to the regular AIChE & the authors of 3 ethylene related papers will be asked if they want their papers carried over to 2017 (in the EPC), or want their papers to be released also to the general AIChE. Jack B will notify all authors of the decisions.

<u>Feedstock Flexibility</u> (Alain/Thomas). They have 8 papers submitted now, and will reject 2 papers. They will accept either the IHS or the Solomon paper once they get more details on each, they likely will reject the Sinopec paper at this point.

Tim Z. relayed the following dates on overall paper selection:

Accept/reject papers: Dec 1

Draft EPC session schedule for publication: Dec 8

Minutes prepared by RJ Krinock (Technology Subcommittee Chair) – Nov16, 2015