

EPC Safety Subcommittee Minutes

Thursday, January 30th, 2020 – Doubletree Hotel, Houston, TX – 4:30 PM

Anti-trust statement

“No activity of the Committee shall involve the exchange, collection or dissemination of information among competitors 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.”

Safety moment

Discussed recent industry incidents that have had substantial community impacts. An explosion had occurred in January at an ethylene oxide and derivatives facility in Tarragona, Spain. Also, in Houston, an explosion had occurred at a welding and grinding facility. A propylene leak is suspected to have led to that incident.

Membership – No change

Overall Plan for Safety Session Papers

- NORM Paper (FQE) *AJ Armer is tracking progress with author and David Gent will review paper. David expects to be out of pocket during the review timeframe and Jake Berret is the backup reviewer.*
- Exothermic Runaway in Reactor Feed Heater (Sasol) (Abstract submitted) . *Jeff Nichols from Sasol confirmed that the paper is on track. Jeff Elam will review paper, Greg Jones is the backup reviewer.*
- Self-Heating Polymers (ExxonMobil) (Abstract submitted) – *Paper is on track per Michael Smith from ExxonMobil. Norman Wilhelm will review paper.*
- NOX Update – (ExxonMobil) (Abstract submitted) *Paper and presentation is outlined per Michael Smith. We are considering letting this paper have a larger time slot if the ExxonMobil light ends fouling paper does not come through. Daryl Bitting will review paper*
- Light ends polymer fouling or alternate – (Exxon Mobil) *This paper is being pushed internally at XOM. Jeff Melching is the reviewer. Sankar Mahalingham is the backup reviewer.*
- Experiences with Hydrotesting and MIC on recent projects – Dow (added after the meeting upon agreement with Ops subcommittee.) *Paper is on track. Jeff Nichols is the reviewer.*

Wish List for Future Sessions (discussed in previous meetings)

- Rotating equipment, Static, furnaces, controls
- Hot tap safety – Interest in this topic in June discussion
- Continue with good papers on brittle fracture, decomp

- Process safety topics from the real world, another tutorial on process safety (acetylene precipitation maybe), process safety practices
- NORM tutorial – interest in this topic in June discussion
- Exxon paper on C3 fire
- Sasol – Light ends fouling
- Nova (Jake) PQE Inlet Cone Failures
- Eastman – Reverse flow from convection section to radiant section
- Nova – Detonations at Ground Flare. Sasol suggested they could be interested in doing a joint paper on this topic.
- Reach out to CSB on investigations to recent incidents
- Shell – suggested a topic on vaporizing LPG for use in inventorying equipment to avoid low temperature brittle fractures

NOx Subcommittee/Paper

No significant update in this meeting. Paper is on track. Previous notes below.

- Charter previously approved
- Dave Grenoble agreed to present paper @ 2020 conference.
- Meeting was held on October 9th. Good attendance -6 companies. Another meeting to focus on chemistry and analytical techniques was being discussed. This will not necessarily be part of this year's paper.
- Subcommittee is considering updating the NOx tutorial for 2021.

Update on Safety Session Chairs (no change)

- Jeff Melching –2020 Committee Chair and Norman Wilhelm co-Chair
- Jeff Nichols is the 2020 Session Chair and Michael Smith is the co-chair.

Upcoming Meetings and Key Dates

- February 17th, 2020 – Draft presentations due
- March 2nd, 2020 – Papers due
- EPC March 29-Apr 2, 2020 Houston, TX

Ideas for 2020/2021 papers/Brainstorming (notes collected during previous meetings and this meeting)

- Sulfur Reducing Bacteria/MIC/Selection of water for hydrotesting - Sasol and Dow are possibilities. Sasol reported a very large percentage of HXs needing repair/inspection. We could also consider getting a water treatment vendor to present. This paper on Microbiologically Influenced Corrosion (MIC) was a candidate for joint Commissioning Session but it turned out we don't have enough papers to go forward with the joint session. Dow did recently agree to present a paper on MIC. At the time of our October meeting this paper was thought to be going into the Ops session but at this point the Ops session does have enough papers and the MIC paper has been given back to the safety subcommittee.

- Commissioning in general (was previously discussed as joint paper or tutorial with Operations subcommittee: CPChem is considering something on Contractor Engagement. Could engage EPC Contractor. CPChem provided update prior to meeting. CPChem will be submitting an abstract for contractor safety during a MEGA project. Focus points will include contractor engagement, communication, etc...This could potentially be included in commissioning session. This will be primarily focused on personnel safety and not process safety. The group had some mixed feelings on including this paper but we may need and want it for commissioning session. CP Chem gave an update that they do not plan to present
- Valve Issues (Need presenter) This will be on backburner, not a likely paper for 2020. Not discussed in Dec meeting.
- NORM (Naturally Occurring Radioactive Material (was covered in 1996. Per June meeting David Gent will look for potential presenter – 3rd parties, surveyors, Industrial Hygiene. Update: This can be different depending on geography. Jake Barret will work with David on finding possible presenter. CPChem will also follow up with contractor. Update from CPChem: Contacted Chris Tanguay with FQE Chemicals about an overview of NORM removal/mitigation chemistry. He is the FQE Manager of technology. The group wants to pursue this paper from FQE. He could possibly work with NOVA if desired. This paper from FQE is on track AJ will track with the author and confirm progress.
- Pyrophoric polymers – trays vs packing- chemical cleaning with permanganate (Need presenter) Can we approach McDermott – they have collection of papers on Lummus Design. Check with Aivars Krumins from main committee.....David Gent to follow up No paper has materialized
- Brittle Fracture – has anything changed since last years session? Norman checked with Ralph. Ralph King is not planning at paper for EPC 2020.
- Hot tap safety – Idea from 2018 comments (Need presenter) Jeff Melching to talk with contractor such as TD Williamson or Steam& Process. This may be a backup plan paper if given solely by contractor.
- Paper on Underground Cooling Water failure – being presented at EEPCC. This failure was right next to Gasoline Fractionator. Norm Wilhelm following up and has seen draft of paper.
- Micheal to look at APFM conference agenda in Fall for possible papers. Michael looked at Spring papers. Mostly generic. Nothing promising so far.
- Mine PS Congress for papers – Jeff Melching
- Carryover from 2018 - Braskem paper ‘Protection against backflow in Existing Furnaces.’ Was withdrawn due to author health issue – Sankar Mahalingam to follow-up with author.
- Possible Sasol paper on recent ethylene decomp – Jeff Nichols presented abstract. The group wants to include this either in the main session or commissioning session.
- Deadlegs - universal agreement this is an issue (Need presenter) Backburner for now
- New – Possible ExxonMobil paper on air-blow for plant commissioning. Could work well for a joint safety + ops session.
- New – Possible paper from Exxon Mobil on self-heating materials inside of towers. Hydroprocessing Unit event, Had changed from trays to packing – Paper already being presented elsewhere, but has applicability to olefins plants. This is included in the 2020 session.
- An abstract was received from SABIC on “Lessons Learned from Furnace Switching – paper did not materialize.
- ExxonMobil volunteered to bring another paper to fill the session. The paper may be on the topic of light ends polymer fouling

- Joint Session with Ops Subcommittee – The session did not materialize as we did not have enough content for three sessions
- Ideas for 2021 Meeting discussed on Jan 30
 - Ground flare detonations NOVA and/or Sasol, possible joint paper?
 - How to clear equipment to ground flare when ground flare is running at higher pressure
 - Possible session just on ground flare issues, joint environmental/safety session?
 - CSB investigation results for TPC
 - Issues with Hydrocarbon vaporizers – avoiding low temperature embrittlement – Shell
 - Reactions in Dryers during Regen - Shell