

Minutes of Meeting Maintenance & Reliability Subcommittee of the Ethylene Producers Committee

DATE: July 9, 2015

LOCATION: Pappadeaux Restaurant, Beaumont, TX

Minutes written by: Jorge Blanco and Dane DeRouen

Next Meeting: Thursday, August 13, 2015 Joe Martin to confirm hosting at Huntsman in Port Neches.

MEMBERS ATTENDING:

Karl Bishop, Westlake; Jorge Blanco, ARVOS; Dane DeRouen, BASF; Joe Martin, Huntsman; Jim McCarter, Flint Hills; Dave Sankey, BASF; Trobie Thompson, Sasol; Paul van Helmond, Linde; Keith Wade, Zeeco; Ken Webb, Eastman.

Two new members attended: Samantha Borssen, Sasol; David Harrison, Eastman

The meeting started around 6:15 pm after a short cocktail period where members had a chance to mingle and catchup. The meeting went through dinner and adjourned at 8:30 pm

AGENDA

- a. Update Subcommittee membership and vote S/C officers
- b. Review 2015 EPC Session
- c. Consider topics suggested in the evaluation forms
- d. Open discussion on members' thoughts for 2016 topics and format
- e. Schedule next meetings

PROCEEDINGS

Update subcommittee membership

- Election of Subcommittee officers has been postponed to the next meeting.
 - o Discuss rotating Subcommittee Chairmanship – system to be determined
 - Dane DeRouen would like to explore offline with Jorge Blanco
 - o Via text message to Jorge, Michael Pelton volunteered to Co-Chair the next Session.
 - o Paul van Helmond volunteered Shailendra Inamdar to Chair or Co-chair
 - o Keith indicated after the meeting he would Chair if no one volunteers
 - o Jorge will contact Members to consider Chairing the Session.
- Suggestion to have new members host the subcommittee meeting to get them involved.
- The EPC is considering bylaws for the Subcommittees. Paul submitted the rules and regulations we had worked on some years back.
- The roster of members was reviewed noting the following:

- Trobie Thompson introduced Samantha Borssen who will take her place in the Subcommittee
- Ken Webb introduced David Harrison who will be representing Eastman in the Subcommittee
- Jorge Blanco will continue to look for new members, he's in contact with interested engineers at Dow in Taft, LA.
- Eddie Carter from Ineos has to step out of the S/C but will introduce a replacement.
- Ken Webb cannot be very involved but asked to stay on the roster. He will continue to contribute when he can.
- Jorge will contact inactive members to determine their interest in continuing associated to the S/C or recommend a replacement.
- Jorge Blanco received expression of interest to join the S/C from attendees to the 2015 EPC in Austin.
 - Reliance, Amish B. Jani, Asst. VP (Corrosion & Inspection) and Deepak Kumar, Sr. Manager Engineering & Maintenance
 - Although they are located in a different continent, the S/C members present recommended that invitation be extended to these individuals.
 - Walter Gull, from Unit Birwelco,
 - A review of his background did not seem to be a fit for the S/C.
 - VK Arora, at KPI
 - A review of his background does not fit with the S/C, plus there are too many non-operating company representative on the S/C. Based on his vast experience in ethylene he will be invited to present a paper at a conference should a topic suitable to his experience be developed.
 - Dr. Vasant Bhirud consultant.
 - Same comments apply to Bhirud as for Arora.

Review of the 2015 EPC Maintenance and Reliability Session

- The evaluation forms were distributed to the members by email to be read at their convenience, so there was no detailed discussion during the meeting.
- Overall feedback was that of a successful, well attended and well received session, noting that the presentation with videos by TubeTech on the subject of convection section cleaning set a new standard for content and presentation quality.

Topics for the next conference – new thoughts from the members + suggestions from the session evaluation forms

Suggested Topics

IDEAS GENERATED DURING THE MEETING BY THE MEMBERS:

State of environmental regulation influence on investment decisions and its impact on maintenance of facilities (McCarter)

Look into maintenance of cold service heat exchangers (McCarter)

Convection Bank cleaning inside of the tubes (Inamdar – QUEST, McCarter)

Convection Bank measurement of tube wall thickness with smart pig (the S/C, McCarter)

Inspection of radiant tubes (Martin, McCarter)

Impact on maintenance requirements to meet BMACT rules (Wade)

Inspection of cooling water system, underground piping (McCarter)
SCR topics (Inamdar)
Firebox Combustion Monitoring (Barnett, Zoloscan)
Positive effects on maintenance and operation of controls with new technology (McCarter)
Failure of TLE in Saudi plant (DeRouen – recommends contacting Thomas Garza)
Topic on handling radioactive contamination in plant - NORM (McCarter)
Vertical Flare Failure of water seal – case study on inspection and repair (Webb)
Dow Cooling tower collapse (DeRouen contact Dow; van Helmond suggest use 3rd party)
Convection section tubesheet failure, and destructive testing of tubes to determine expected life (Karl Bishop)
Use of rope access for inspections and repairs (DeRouen, Webb, Bishop)

IDEAS SUGGESTED IN THE 2015 SESSION EVALUATION FORMS (list of topics and conference attendee who made suggestion follows)

Maintenance & Inspection in FRP cooling Tower Vibration Monitoring in Cooling Tower

- Find an expert

Maintenance and Inspection of convection Tubes

- Tie into Inamdar suggestion for a paper from Quest

More robotic application in cracker plant

- Too broad, no other application was evaluated. Cleavinger presented use of helicopter for flare tip inspections

Furnace Troubleshooting

- This topic was covered in 2015 session by Lummus

Transferline exchanger incident failures

- Too many TLE topics recently covered

Change to furnaces going to light

- Interesting but very broad. Consider impact on TLE's and convection banks

Need twitter question send-in

- Great idea which Paul will take to the main committee

TLE and life monitoring and evaluation

- Recently covered TLE subjects

Need furnace roundtable – more questions and answers

- This is definitely under consideration as a format for our session

Best practice for steam drum sample systems Design, installation, utilities

- The topic was covered in a paper / presentation during 2015 session by Arvos

Advances in tube alloy technology

- Not for our S/C

Trouble shooting for damaged castable refractory in convection section in ethylene plant

- Not enough here to make it a worthwhile topic

Convection coil failure mechanism. Inspection requirements for convection coils

- Karl Bishop to look into experience at his plant on Kellogg furnace.

Trouble shooting in existing furnaces (aged)

- This was a topic presented in our 2015 Session by Lummus

Paper on trouble shooting entire ethylene plant not just furnace

- Too broad a topic but consideration is being given to look at other parts of the plant for the next session

Sharing practical experiences

- That's what we will do. Considering a round table / panel discussion format.

Topics suggested in the evaluation forms of the Maintenance and Reliability Session

En Yeo Kong	PES	Maintenance & Inspection in FRP cooling Tower Vibration Monitoring in Cooling Tower
Sudeep Durge	Reliance	Maintenance and Inspection of convection Tubes
Avel Solis	Braskem /Idesa	More robotic application in cracker plant
Lee Yong Gak	YNCC	Furnace Troubleshooting
Alain Chepda	Total	Transferline exchanger incident failures
Nicholas Graham	CPChem	Change to furnaces going to light Need twitter question send-in TLE and life monitoring and evaluation Need furnace roundtable – more questions and answers
Lowell Sykes	Westlake	Best practice for steam drum sample systems Design, installation, utilities
Marc Jordens	Borealis	Advances in tube alloy technology
Raju Kevadyra	Reliance	Trouble shooting for damaged castable refractory in convection section in ethylene plant

Topics submitted to the Technology S/C and forwarded to us for consideration

Sundeep Durge	Reliance	Convection coil failure mechanism. Inspection requirements for convection coils
Raju Kevadiya	Reliance	Trouble shooting in existing furnaces (aged)
D. Bandyopadhyay	Reliance	Paper on trouble shooting entire ethylene plant not just furnace
Sanjeev Rai	Reliance	Sharing practical experiences