| Minutes of Meeting: | <b>EPC Maintenance &amp; Reliability Subcommittee</b><br>Minutes written by: Jorge Blanco |
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| Meeting Date:       | June 26, 2013   |
| Meeting Location:   | Pappadeux Seafood Restaurant, Beaumont, Texas   |

Hosted by Paul van Helmond and Jorge Blanco

### Members Attending:

Dan Barnett – BD Energy Jorge Blanco - Alstom Jeff Byrd – DuPont Jonathan Cardell - DuPont Dane DeRouen - BASF Muhammad Imran - Technip Stone & Webster Mark Karrs, Becht Engineering Carl Matherne - BASF Mike Pelton – LyondellBasell Dave Sankey - BASF Trobie Thompson - Sasol Paul van Helmond – Linde

### Meeting Started at 6:15 pm Agenda attached

Antitrust statement: The Antitrust Statement was read to kick off the meeting.

**Membership:** Members present unanimously voted to accept Dan Barnett to the Subcommittee. Jeff Byrd, process engineer with DuPont, was introduced and nominated by Jonathan Cardell as a new member to the S/C representing their company. In the weeks to come they will decide internally if Maintenance & Reliability is the best fit for him or if they may direct to one of the other S/C's.

Attached is an updated Membership List, dated June 26, 2013 (file: C-MtcReliabSubcommMemberList\_2013-06-26)

### Subcommittee officers

Trobie Thompson and Muhammad Imran volunteered to be the chairs of the 2014 conference.

Paul van Helmond as the only S/C member sitting on the main EPC committee continues as director of the S/C and liaison with the EPC committee. Jorge Blanco accepted to continue as Chair of the S/C.

### Next meeting date:

July 25, 2013, Thursday, at BASF TOTAL Port Arthur, TX Hosted by Carl Matherne

## **Topics for the 2014 EPC – New Orleans**, LA

Suggestions collected from the 2013 EPC conference session in San Antonio this year and new ones submitted by members of the subcommittee were reviewed. The attached 2 files (D-PaperTopics2014Rev1and E-SuggestedTopics-from-SubcommitteeR4) were the basis for our discussion tonight; as well as, the 2 areas being explored by the EEPC, Issue Group on Cracker asset life management and Asset Management of Cryogenic Tanks.

The conversation during the meeting tonight gravitated towards topics related to furnaces. There was not much traction to the discussion related to the cold side of the plant; i.e. cold boxes or cryogenic tanks, but these will be pursued further by Muhammad and Jorge. The discussion of energy saving technologies and impact on maintenance and reliability may be considered in a broader context as they apply to furnaces. The application of variable speed drives on furnace ID fans will also be considered in the broader topic on furnaces. Convection life expectancy, inspection, replacement; SCR's update and boiler reliability will also be under consideration.

A strong case was made to bring back and expand the Furnace Tutorial last presented by the subcommittee. Areas for further consideration and inclusion in the tutorial:

- Incorporate or refer to the Furnace Survey as basis for the tutorial
- Divide the Session in to segments addressing separate sections of the furnace; i.e. radiant coil, convection section, quench and steam system, etc
- Describe the general design concept of each section
- Discuss issues that affect safety, maintenance and reliability
- Address energy improvement techniques and application
- Address emission reduction techniques and application
- Establish techniques for determining remaining life or expected life of the furnace and its components
- Present life extension techniques

# ACTION ITEMS

All S/C members will consider the topics discussed during the meeting and provide further thoughts, recommend papers and/or authors to Trobie, Muhammad and Jorge before the next meeting on July 25<sup>th</sup>.

Jorge and Paul will distribute for everyone's consideration the Furnace Tutorial Session paper and presentation, and the Furnace Survey presented at the EPC.

Meeting Adjourned at 8:45 pm