

## **EPC Operations Committee Meeting Minutes**

Time: 1:00 – 2:00 pm

Date: 10-7-21

Location: virtual

Attendance:

Patty Summers (Zeochem)  
Jenny Heinlein (Dow)  
Miguel Maldonado (TECHNIP FMC)  
David Dutschmann (ExxonMobil)  
Joseph Lawrence (Motiva)  
Ryan Chun (Evonik)  
Vik Balasubramanian (Linde)  
John Dillon (Dow)

### **Agenda:**

- Anti-Trust statement – Patty
- Volunteers? Chair & Co-chair roles for Operations Sub-committee and EPC Session
- Membership – new members
- Update on 2022 Conference (April 10 – 14, San Antonio, TX)
- Theme or paper ideas – open discussion

### **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.”

### **Meeting Minutes**

#### **Roles:**

Following the last meeting Vik shared that he will be taking a new short term assignment with Linde which will limit his participation for about 6 months beginning roughly in November. He therefore will step aside in his Operations Sub-committee co-chair role. If anyone is interested in this role or in the session co-chair position for the 2022 conference, please speak up.

**PLEASE consider stepping up into one of the co-chair roles to help support the committee’s work.**

#### **Membership:**

David from ExxonMobil has proposed two candidates with different background as new members to the sub-committee to overlap with him for a bit before his upcoming retirement. One would be associated with Olefins Recovery (Chris Carr) and one associated with furnace operations (Brian McVicker). Dow has proposed John Dillon join the sub-committee as well.

Watch for a separate email where committee members will be asked to vote on the acceptance of these 3 new members.

**Main Committee:**

Update from the Main committee is that no final decision has been made as to whether the 2022 conference will be virtual or in person. If in person, it will be in San Antonio.

**Papers Discussion:**

**Paper 1. Technip and YNCC, large plant expansion/revamp**

Just prior to the meeting, Miguel shared the abstract from his company. The group thought it is a good fit with our session and we asked that it be uploaded to the AIChE site under our session. Abstract is below in its entirety:

## **Revamp of YNCC No. 2 Ethylene Plant**

***Muhammad Imran,***

*Lead Process Engineer, Technip Energies Process Technology*

***Chang-Seok Park,***

*Process Manager, Yeochun NCC Co. Ltd.*

***Yong Wang,***

*Furnace Technology Manager, Technip Energies Process Technology*

***Joel Guillaume,***

*Director Ethylene Technology, Technip Energies Process Technology*

Abstract: Yeochun NCC Co., Ltd (YNCC) Ethylene Plant No. 2 is located near Yeochun, Korea. The plant No. 2 ethylene technology was licensed by Technip Energies Process Technology (formerly Stone and Webster) in 1992. The original capacity of this plant was 350 KTA of polymer grade ethylene with the equipment designed for capacity of 450 KTA (based on 8,000 operating hours per year). YNCC#2 revamped plant on various occasions to 543 KTA. In 2009 Technip Energies Process Technology performed a feasibility study to identify the bottlenecks and required scope of modifications. The objective was to increase the operating capacity of the plant from 543 KTA to 859 KTA. In 2018, YNCC decided to implement 859 KTA expansion and contracted Technip Energies Process Technology to provide Basic Engineering Package (BEP) and Ethylene Technology Licensing for the planned capacity, as well as efficiency increase for YNCC No. 2 Ethylene Plant. This important plant revamp had many challenges due to the large capacity increase of ~160% from the current capacity.

This paper will discuss the various revamp techniques and construction challenges in this large capacity increase. Few examples are:

- Addition of two 192U furnaces and a gas turbine on a tight plot space.
- All three major compressors (Cracked Gas, Ethylene Refrigeration and Propylene Refrigeration) had a foot print replacement on the same foundation.
- High capacity trays were used in many towers.
- Parallel towers were added for few services where required capacity increase was beyond capacity limit of the high capacity trays.
- Efforts were done to minimize the parallel equipment addition due to the limited availability of the plot space. Many equipment were therefore replaced on the same foundation instead of adding a parallel equipment.

YNCC along with its construction partners Daelim and Hanwha successfully completed the construction in December 2020 and plant was started up and achieved the targeted ethylene production in January 2021.

### **Paper 2. SpectraSensors and end user: use of TDL trace moisture analyzer in CGD**

Patty is trying to get a commitment from SpectraSensors and their end user on the benefits of a faster more accurate moisture measurement in this critical point in the ethylene plant. UPDATE: it has since been learned that the legal team of the end user has blocked the presentation of this material.

### **Paper 3. ExxonMobil: use of simulators for training and preparing for start-up**

David says the topic is moving forward. He is still trying to round up speakers/presenters, but looks like this one will be supported. Next step is an abstract.

No further discussion on the joint session, other than given the slow response to the call for papers, we find it may be difficult to populate two sessions.

**Please continue to look for papers within your organizations and industry networks.**

#### **Action items:**

- Patty to contact Solomon about potential papers on sustainability (or other ideas)
- Vik to update the sub-committee roster before stepping down from co-chair role
- Miguel to ask his team to upload the abstract to our session

Next Meeting: Tuesday, November 9, 2022 2:00pm – 3:00pm VIRTUAL