



TNCHE Asia 2023 Conference

COP Name XXXXXXXXXXXXX

Presenter Bio data & Abstract



Name : Piyes SrungBoonmee

Company : Thai Polyethylene Co., Ltd.

Current Position : PE Wax Technology Leader

Working Experience : 16 years of

- Managing mechanical equipment design, purchase, install, pre-commissioning and commissioning
- Developing project engineering standards for new-to-company equipment and systems.
- Providing process technology solutions for new product development.
- Designing, managing and supervising installation, pre-commissioning, and commissioning lab scale, pilot scale, and commercial scale of new process (batch and continuous processes) for new product and for process improvement.

Presentation Topic : **Challenge of Process Development in Decarbonization Era**

Presentation Abstract:

Amidst the well-realized process development challenges engineers have been facing for years, in decarbonization era, process scale-up engineers inevitably have to face with process sustainability issues. Decarbonization is in every task we perform from lab scale, to pilot scale, and to commercial scale. It needs to be considered in raw material receiving, raw material packaging, utility, by-product, product, their packaging, and logistics as it is a majority part of business sustainable growth and ensuring business continuity.

Well-designed production process plants can contribute tremendously to reducing carbon footprint of the product because process development is the first step which determines the path towards business success. Therefore, process development engineers should pre-design the commercial scale plant at the early stage, for instance from the pilot scale, for the purposes of scaling-up and commercial feasibility throughout the lifetime of the plant.

New product development process could take a few years to complete from market development to launching the product. Ever so advancing technology makes process development engineers' job even more demanding. Having to pre-design what the commercial





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scale plant should be 3 years down the road, foreseeing of the timely future state-of-the-art technology is required.

The presentation will collectively address concepts of scaling-up of batch and continuous process, design robustness sometimes not covered in HAZOP review, foreseeing up-to-date technology, design for process safety, and design for decarbonization. To increase the chance of business success in this fast-paced dynamic time and possibly more new business opportunities during carbon-emission-conscious era, design methodology to cover these dimensions has to be developed.