PE15: Pneumatic Conveying Design and Engineering - Dilute Phase and Dense Phase

This course is co-organized by Chemengedu (www.chemengedu.com), in collaboration with TAPI (Thai Association for Particle Institute) & CEPT (Center of Excellence in Particle and Materials Processing Technology, Chem. Eng. Dept., Chulalongkorn Univ.)

In addition to lectures, there will be case studies and exercise problems (with solution) on the design of both dilute and dense phase pneumatic conveying systems using both the equation/correlation and the test data approaches. The methodology for optimizing and up-rating existing systems will be introduced in significant details. All lectures will be delivered in Thai and detailed handout of all presentation slides (Thai/English) will be given to all participants.

Target Group: Engineers, researchers & practitioners who want to have in-depth understanding of the conventional pneumatic conveying systems (dilute & dense phases, vacuum and positive pressure) commonly used in various industries, know how to correctly choose & design a system suitable for the material of interest (by the use of equations/correlations or test data in case of unfamiliar materials), and want to optimize and up-rate an existing system. The conventional dense phase system will be limited to the sliding bed flow.

Qualification of Participants: Should have engineering or technical background (preferably Bachelor degree level) in chemical engineering, mechanical engineering, civil engineering, or equivalent scientific background

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Date: 2 Days Course - Check upcoming dates in www.chemengedu.com

Time: 9:00-17:00

Price & Promotions: See rate and promotions in www.chemengedu.com

Venue: Check venue in www.chemengedu.com

Registration: By Training Registration Page in www.chemengedu.com or contact Khun Piyarat 089 118 6531, chemengedu.training@gmail.com

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Agenda & Course Outline:

Day 1: Topics covered by Emer. Prof. Dr. Wiwut Tanthapanichakoon

8:00 AM – 9:00 AM Register

9:00 AM – 12:00 PM

- Review of Pneumatic Conveying Systems
- Selected Conveying System Components
- System Selection Considerations

12:00 PM – 13:00 PM Lunch Break

13:00 PM – 17:00 PM

- Conveying Characteristics
- Pipeline Scaling Parameters
- Design Procedures: equation/correlation approach & test data approach

Day 2 (July 2, 2019): Topics covered by Dr. Apinan Soottitantawat

8:00 AM – 9:00 AM Register

9:00 AM – 12:00 PM

- Data-based Design Case Study: Coarse Material Conveying (Dilute Phase) System
- Data-based Design Case Study: Fine Material Conveying (Dense Phase) System

12:00 PM – 13:00 PM Lunch Break

13:00 PM – 17:00 PM

- Optimizing and Up-rating of Existing Systems
- Design Practice based on equation/correlation approach for *Dilute and Dense Phase* Pneumatic Conveying Systems

This course has been proven by our participants from PTTGC, Pöyry Energy Ltd., Pharmaceuticals and Medical Supply Co., Ltd., HVAC ENGINEERING CORP., Chememan PCL., Rayong Engineering & Plant Service Co., Ltd., HMC Polymers Co., Ltd., Demier Co., Ltd., Air Design Co., Ltd. and etc.

Your Instructor:

1. ***Emer. Prof. Dr. Wiwut Tanthapanichakoon***

Present: Technology Adviser, SCG Chemicals; Satrapichan, Chulalongkorn Univ. (CU); Fellow, The Royal Institute of Thailand (RST)

Past: Professor, CU; Professor, Tokyo Inst. of Technology, Japan; Founding Executive Director, NANOTEC, NSTDA; Director, Thai Powder Technology Center; Director, Center of Excellence in Particle Technology; Author & editor, Handbook of Powder Handling & Processing (in Thai); Etc.

Experience: 40 years of teaching, writing and research in powder/particle technology, aerosol engineering, heat & mass transfer operations, process analysis & simulation, etc.

2. ***Assoc. Prof. Dr. Apinan Soottitantawat***

Present: Director of Center of Excellence in Particle and Material Processing Technology (CEPT); Associate Professor, Faculty of Engineering, CU; Deputy Head of the Chemical Engineering Department for Academic Affairs, CU; Chemical Engineering Undergraduate Program Chairperson, CU; Course Coordinator of Particle Technology, Mass Transfer Operation, Chemical Plant Design, Chemical Process Scale up.

Former: Postdoctoral researcher at National Institute of Advanced Industrial Science and Technology (AIST) Japan, Researchers at National Science and Technology Development Agency, Thailand. Deputy Head of the Chemical Engineering Department for Research Affairs, CU.

Experience: 12 year of teaching in the core courses of chemical engineering as fluid mechanic, heat & mass transfer operations, thermodynamic, process design, plant design, powder/particle technology, advanced particle technology, chemical process scale up, advance kinetic and reactor design.