



Organised by Chemical Engineering  
Technical Division, IEM

BEM Approved CPD Hour: 4.0  
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**HALF DAY ONLINE COURSE**

# FLUID FLOW AND HYDRAULICS OF PIPES, FITTINGS, ORIFICES, CONTROL VALVES

**Speaker : Mr. Wiroon Tanthapanichakoon**  
Professional Licensed Chemical Engineer in Thailand

**28 JULY 2021 • 9:00 AM - 01:00 PM • WEDNESDAY**



**Registration Fees - Subject to 6% SST**

ONLINE | NORMAL

IEM STUDENT MEMBER	: RM 40		RM 50
IEM GRADUATE MEMBER	: RM 75		RM 90
IEM CORPORATE MEMBER	: RM 125		RM 150
NON-IEM MEMBER	: RM 240		RM 300

**For Online Registration,  
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## SYNOPSIS

Chemical and mechanical engineers often have to deal with fluid flow and hydraulic analysis in their projects and technical works. Unfortunately, most people do it incorrectly or without sufficient knowledge, resulting in undersizing and/or oversizing of lines and components in the hydraulic systems, which subsequently lead to problems in operations. The problem with existing training courses is that they focus only on line pressure drop, but fails to address the effects of many important components such as fittings, orifices, and control valves. This intensive LIVE WEBINAR course will also show real examples of hydraulic analysis calculations, thus making it very practical and useful for practicing design engineers.

## ABOUT SPEAKER

**Mr. Wiroon Tanthapanichakoon** is a founder of Thailand's No. 1 Chemical Engineering Training Center with more than 170 organizations and more than 1900 engineers having attended his training seminars. He is a Managing Director of Global R&D Co., Ltd., Thailand's pioneer company in chemical technology R&D and scale-up and engineering consultancy services. He holds a Bachelor and Master degrees in Chemical Engineering from Kyoto University, Japan and has more than 15 years experience in a refinery of a global oil company and an ethylene plant of a leading Thai petrochemical company.

Mr. Wiroon has a work experience in a technology team of a renowned US technology licensor, GTC Technology for refining and petrochemical industry. He is a member of Elsevier Editorial Board in Process and Plant Design and an advisory board member of International Association of Certified Practicing Engineers (IACPE). He is also a Senior Member of American Institute of Chemical Engineers (AIChE) and has been an invited lecturer and instructor for various technical seminars. Mr. Wiroon has been known as one of the first Thai chemical engineers to have published articles in 3 renowned chemical engineering monthly magazines in the US – i.e. Chemical Engineering Progress (by AIChE), Chemical Engineering Magazine & Hydrocarbon Processing. Part from his achievements, he also holds several papers on Sciencedirect and technology patents, Presented papers at AIChE 2006 Fall Meeting and was the first engineer of his Thai leading company to present technical knowledge at AIChE 2015 Spring Meeting: Ethylene Producers' Conference. Mr. Wiroon was an invited expert for an IChemE Webinar on Scale-Up in Feb 2020. He is also a technical advisor in the committee for NSTDA multi-billion baht pilot plant project in Wangchan, Rayong.

# PROGRAM

09:00 – 10:00	Basics of Fluid Flow , Pressure Drop in Lines
10:00 – 11:00	Pressure Drop in Valves & Fittings , Critical (Choked) Flow or Sonic Flow
11:00 – 12:00	Orifices, Nozzles, Venturis , Integrated System Pressure Drop
12:00 - 12:45	Control Valve Hydraulics with & without pumps
12:45 - 13:00	Q&A

## **Cancellation Policy**

No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with 7 days prior notification and substitute will be charged according to membership status.

## **Personal Data Protection Act**

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**"IEM reserves the right to alter or cancel the programme due to unforeseen circumstances at its discretion".**

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