



# DISTILLATION OPERATION, CONTROL AND TROUBLESHOOTING

date/ **23 – 26 July 2007**

Venue : CEPP, UTM Skudai, Johor, Malaysia



## ■ What you can expect to gain

- The operation, control and trouble shooting of a distillation columns and it's associated equipment
- An understating of essential distillation concepts
- Valuable practical insights for trouble free design and field proven techniques for commissioning, start up and shutdown of distillation operation.
- The fundamental knowledge of distillation control.
- To tailor your approach to specific design, analysis and trouble shooting problems.

## ■ Course Content I

*Items that you might consider allowing me to review – we may need to have a round table discussion and have the team review what are the best options.*

- Introduction to Distillation Column
- Operation Difficulties
- Column Field Testing : Flooding, Foaming, Efficiency and Troubleshooting
- Reboilers and Condensers and Pressure Control
- Temperature and Composition Control
- Miscellaneous Column Control : Level Control, Reflux Control, Side stream Draw off Control
- Key Concepts about Column Internals -Efficiency, Capacity, Flooding, Pressure Drop and Liquid Hold Up
- Trays Verses Packings – when to utilize each
- Distillation In Practice,Refining,Petrochemicals,Palm Oil and Specialty Chemicals
- Designing Columns for Fouling Service
- Designing Columns for Improved Operations and Maintenance
- Trouble Shooting Guidelines-Tower Scanning
- Troubleshooting Case Examples

## ■ Who should attend I

- People who are making decisions regarding distillation equipment operation, design, and economics; Plant Managers,Process Support Engineers, Operations Engineers,Design Engineers, Senior Plant Supervisors.
- People who must trouble shoot and solve distillation problems in a plant, engineering office or laboratory.
- Ideal for veterans and those with only a few years of experience who want to review or broaden their understanding in Distillation Operation, Control and Troubleshooting.
- Other professionals who desire a better understanding of subject matter





**ASSOC. PROF. DR. KHAIRIYAH YUSOF** | She received her bachelor degree in Chemical Engineering from University of Alabama, USA and Ph.D from University of Waterloo, Canada. She is currently and Associate Professor and Head of Chemical Engineering Department, Universiti Teknologi Malaysia. Over the years, she has been actively involved in research and development activities particularly in the area of process control and optimisation. She is an active process control trainer for chemical industries.



**PROF. DR. ARSHAD AHMAD** | He is a Professor of Process Control at the Universiti Teknologi Malaysia. He joined UTM in 1986 and has been actively involved research and consulting activities in the area of process control and safety. Over the last 10 years, he has conducted more than 70 professional courses to various levels of participants from process industries. To name a few, companies such as Petronas, Shell, BASF, BP, Titan as well as others have benefited from these courses. He holds a Bachelor of Chemical Engineering from Colorado State University, USA and a Ph.D. from University of Newcastle upon Tyne, UK.



**PROF. DR. KAMARUL 'ASRI IBRAHIM** | is a Professor in the Department of Chemical Engineering, University Teknologi Malaysia. He has 18 years of experience in teaching chemical engineering subjects in the university and in-house training for the chemical industries. He holds three degree in chemical engineering; a B.Sc. from Ohio University, M.Sc. from Colorado State and a PhD from Newcastle University. His research interests are in process control and optimisation especially in application of multivariate SPC in process industries.



**MR. KARL KOLMETZ** | He is currently the General Manager for KLM Technology Group. He has over twenty-five years of progressive experience in the design, construction, commissioning, and operations management of process units from the US Gulf Coast to Alaska through Asia. He has a strong background in the manufacturing of a wide variety of chemical process technologies and product categories including; cryogenic liquids, ethylene, propylene, benzene/toluene extraction, styrene, catalytic reforming, crude atmospheric/vacuum fractionation, polyvinyl chloride, and steam /power plant operations. Mr. Kolmetz has substantial experience in the design and trouble shooting of distillation columns, which is one of the key unit operations in hydrocarbon production. His experiences includes four eyes of Construction, two of which were on the Alaskan Pipeline with Fluor Daniel. Seventeen years of Refining experience, including eleven years in Catalytic Reforming, in The Charter/Phibro Refinery (now Valero Refinery) in Houston, Texas. One year of commissioning experience with Raytheon Badger EB/Styrene plants in Asia. Seven years Ethylene experience: four years in Louisiana and three years in Malaysia. Presently is the Asian Assistant Technology Manager for Sulzer Chemtech a leading distillation tower internals manufacturer. Karl has a Degree in Chemical Engineering from the University of Houston and is a member of the American Institute of Chemical Engineers.

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Staff from more than 450 **local and overseas companies** have attended our life-long learning programmes.

Some of these companies are :

**PETRONAS, SHELL, BP, SAUDI ARABIA BASIC IND. CORP. (SABIC), QATAR LNG, ALMARAI (SAUDI ARABIA), IDEMITSU, EASTMAN CHEMICALS, BASF PETRONAS, KUWAIT INSTITUTE for SCIENTIFIC RESEARCH, YOZAI, SUDAN REFINERY, KHARTOUM REFINERY, EMMERSON(Singapore), LOADSTAR Ltd(Sri Lanka) etc.**

| Course Fee                       | Single | 2 or more |
|----------------------------------|--------|-----------|
| Local Participant (RM)           | 3050   | 2950      |
| International Participant (EURO) | 1500   |           |

(Fee is inclusive of lunch, refreshments and course materials)

### Method of Payments

Please kindly complete and return the reply form together with:

#### Local Participants

- By cheque / Bank draft which are made payable to **PHYTO BIZNET SDN BHD**

#### International Participants

- By Direct Transfer/Bank Draft:  
PBSB Bank details: **CIMB Bank Berhad**  
**Universiti Teknologi Malaysia**  
**81310 UTM Skudai, Johor, Malaysia**
- Account No : **0118-0004178-05-7**
- Swift code : **CIBBMYKL**
- Please instruct your bank to remit us the full amount, net of bank charges.

### Cancellation & Substitutions

A full refund will be promptly made for all written cancellations 2 weeks before the meeting. 50% refund will be made for written cancellations received 7 days before the meeting. A substitute may be made at any time.

**Note** a) The organiser has the right to make any amendments that they deem to be in the best interest of the course and to cancel the course if insufficient registrations are received a week before course commencement date.

b) **CERTIFICATE OF ATTENDANCE** will be awarded at the end of the course.

**We can offer in-house course at your company**

## REPLY FORM

<http://www.cepp.utm.my>

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CEPP, UTM Skudai, Johor, Malaysia

23 - 26 July 2007

**YES ! I would like to register the following participants**

Name 1 \_\_\_\_\_

Job Title \_\_\_\_\_

Name 2 \_\_\_\_\_

Job Title \_\_\_\_\_

#### COMPANY INFORMATION

Company \_\_\_\_\_

Address \_\_\_\_\_

Town \_\_\_\_\_

State \_\_\_\_\_

Tel \_\_\_\_\_ Fax \_\_\_\_\_

**AUTHORISED Signatory** (\*This registration is invalid without signature form an authorised officer)

Name \_\_\_\_\_

Job Title \_\_\_\_\_

Tel \_\_\_\_\_ Fax \_\_\_\_\_

## ENQUIRIES

### CHEMICAL ENGINEERING PILOT PLANT, UNIVERSITI TEKNOLOGI MALAYSIA

#### MAIN OFFICE

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#### BRANCH OFFICE

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