Asia Pte Ltd Presents a Computer-Aided Engineering Course for:

**PIPE STRESS ANALYSIS & SURGE FLOW PREDICTION**

Using

**CAESAR II® & FLOWMASTER V7**

2009 (11th May to 16th May) Singapore

**Course Synopsis**

This 6-day course is a combination of the world renowned COADE Pipe Stress Engineering course and a one-day introduction to Fluid Network Analysis to predict surge flow conditions.

Pipe Stress Analysis is an important requirement for the safe design & operation of a process plant. Adherence to international codes (ASME, DIN etc) is necessary for safety compliance. To better understand pipe stress conditions due to fluid pressure surges arising from transient operating scenarios, especially normal & emergency shutdowns and start up, a fluid network analysis is necessary.

In Pipe Stress analysis, the course will cover piping system modelling techniques, static (3days) and dynamic (2days) analysis, evaluation of piping designs and approaches to re-design. This is followed by coverage of modelling and simulation of fluid networks using Flowmaster (1day).

**How will you benefit from the course?**

* You’ll learn how to analyse your company’s pipe stress problems that may have been sent to “specialists”
* You’ll learn the underlying engineering principles used in analysing types of loads affecting piping systems.
* You’ll learn the theory behind the problems to help you gain more confidence in your modeling and build better models faster.
* You’ll work through examples to gain insight to the subjects. Comprehensive course notes are provided which will serve as a useful reference document for your future work.
* You’ll be exposed to recent techniques in dynamic transient analysis.

**Why should your company sponsor you?**

® You will be able to accurately and speedily solve and understand the impact of surges and pipe stress problems
® You will become the in-house specialist thus eliminating the need for high cost consultants.
® All future re-design and improvements will be speedily implemented in a cost effective manner.

In short, your company will gain a competitive edge and at the same time you progress your career.

**Who Should Attend?**

Anyone involved with piping in the petroleum, chemical, power, gas transmission, water and related industries can benefit from this up-to-date, information-packed short course, whether they use CAESAR II, other pipe stress programs - or don’t use any!

Mechanical/Design Engineers  Piping/Vessel Engineers
Engineering Managers  Maintenance Engineers
Plant Managers  Piping Designers

IOCS ASIA PTE LTD | Authorised distributor of COADE, Flowmaster, Ultramarine & other engineering software
Web: www.iocsasia.com / Email: education@iocsasia.com / Tel: +65 6779 5122 / Fax: +65 6778 9200
“Taught by a 40years piping engineer”

Darren H. Yin – Darren Yin a licensed professional engineer (Texas) has 40years of engineering experience specially in piping design and analysis. He has worked with Kellogg, Lummus, Brown & Root and was the GM of COADE (1989-1992). Darren now runs his own company called Clear Lake Engineering (Texas) which provides engineering consulting service.

“Learn from our founder”

Dr David Haines – Chairman of the IOCS group, David has been using computers to solve engineering problems for 40 years. He came to Singapore in 1973 to teach at the University of Singapore. In 1978, IOCS was founded. He will deliver the “Surge Prediction” course.

Course Details

Statics (3 days): piping Code analysis requirements; considerations for piping models; stress guidelines for piping layout; evaluation of results and re-design; fatigue of piping; wind & seismic loading; FRP modelling & analysis; offshore risers.

Dynamics (2 days): proper dynamic modelling; interpreting dynamic analysis results; harmonic analysis; seismic analysis using spectrum response; relief valve discharge; time history analysis.

Network flow simulation (1 day):
Flowmaster basics; fluid network modelling; steady state solution; transient analysis; surge scenarios; surge reduction.

Training’s Location

Singapore Water Association (SWA) Water hub
80 Toh Guan Rd, Singapore 608575

Click here for the map.

Public Transport:
Bus 183
From Jurong East MRT, 8th stop
From Clementi MRT, 6th stop

Course Fees

S$4,000 +7%GST per person
A 5% discount applies for a group of 3 or more provided it is from the same company.

IOCS Customers enjoy a preferential 10% discount for each person.

Early bird registration enjoys a S$250 discount.
Hurry; this offer ends on 14th April 2009.***

*** - if the 20 places are filled up before 14th April 2009, this discount becomes inoperable.
The $250 is applicable for the first person registration if there is more than one registrant from a company. This discount is inapplicable for registrants enjoying preferential rates.
**Registration**

Kindly complete the form and email to education@iocsasia.com or fax to 65 6778 9200.

Registration for Pipe Stress Analysis and Surge Flow Prediction course

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**Details of Participants**

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Mr. Babu Mohan will gladly answer any queries you have at 65 6779 5122 or Email to babu_mohan@iocsasia.com

- Upon booking an invoice will be emailed/ faxed to you.
- Upon invoicing, immediate payment to confirm your seat.
- NO refund but Substitution of names from the same company allowed.
- Course fee is inclusive of lunch & tea/coffee breaks, course material (worth USD250).
- Certificates of Training Attendance.
- The course is accredited with 42 PDUs by the Singapore Professional Engineers Board.