

PIPE STRESS ANALYSIS & SURGE FLOW PREDICTION

Using

CAESAR II® & FLOWMASTER V7

2008 (12th May - 17th 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 to how 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
Engineering Managers
Plant Managers

Piping/Vessel Engineers
Maintenance Engineers
Piping Designers





“Taught by one of the architects of CAESAR II”

Dave Diehl – Vice President, COADE, Houston, Texas. He has been involved with Pipe Stress Analysis for more than 30 years. Dave joined COADE in 1986 and has trained CAESAR II users around the globe. Dave holds a Professional Engineering licence in Texas and is a Board Member of the Society of Piping Engineers & Designers and Chair of the ASME B31.3 design task group.

“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 (6days, 9.30am to 5.30pm)

Statics (3 days):

pipng 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\$2,950 per person

A 5% discount applies for a group of 3 or more provided they are 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 31st March 2008.***

*** If the 20 places are filled up before 31st March 2008, 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 support@iocasia.com or fax to **65 6778 9200**.

Company: _____			
Address: _____			
Contact Person:	Tel:	Ext:	Fax:
Position:	Email:		
Details of Participants			
Name	Position	Tel	Email

Mr Chung Toh Wong will gladly answer any queries you have at **65 6779 5122**.

- * 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).
- * The Fee is exclusive of 7% Goods & Service Tax.
- * Certificates of Training Attendance will be presented.
- * The course is accredited with 42 PDUs by the Singapore Professional Engineers Board.

Company Stamp

Authorised Signature / Date

