

ABB Consulting Events

# Design and operation of piping systems



## A two day training course

2nd - 3rd May 2012 - Edinburgh, Marriott Hotel

23rd - 24th October 2012 - York, Marriott Hotel

IChemE  
approved course



Power and productivity  
for a better world™



# Design and operation of piping systems

**This 2 day course explains why it is necessary to pay attention to piping systems at all stages throughout their life to prevent loss of containment and maintain a licence to operate.**

## What will the course cover?

The main topics relating to design and safe operation of piping systems which include:

- Code compliance
- Layout
- Routing
- Flexibility analysis
- Supporting
- Testing
- Commissioning

Topics are covered by discussion, case studies of real incidents and syndicate exercises. It is expected that participants of this course will have gained some knowledge of the subject, either by experience or by attendance on the appropriate courses.

## Benefits

This course will identify the principles and methods of piping design together with the considerations to be taken into account for layout and routing, testing, commissioning and safe operation of piping systems. You will gain an increased awareness and understanding of the causes of piping failures and how to resolve the problems that can occur.

The course is beneficial to anyone who is involved in design, construction, inspection, operation or maintenance who needs a design appreciation or to be aware of safer piping practices.

## Training method

The style of the trainers is to encourage participation in the discussions and to use case studies to share the experiences of the delegates to broaden their knowledge of the topics.

On completion you should be able to:

- Manage the safe operation, maintenance and commissioning of piping systems
- Improve business productivity by reduced maintenance and capital costs
- Recognise the need for, and the importance of, design codes and registration of critical piping systems
- Have an awareness of the technical aspects of piping that must be considered when designing, constructing, modifying or maintaining piping systems, highlighting the need to control modifications
- Identify the modes of failure of piping systems due to inadequate design, flexibility, supporting or routing

## Previous participants' comments

"Excellent test cases."

"Very good refresher course and picked up useful new information."

"Well designed and presented."

"Would recommend this course to other engineers / designers."

## Price

Member of IChemE - £1200 + VAT

Non-Member - £1299 + VAT

## Course leaders

**Laza Krstin** BSc Mechanical Engineering, is a Senior Consultant. Throughout his career Laza has been involved in the design, construction and commissioning of piping systems for major capital projects and maintenance and problem-solving on chemical plants worldwide. Laza is functional head of piping in ABB Consulting. He is a member of a number of national industry bodies and standards-making committees.

**Howard Robson** has been involved in all aspects of piping engineering and design for over 30 years. Howard has extensive experience of engineering standards and specifications, project engineering, pipelines, pressure relief and flexibility/stress analysis. He has been involved in problem-solving/troubleshooting over the years and now specialises in asset integrity aspects of chemical plants.

This course meets the requirements of Continuing Professional Development (CPD).

Agenda Day 1 - 08:30 to 17:00	
Registration and coffee	
Introduction	
Overview of design codes Information required for design (1) Information required for design (2) Pressure design Thermal design (1)	Thermal design (2) Expansion joints - bellows Layout and routing Pipe supporting
Close	
Agenda Day 2 - 09:00 to 17:00	
Review of Day 1	
Layout and routing exercise Special considerations (small-bore piping, dead legs, injection points) Piping in-service inspection	NDT and pressure testing Commissioning Operation and maintenance
Coffee / syndicate exercise	
Dynamics	
Review and feedback	
Close	

The following companion courses are also available:

### Essentials of Pressure Systems

This course aims to provide the fundamental understanding required for managing the integrity of pressure systems, some of the problems encountered and how to avoid them. The course covers the significant deterioration mechanisms that can affect pressure equipment and provides an overview of the UK legislative framework relating to pressure systems.

### Managing Deterioration of Plant Equipment

This course provides an understanding of significant deterioration mechanisms that can affect pressure systems and how to detect and discharge them.

## Four easy ways to book

Post: Send completed registration form to address below  
Telephone: Call Jackie Kendall on +44 (0)1642 372121  
Fax: Fax your form to +44 (0)1642 372296 f.a.o. Training courses  
Email: jackie.kendall@gb.abb.com

All correspondence should be addressed to:

**Freepost - RRGLSALUCCAJ, ABB Consulting, Billingham, TS23 4EB**

<input type="checkbox"/>	2nd - 3rd May 2012 - Edinburgh, Marriott Hotel	late booking date	10th April 2012	<input type="checkbox"/>
<input type="checkbox"/>	23rd - 24th October 2012 - York, Marriott Hotel		2nd October 2012	<input type="checkbox"/>

Dr/Mr/Mrs/Ms | First Name | Surname |

Job Title |

Company Name |

Address |

Post Code | Country |

Telephone | Fax |

Email |

**Fee per delegate**

Member of IChemE - £1200 + VAT      Non-Member - £1299 + VAT

My Professional Institute number is:.....

The full course fee (incl. VAT) is payable in advance, and should be received no later than 4 weeks prior to the course commencement. The fee includes course documentation, refreshments and lunch but does not include accommodation.

**Payment**

Please debit my credit card (Eurocard/Mastercard/Visa/Switch/American Express)

Card number .....

Signature .....

Cardholder details (if different) .....

.....

Issue number ..... (Switch cards only)      Expiry date .....

Security code .....

**Booking Information**

All bookings are provisionally accepted and confirmed in writing upon receipt of payment. Cancellations made up to 30 days prior to the course will be subject to a cancellation fee of £50 administration fee. Cancellations made 30-14 days prior to the course will be subject to a cancellation fee of 50%. Cancellations made thereafter will be subject to the full course fee, however a substitute delegate can be named at any time. Accommodation is not included in the fee. We have reserved a limited amount of hotel accommodation subject to confirmation. Please mention you will be attending an ABB Consulting course when booking. Hotel details will be forwarded on receipt of the registration form. It may be necessary for reasons beyond the control of the organisers to cancel the event, alter the content, change the timing of the programme, or the listed speaker(s).

Prices apply to bookings made prior to 31st December 2012.