2KG TRAINING

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INDUSTRIAL FLOW MEASUREMENT

Presenter: David W Spitzer

ABOUT THE PRESENTER: DAVID W SPITZER

David W Spitzer has over 35 years of broad instrumentation and control experience. An ISA Life Fellow and Professional Engineer, David has written over 10 books including the seminar text Industrial Flow Measurement and other books on specific flow meter technologies, level measurement, advanced regulatory control, and the application of variable speed drives. Mr. Spitzer's broad experience in industry includes working for United States Steel, Mobay Chemical, and Nepera Chemical before becoming an independent consultant in 1998.

David has taught over 100 seminars since developing the flow measurement seminar for ISA in 1983. In addition, well over 250 of David's articles have been published in technical magazines—most of which are related to flow measurement. In addition to being the author of the seminar text, David brings a wealth of first-hand experience and knowledge to this seminar

Number of days: 3 **CPD Points:** 3

Live Virtual Classroom

2KG Training Live Virtual Courses offer participants the same instructors, training systems, course materials, personal support, and face-to-face engagement with instructors and other participants that they would expect to find in a conventional classroom.

The Advanced Pumps Live Virtual Course brings participants together in a virtual classroom, where they receive training from an expert via a live video link. Participants are interconnected via audio and video, enabling them to interact both with the instructor and with their classmates. Learners can speak to their instructor at any time to ask questions, request assistance, and instructors can provide hands-on support.

Description

This course presents the principles, design and application of flow measurement systems. Fluid flow fundamentals are emphasized before discussing the principle of operation, accuracy, performance, specification, installation and maintenance of the different flowmeter technologies .

After The Course You Will Be Able To:

- Describe principles of operation of different flowmeter technologies
- Design a system to make practical and precise industrial flow measurements
- Calculate the effects of fluid properties on flowmeter performance
- Evaluate flowmeter performance statements and compare them with application requirements
- Specify and select the appropriate flowmeters for different applications
- Create installation detail drawings to obtain flowmeter accuracy and performance
- Identify requirements for flowmeter calibration
- Solve typical flow measurement problems
- Perform flowmeter compensation and totalization calculations

- Plan maintenance activities required by different flowmeter technologies
- Understand flow and related phenomena (piping hydraulics, Reynolds Number, cavitation, etc.)
- Size flow elements for specific applications.

Who Should Attend

- This seminar should prove beneficial to individuals who desire to become more productive through improvement of their flow measurement skills.
- Persons such as technicians, engineers, managers, sales persons, marketing persons, purchasing agents, accountants, lawyers, and others involved with flow measurement and its associated equipment.

COURSE OUTLINE	
Introduction	Review of Fluid Properties | Flowmeter | Performance | Linearization and Compensation | Totalization
Differential pressure flowmeters	Orifice Plate | Venturi | Other DP Producing Elements
Magnetic flowmeters	Construction | Operating Constraints
Mass flowmeters	Coriolis Mass Flowmeters
Oscillatory flowmeters	Fluidic | Vortex Shedding
Open channel flow measurement	Weirs | Flumes
Positive displacement flowmeters	Helical Gear | Nutating Disc | Oval Gear | Piston | Other Technologies
Thermal flowmeters	Construction | Operating Constraints
Turbine flowmeters	Axial | Other Technologies
Ultrasonic flowmeters	Principles of Operation | Installation Considerations
Correlation flowmeters	Technologies | Installation Requirements | Performance
Insertion flowmeters	Available Technologies | Operating Constraints
Flowmeter selection	Criteria

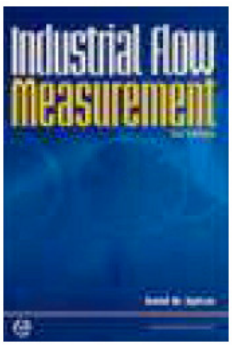
CLASSROOM EXERCISES

- Determine upstream and downstream piping considerations for different types of flowmeters
- Perform sizing calculations for different types of flowmeters and different process applications
- Select flowmeters for a variety of specific applications and determine installation and calibration requirements
- Specify installation and calibration requirements for different types of flowmeters and applications

YOU WILL RECEIVE:

Included in the seminar is the ISA Text: *Industrial Flow Measurement, 3rd edition: by David W. Spitzer*

Designed to help practicing engineers avoid costs associated with misapplication of flowmeters, this third edition reviews the important concepts of flow measurement and provides explanations, practical considerations, illustrations, and examples of current flowmeter technology.



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Registration Form:

Number of days: 3
CPD Points: 3

How to register for the course:

1. Complete this registration form and fax it to Phindi Mbedzi: Tel: 011 325 0686 Fax: 011 325 0488 Email: phindi@2kg.co.za
2. Acknowledgement will be emailed to you.
3. Final confirmation and details will be faxed or emailed to you approximately 7 days before the commencement of the seminar.

Conditions of entry:

1. Cancellations are accepted in writing and without penalty, up to 7 working days prior to commencement of the seminar.
2. Cancellations in writing less than 7 working days prior to the seminar will be liable to pay 20% cancellation fee.
3. If prior written notification of cancellation is not received, defaulter will be liable to pay 50% cancellation fee.
4. In case of insufficient applications for the workshop 2KG reserves the right to cancel the seminar. Applicants will be informed and all fees will be refunded immediately.

Delegate information:

Title: _____ Surname: _____ Name: _____

Full Company name: _____ Job Title: _____

Postal Address (to which invoice must be sent): _____

_____

Code: _____ VAT number: _____

Tel: ( ) _____ fax: ( ) _____

Cell: _____ Email: _____

Contact/ Accounts information:

Title: _____ Surname: _____ Name: _____

Tel: ( ) _____ fax: ( ) _____

Cell: _____ Email: _____

Please tick the course that you would like to attend:

☐ Currently Unavailable a Date to be Advised
Live Virtual Classroom
R10 032.00 (excl VAT)

☐ Currently Unavailable a Date to be Advised
CedarWoods of Sandton
R12 540.00 (excl VAT)

I have read and agreed to all the conditions of registration as stipulated in this brochure.

_____ _____

Signature Date

For more info and to register contact Phindi Mbedzi on tel: 011 325 0686 or cell: 071 125 6188 and email: phindi@2kg.co.za or visit www.2kg.co.za