



**PSR**

PERFORMANCE | SAFETY | RELIABILITY

PSR INTERACTIVE



## EQUIPMENT 06 - INSTRUMENTATION & CONTROL

This program is designed to give your production personnel the knowledge, skills and focus to maximize the performance, safety and reliability of your instrumentation & control systems, covering in detail topics such as:

- measuring elements
- control elements
- methods of process control
- high integrity emergency shutdown systems

CONTENT	DESCRIPTION
Introduction	A brief introduction designed to prepare trainees for the modules that follow
Module 01 - Measuring & Control Elements	Principles of design and operation of temperature, pressure, flow, level and analytical measuring elements and transmitters  Principles of design and operation of automatic and remote actuated on-off, regulatory and tight shut-off control valves
Module 02 - Process Control	Principles of design and operation of regulatory, enhanced, advanced and optimization control - open loop, automatic, cascade, split range, feedback, feedforward, gap, constraint, adaptive, statistical, calculated variable, multivariable and programmable logic control  Tuning of three-term PID controllers
Module 03 - Emergency Shutdown Systems	Principles of design and operation of hard-wired high integrity ESD systems - fail-safe and redundancy philosophy, trip initiating devices, common mode failures, 2 out of 3 voting logic, signal transmission, processors, programming logic, trip actuating devices, tight shut-off, fireproofing, solenoid valves, trip resetting, operator interface and the importance of routine testing
Test	Trainees answer a random selection of questions to demonstrate understanding of the content covered throughout the modules

## PROGRAM INFO

CATEGORY:  
Equipment

MODULES:  
3

PROGRAM DURATION:  
225-270 mins (approx)

As with all our programs, the content is self-paced. Users are able to validate their understanding of the material through embedded interactive quizzes

Our programs are based on internationally recognized best practices and are designed to enable your production personnel to make a personal contribution to maximizing your profits and minimizing your losses

For further details of the style and methodology of our training programs, please refer to our website, where you can watch a demo video and apply for a free trial:

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