Control Valves:
Operation, Selection and Maintenance
May, 07th – 10th, 2012 Grand Papandayan Hotel Bandung
By. DR.Ir. Endra Joelianto

ABOUT THE COURSE:
Valves are, unquestionably, the most important part of any piping and pumping system because they direct the flow of fluids and regulate temperatures. Properly used and maintained, they can improve process efficiency and lower costs. It is wise to apply the basics of proper valve maintenance in ways that improve their life cycle and operating efficiency. Here are eight often-overlooked valve maintenance basics that can help you do just that.

Five years ago, the management at Vulcan Chemicals, a business group of Vulcan Materials Company, commissioned a study to identify components representing high annual maintenance costs. The outcome: instead of expected high-ticket items like heat exchangers and pumps gobbling up dollars, it was determined that valves and piping represented up to 80% of the maintenance budget’s allocations in certain cost centres.

The study indicated annual potential savings of up to $500,000 in valve replacement costs alone if a program could be developed to guide purchasing and improve maintenance procedures.

COURSE OUTLINE:
Control Valve:
Preface, Components and function of valve body, Type of valve according stem movement, Types of plug, Plug guiding, Characteristics flow of control valve, Valve and its characteristics, Design features and considerations

Actuator and Positioner:
Function and selection criteria of actuator, Diaphragm and piston actuator, Type of actuator action, Electrical actuator, Function, objective and location of positioner, Positioner action

Accessories for Control Valve:
Hand wheels or operator manual, Snubber, Limit switch, Supply pressure regulator, Booster relay, Fail safe system, On-off relays

Control Valve Selection:
Information for selection of control valve, Materials of control valve, Corrosion resistance material, Selection of flow characteristics,

Control Valve Sizing:
Preface, Flow capacity coefficient, Liquid service, Cavitations and flashing, Choked flow, Damages due to cavitations and flashing, How to avoid corrosion and cavitations on control valve, Cavitations index, Gas or steam service, Gas sizing universal, Sizing for mixing gas-liquid, Actuator sizing, Actuator for sliding and rotary stem valve, Valve sizing using software

Valve Problems and Maintenance Activities:
Noise in valve, Noise Control, Fluid behaviors, Problems in control valve and its solution, Maintenance problems of control valve, Troubleshooting analysis, Hands-on activities
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Practical examples, problems solving and sizing exercise using software

WHO SHOULD ATTEND
– Instrumentation Engineers & Technicians
– Design and Process Engineers
– Operation, Piping, Mechanical and Plant Engineers
– Maintenance Technician and supervisors
– Service Engineers and supervisors
– Work over engineers and supervisors
– Asset Manager Team members
– Everybody who are responsible for selecting, purchasing, or repairing control valves.

ABOUT INSTRUCTOR'S TEAM LEADER

Dr. Ir. Endra Joelianto is an expert in control engineering. His outstanding research is: Hybrid Control Systems, Discrete Event Control Systems, Petri Nets Analysis and Application on PLC, Robust PID Controller, Advanced Process Control, Industrial Automation using PLC/DCS. He received first degree (Ir.) in Engineering Physics in 1990 from Department of Engineering Physics, ITB and Doctor of Philosophy (PhD.) in Control Engineering in 2001 from Department of Engineering, The Australian National University, Australia.

He is coordinator of Intelligent Control and Automation, and founder of PLC Research Group, Laboratorium Instrumentasi dan Kontrol (LINK), Departemen Teknik Fisika, Institut Teknologi Bandung. He was the founder and the director of Schneider-OMRON PLC Training Center, Maranatha Christian University, Bandung. The Schneider-OMRON PLC Training Center has cooperation with PT. Schneider Electric Indonesia, PT. OMRON Corporation Japan, Invensys WONDERWARE.

He was the project leader for TPSDP Retooling Program Batch II-DIKNAS for Training Program on "INDUSTRIAL AUTOMATION USING PLC“ 2004 and Co-provider for the same retooling program Batch II on "INDUSTRIAL CONTROL AND AUTOMATION“ by PT. Cahaya Sumirat, Bandung. In 2005, he leads the retooling project entitled PLC for Industrial Control and Automation at the Department of Engineering Physics, ITB.


He serves as instructor either for public, universities or in-house training on instrumentation and process control to universities, petrochemical or oil and gas companies, such as: PT. NGL Arun, PT. NGL Bontang, PT. Pupuk Iskandar Muda, PT. Pupuk Kalimantan Timur, PT. Pupuk Kujang, PT. Semen Padang, PT. Semen Gresik, PT. Petrokimia Gresik, PT. Semen Cibinong, PT. Indocement, PT. Semen Tigaroda Perkasa, PT. Exspan Nusantara, PT. ALSTOM Indonesia, PERTamina, British Petroleum, Maxus, Amoseas, PT. Nusa Halmahera Mineral, PT. Indonesia Jaya Power, Indonesia Power-Paiton, PT. Riau Pulp and Paper, Indonesian Cement and Concrete Institut (ISBI), LIPI-Bandung, LAPI-ITB, POLMAN-Bandung, etc.
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**Investment fee per delegate:**

Rp. 8,450,000, net
Includes: training materials, bag, stationeries, 2x coffee breaks, luncheon, and gimmick
Excludes: board and lodging, and all statutory taxes

Payment could be by cash, cheque, or transferred to:
Bank Mandiri, KK Gatot Subroto Bandung
Account No. 131 000 701674 6
Cc. PT. Surya Daya Mandiri

How to register?
Please, contact Lucky at PT. Surya Daya Mandiri,
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