Process Engineering Flow Scheme (PEFS) Engineering Reading

22 - 26 August 2016
Kampala, Uganda

This course is Designed, Developed, and will be Delivered under
ISO 29990:2010 Standards
WHY CHOOSE THIS TRAINING COURSE?

The training course will introduce and lead participants to the presentation and reading of engineering drawings (schematics) and symbols that are related to Process Flow, Piping, Process (piping) and Instrumentation Diagrams P&IDs.

Major emphasis will be placed on Process Plant Equipment, such as valves, valve actuators, pumps, compressors, motors, tanks, control instrumentation and control loops, etc., in addition to mass and energy balance considerations to the flow process.

This training course will:

- Systematically offer information that can be used to recognize standard engineering flow diagrams
- Be used to understand how the major parts of the process interact with each other, be used to plan effective installation, operation and inspection of plants and equipment
- Provide sound knowledge and skills to independently evaluate possible design solutions through an understanding of prints and symbols
- Include relevant exercises to emphasis the fundamental aspects of Process Flow and P&ID

WHO IS THIS TRAINING COURSE FOR?

The course is primarily intended for individuals, with or without an engineering background, who need to be familiarized with standard methods of reading and interpreting Process Flow and P&ID diagrams. This include the following:

- Plant Engineers
- Maintenance Personnel and Supervisors
- Other technical individuals

The course will also benefit senior engineers and managers who would like to increase or refresh their knowledge of reading and interpreting Process Flow and P&ID diagrams.

WHAT ARE THE GOALS?

The major goals of this program are to develop fundamental understanding of flow and P&ID diagrams and Prints and recognition of a variety of schematic conventions and standard drawing symbols.

Upon completion of this program, attendees will have a practical understanding of Process Flow and P&ID diagrams and would be able to:

- Know about methods of Representation of Views and Projections
- Recognise symbols of proprietary engineering components
- Identify various types of lines on flow and P&ID Diagrams
- Demonstrate the ability to interpret process (piping) and instrumentation diagrams P&IDs
- Identify schematics by their symbols, such as Fluid-power, Flow, Piping, Components, equipment, etc.

HOW WILL THIS TRAINING COURSE BE PRESENTED?

The course combines presentations and discussions of topics covered with relevant examples.

Class exercises will be conducted to emphasis fundamental principles of reading Samples of equipment will be shown to the attendees and then associated with relevant engineering flow and P&ID diagrams, prints an symbols.

Participants will be provided with comprehensive paper and soft copies of course notes and copies of presentation material that will be very valuable for detailed study and future reference.

QUALITY CERTIFICATION

PetroKnowledge utilises a Quality Management System which covers technical, administrative and commercial aspects of its business operations. It was designed in accordance with the principles of ISO 9001:2008 quality standard.

PetroKnowledge has acquired the ISO 29990:2010 international standard which ensures that the design, development, and delivery of the learning service meet the ISO requirements. This quality mark ensures excellence of our training courses.

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**Daily Topics**

**DAY ONE**
- Introduction to Engineering Prints and Representations, Methods of Representation
- Views and Projection
- General introduction to P&ID and PFD, Purpose, Contents of PFD
- Flow direction, Line types, Line cross-over
- Titles and Legends, equipment numbering

**DAY TWO**
- Piping Drawings, P&IDs, Equipment and Symbols
- Process (Piping) and Instrumentation diagrams P&ID
- Guidelines for schematic flow diagrams, Symbols and Abbreviations
- Instrumentation, e.g. Flow Indicators, Flow Recorders Temperature Controllers, etc.
- Devices, e.g. Valves, Fittings and Special Symbols, Flow Lines, etc.
- Equipment Symbols, Pumps, Compressors, Vessels, Tanks, etc.

**DAY THREE**
- Equipment Location Drawings, Plot Plans, Elevation plans
- Types of Process Diagrams, Block Flow Diagrams, Flow diagrams, Process flow design
- Line Symbols, stream information, numbering and Flags, Battery Limits
- Standard Conventions for Valve Status, Valve Actuators and Control, Control Valve Designations
- Instrument Identifiers and Function Symbols
- Controllers, Modifiers and Transmitters

**DAY FOUR**
- Functional Instrument-Identification Letters, Examples of Instrument Loops
- Storage Symbols ( Tanks or Reservoirs), Heat Exchangers, Cooling Towers
- Furnaces, Boilers, Reactors, Distillation Columns
- Conventions Used for Identifying Process Equipment, Equipment numbering
- Heat and material balances, material balance tables
- Piping Isometric Diagrams & Flow Examples, Exercises

**DAY FIVE**
- Interlock Logic Symbols, General considerations
- Use of Logic Symbols
- Input, Output, And, Or, Not, etc.
- Example of Process Logic Circuits
- Exercises
- Revision, Summary and conclusions
Please use BLOCK CAPITALS to fill in this form. It is important that you read carefully through all information before starting to complete the form.

REGISTRATION DETAILS

Family Name
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First Name (Mr./Ms.)
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HOTEL ACCOMMODATION

Hotel accommodation is not included in the Registration Fee. A reduced corporate rate and a limited number of rooms are available for attendees wishing to stay at the hotel venue.

Please make your request for accommodation at least 3 weeks prior to the commencement of the course.

CERTIFICATION

A Certificate of Completion will only be awarded to those delegates who attend the entire course.

CANCELLATIONS & SUBSTITUTIONS

You must notify the Registrar of cancellations at least 2 weeks before a scheduled seminar in order to be eligible for a credit. If you cannot attend, you may send a replacement from your organisation at no charge. There is a $250 handling charge for all cancellations or rescheduling. We reserve the right to cancel a seminar due to low enrolment. All registrants will be notified in advance and a full refund will be provided upon request.

DISCLAIMER

Circumstances beyond the control of PetroKnowledge may necessitate postponement, change of venue or substitution of the Instructor. As such, PetroKnowledge reserves the right to implement such amendments.

COURSE SCHEDULE

22 - 26 August 2016
Kampala, Uganda

REGISTRATION FEES

US$ 5,500/ - per participant

This fee is inclusive of Documentation, Lunch and Refreshments

MODE OF PAYMENT

☐ Please invoice my company
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☐ Cheque payable to “PetroKnowledge Limited”

WAYS TO REGISTER

T: +971 2 5577 389
F: +971 2 5577 128
E: info@petroknowledge.com
W: www.petroknowledge.com

“Training & Development Services for the Oil & Gas Industry”

PetroKnowledge Limited
P. O. Box 135120
Abu Dhabi, U.A.E.