
INSTRUMENTATION ENGINEERING FOR OIL AND GAS FACILITIES



WHAT YOU WILL LEARN:

- Skills and competencies in instrumentation oil and gas engineering
- Knowledge of the latest technologies in Instrumentation oil and gas engineering
- Key techniques in operating your facility to the highest level of safety and in protecting the environment
- Decades of real experience distilled into the course presentations and materials
- Guidance from real Instrumentation oil and gas experts in the field
- Hands-on, practical knowledge from the extensive experience of instructors, rather than the theoretical information from books and colleges
- Networking contacts in the oil and gas industry

WHO SHOULD ATTEND:

This course is ideal for you if you are seeking expertise in the oil and gas business and are an:

- A recent graduate instrumentation or mechanical engineer
- Chemical engineer
- Fire and gas engineer
- Instrument and control systems engineer
- Instrument and process control technician or technologist
- Instrument fitter
- Mechanical engineer

Even if you are highly experienced you will find this a great way to become familiar with the oil and gas technology as quickly as possible.



Technology Training that Works

The Workshop

There is a growing shortage, and hence opportunity, for instrumentation technicians, technologists and engineers in the oil and gas industry. This is due to an increasing need for higher technology methods of obtaining and processing oil and gas as it is a finite declining resource. The price of oil is heading upwards steadily, thus making personnel and their associated oil and gas expertise in these industries even more valuable. The technical challenges of extracting oil and gas are becoming ever more demanding, with increasing emphasis on more marginal fields and previously inaccessible zones such as deep oceans, Polar regions, Falkland Islands and Greenland. The aim of this program is to provide you with core Instrumentation engineering skills to enhance your career, and to benefit your firm.

This workshop provides a whole spectrum of activities ranging from basic instrumentation engineering to advanced practice including hazardous areas, data communications along with a vast array of instrumentation equipment utilised in an oil and gas environment as well as practical treatment of instrumentation within the oil, gas, petrochemical and offshore industries. Whilst there is some theory this is used in a practical context giving you the necessary tools to ensure that the instrumentation hardware is delivering the results intended. No matter whether you are a new instrumentation or control technician/technologist/graduate engineer or indeed, even a practising facilities engineer, you will find this course beneficial in improving your understanding, skills and knowledge. This is a 3-day intensive workshop, covering considerable material. If you are looking for a far higher level of knowledge and competencies, you can undertake our 18 month in-depth Advanced Diploma in Oil and Gas (E&I).

Practical Sessions

This is a practical, hands on workshop enabling you to work through practical exercises which reinforce the concepts discussed.

To gain full value from this workshop, please bring your laptop/notebook computer.

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“Excellent presentation of a complex subject in a very short period.”

Terry Hailstones

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The Program

DAY ONE

INTRODUCTION – SETTING THE SCENE IN OIL AND GAS E&I ENGINEERING

- Fundamentals of instrumentation, measurement and process control engineering

DAY TWO

INSTRUMENTATION AND CONTROL

- General instrumentation standards in oil and gas
- Process instrumentation
- Calibration, installation and maintenance of instruments
- Process control basics
- Control valves sizing, selection and maintenance (including pressure relief valves)
- Programmable Logic Controllers
- SCADA systems
- Distributed control systems
- Industrial data communications (including Fieldbus and industrial Ethernet)
- Safety instrumentation and emergency shutdown systems for oil and gas (IEC 61511 and IEC 61508) – basic introduction
- Wellhead and flowline control – control systems
- Emergency wellhead blowout controls

DAY THREE

SPECIALISED APPLICATIONS IN OIL AND GAS

- Power generation
- Cathodic protection
- Compressor control (including surge control)
- Drilling control systems and instrumentation
- Subsea instrumentation and control systems
- Pig launcher/receiver systems
- Critical flare knock out drum controls and instrumentation
- Flare flame front generator and ignition monitoring system
- Distributed control systems

SUMMARY, OPEN FORUM AND CLOSING



On-Site Training

- ✓ SAVE over 50% by having an IDC workshop presented at your premises.
- ✓ Customise the training to YOUR workplace.
- ✓ Have the training delivered when and where you need it.

Contact us for a FREE proposal.