**Training Programme on Oil Water & Gas Flow Measurement & Control Techniques & Standards**

General Orientation Programme on India and its culture.

Theory Session 40% , On the job Lab/ Hands on trainings 40%, Evaluation of Projecs and Standards presentations 20% on an average.

**Course Content :**

1. **Flow Engineering Basics, Symbols, notations, schematics etc. Over view of units and conversion factors.**
2. **Introduction to CFD & FEM and applications in Oil, Water & Gas flow metering, ANSIS, FLUENT Software.**
3. **Element of flow Technology Management, Method validation.**
4. **Hands on experience on calibration of fow meters like orifice, venturi, Turbine flowmeters, Ultrasonic Flowmeters, DDM, Electro Magnetic Flowmeter, Magnetic Flowmeter, Vortex meter etc using water/ oil / air media, Calibration of CNG mass flowmeters, Methods validation.**
5. **Testing of valves, safety valves and related pipeline products, air release valves, Calibration of PD meter for Oil application.**

**Selection & Appliaction of flowmetres:**  
Selection & Application of flowmeters used in Oil & Gas medium.Different types of flowmeters.Control Techniques, Different types of control valves -Butterfly, Ball,Globe, Angle valve etc.Intelligent control valves, Flow characteristics of valves, non return valves, upstream / downstream control valves / gas filling head.

**Flowmeters Evaluation / Calibration**:  
Calibration of secondary instruments in flow meterng & control, meter prover,Flowmeter "Model Approval" as per Organisation Internationale De MetrolgieLegale (OIML) Standards,Calibration of flowmeters in multiviscous media,Instrument, software for flowmeter & control valve selection and sizings

**Study of International Standards followed for Oil / Gas computations transfer**:  
International Standards followed in Oil and Gas flow measurement like API ,AGA,OIML etc.Custody transfer in petro chemical industry - Norms / Calculation, Heating value calculation.

**Performance Quality aspects in flowmetering systems:**  
Assessment of uncertainty and statistical analysis of accuracy in fluid flow,Traceability or measurement, maintenance aspects of flowmeters, valves and its related custody transfer instrumentation according to OIML /ISo standards.

**Flow network System parameters:**  
Fluid flow pressure surge analysis , inspection and auditing of flowmetreing stations to check conformance to API/I AGA, Flow measurement and control in industrial process control, natural gas properties and computations for flow correction,Oil and gas network distribution analysis technique storage tanks, prover systems.

**Electronic Instrumentation Data Acquisition Systems:**  
Flow measurement and control in distribution network.Flow computers for custody transfer Instrumentation related to flow measurement, Automatic level guaging of storage tanks, flow computers.

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