LDI TRAINING
"Leading Edge Courses for Professionals" ™

An LDI Training Course

Onshore Pipeline Engineering, Design Technology, Repair & Integrity

by
Rachmat Sudjana, ST

Introduction

Pipeline Engineering Design Technology, Repair & Integrity will enhance the knowledge and ability of Pipeline Engineers and Pipeline Staff to obtain the assets integrity in day to day activity in the pipeline operation system.

The subject Course is intended for anyone involved in the Pipeline Operations, such as Onshore Pipeline Engineering, Basic Pipeline Design, Pipeline Integrity Management, and Pipeline Repair Technologies.

Conduct Pipeline Integrity Management system, based on Intelligent Pigging (ILI) Reports, and cathodic protection system surveillance as well as maintain each segment of pipeline for oil and gas transfer.

Conduct repair of pipeline using the recent technology without disturbance to the daily production, keep the fluids flowing while doing the repair works for pipeline and all related aboveground facilities

Maintain all pipeline facilities, such as Pipeline bridges, Main ROW, Pipeline Warning Signboards, Pipeline Stake markers, Pipeline Aerial Markers, rain water creeks, ROW erosion prevention; conduct ROW Patrolling from possible third parties' encroachment, leak survey, and cathodic protection survey, including coating inspection done from the surface.

The Aims

The aim of the course is to provide attendees with a common awareness of Pipeline Integrity Management and also the tools and techniques for producing integrity management plans, as well as a brief history of the pipeline and technical background to the design of pipelines used in the transport of oil and gas.

Understanding of the material selection process for pipeline fabrication, and the method for controlling pipeline corrosion during the pipeline life cycle

Methodology

The class will consist of presentation, open discussion and video show on respective or related subject being discussed.

Course Contents

- **Description of Onshore Pipeline Engineering**
  - Basic pipeline concepts and definitions
  - Introduction to the stages of a pipeline project
  - Description and general requirements of standards, codes and Government local/regional regulations
  - Introduction to the principles of pipeline design, construction and installation
  - Wall thickness calculation based on different design codes or standards
  - Understand how pipelines are designed
  - Learn about the challenges of onshore pipeline installation
  - Appreciate the different techniques of pipeline testing and repair
  - Learn about pipeline integrity management

- **Description of Basic Pipeline Design**
  - Codes, Standard and Regulations for Pipeline
  - Route selection of Pipeline
  - Technical Pipeline Documentation
  - Flow characteristic of fluids inside the pipeline
  - Optimization of the pipeline size selection
  - Pipeline design to overcome loads and be able to conduct stress analysis
  - ANSI/ASME Codes for pipelines
  - Pipeline support analysis & design for above ground portion
  - Operations, maintenance. and inspection of pipelines

- **Description of Pipeline Integrity Management**
  - Basics of pipeline integrity management
  - Concept of the integrity management circle.
  - Principles and Practice of Data Collection and Management
  - Pipeline Intelligent Pigging Program/ In-line Inspection (ILI) Program
  - Causes of pipeline failure
  - Repair method suitable for different type of pipeline anomalies
  - Return the pipeline condition to the original design
  - Definition of the types of defects on pipelines
  - Failure statistics and the relative causes of pipeline failures
  - Failure modes and a description of how pipelines fail
  - Defect assessment, including the different codes and standards used to carry out fit-for-purpose assessments of defects and damage
  - Design code and standard requirements
  - Defect identification and assessmen

- **Decription of Pipeline Repair Technologies**
  - Pipeline damage during operations
  - Pipeline failure due to corrosion internal and external
  - Pipeline failure due to geotechnical problems
  - Pipeline repair methods
  - Pipeline Repair during operation
  - Third Party damages
  - Pipeline Vandalism and how to protect them

Who Should Attend

Piping Engineers, Pipeline Engineers, Field Engineers, Operation Engineers, Mechanical Integrity Engineer, Structural integrity Engineers, Field Inspectors, Plant Inspectors, Central Engineering Staff, and Consultants for Transportation and Distribution of Gas, and Operations Engineer for Liquid Transportations.

COURSE DELIVERY

- This offline (face to face) course is conducted in Bahasa Indonesia
- Training hours are from 08:00 to 16:00 WIB
- Participants will receive course materials
- Participants will receive a certificate after completing the training

Your Course Leader

Rachmat Sudjana, ST

Education: University of Indonusa, Industrial Engineering AKAMIGAS, Mechanical Engineering
Qualification: Instructor for Oil and Gas Industries and Pulp & Paper Mills

Other Qualifications: Lecturer and Mentor for Graduate Engineering Trainee – Engineering Manager - Senior Staff Pipeline/Facility Engineer – Pipeline Material Selection Specialist

He was a retired Oil & Gas Industry practitioner, who is willing to share his knowledge and experience to the next engineer's generation who need them.

He has a lot of experiences in the Oil & Gas Industries domestic and abroad in the World Class Oil Companies, such as working in the oil field in the north edge of Sahara Desert, Africa next the south shore line of the Mediterranean Sea. As soon as he retired, he had a particular assignment as a Company Engineer in Foster Wheeler, Reading, next to London, UK.

He completed the assignment and get a lot more experience after the completion of the project. A long with his engineering tasks, he was also mentored the engineer's new hired in the company to facilitate them for their future to hold more responsibility. He is willing to improve the knowledge by sharing them to others. He also presented some of technical papers in the national and international forums.

TRAINING CONFIRMATION

LDI Training will provide a Confirmation Letter after we receive registration according to the required quota.

For course registration and more information please email to

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