AN LDI TRAINING COURSE

RISK-BASED INSPECTION (R B I)

By
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OVERVIEW

Risk-based inspection (RBI) is the process of developing an inspection plan based on knowledge of the risk of failure of equipment.

This is the combination of an assessment of the likelihood (probability) of failure due to flaws, damage, deterioration, or degradation with an assessment of the consequences of such failure.

With RBI, you can improve safety and potentially reduce costs by optimizing your inspection strategy to focus resources on high-risk areas.

By attending this online course, participants will have a complete understanding of the RBI methods and knowledge to plan and carry out risk-based inspections.

COURSE CONTENTS

- **Introduction to Risk-Based Inspection**
- **Risk & Inspection Terminology -** Risk value, risk level, risk matrix, hazard, danger, failure, likelihood, consequence
- **Hierarchy of Hazard Control** - Elimination, substitution, engineering control, administration, Personal Protection Equipment (PPE)

- **Understanding & Scope of RBI -** Definition, purpose, and outcome of RBI, pressurized & non-pressurized equipment, uninspectable risk

- **Overview of RBI Code & Standard (API 580 & API 581)**

- **Plant Database Source and Structure -** Component of RBI datasheet, heading, plant condition, process flow diagram (PFD), piping and instrument diagram (P&ID)

- **Qualitative RBI Analysis Level 1 -** Screening system analysis, likelihood category, damage consequence category

- **Likelihood of Failure and Methodology -** Generic frequencies, equipment Modification Factor (F_E), Management Systems Evaluation Factor (F_M), adjusted failure frequency

- **Consequences of Failure and Methodology -** Hole size failure, Flammable Consequence, Toxicity Consequence

- **Properties of the Base Resource Document (BRD) Representative Fluids –** Normal boiling point, Molecular weight, density, calculation, examination

- **Technical Modules Sub Factor (TMSF) -** Thinning factor, Stress Corrosion Cracking (SCC) Factor**,** High-Temperature Hydrogen Attack **(**HTHA) factor**,** the mechanical fatigue factor

- **RBI Analysis Level 2 -** Semi-quantitative

- **RBI Analysis Level 3 -** Full-quantitative

- **Development of Inspection Programs -** Damage type, damage mechanism, inspection effectiveness, approach to inspection planning

- **Discussion, Case Studies, and Film**

WHO SHOULD ATTEND

This Risk-Based Inspection is designed for all personnel involved in the operation, maintenance, and inspection of production, drilling, and processing facilities such as:

- Facilities inspection team members
- Maintenance technicians, supervisors, and engineers
- Oil and gas processing plant inspectors, supervisors, and engineers
- Facilities engineers and supervisors

- Production operation supervisors and engineers
- Drilling supervisors and engineers
- Pipeline inspector, supervisors, and engineers
- Safety and HSE officers

ABOUT THE INSTRUCTOR

Ir. In Jumanda Kasdadi is an experienced instructor and he has been conducting training for oil and gas companies since 1997. He has BS and MS in chemical engineering degrees from the Institute Technology Bandung.

Companies that have received Mr. Kasdadi's in-house training include Chevron, Pertamina Hulu Energi–ONWJ, ConocoPhillips, Total, Medco, Petrochina, Pertamina, Star Energy, and many others.

Ir. In Jumanda Kasdadi was involved in several Front-End Engineering Design (FEED) and Risk-Based Inspection projects.

IJK has also taken courses for 9 topics in The Oil & Gas fields at PETEX (Petroleum Extension), University of Texas at Austin, in Houston, Texas, USA (2018).

TRAINING CONFIRMATION

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

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