



FACT SHEET

API 580 - Introduction to Risk Based Inspection



Severity	Disaster	High	Medium	Minimal
Probability	Critical	Critical	High	Medium
Regularly	Critical	High	Medium	Medium
Probable	Critical	High	Medium	Low
Occasional	High	Medium	Medium	Low

Risk Based Inspection: What is RBI? Data Collection, Damage Modes, RBI Analysis, FFS Assessment, Risk Acceptance, RBI Reports & Communication.

Who Should Attend?

This course is intended for graduates (or soon to be), designers, freelancers, technicians and engineers from Petroleum, Petrochemical, chemical & food industries.

Previous knowledge of piping, vessels & storage tanks inspection methods will be an advantage for learning this course but is not mandatory to attend this course.

Training Objectives

The main objective of this course is to transfer RBI concepts, data collection, analysis methodology to the participants, through exercises learn RBI skills required in projects, field inspection & asset management function.

Methodology

Instructor-led training course in adult learning format with discussions, individual exercises and simplified case studies, providing practical knowledge to implement in the field

Course Duration

The duration of this training course will be determined according to the training needs of the participants.

What to expect?

Get familiar with RBI basics, definitions & terms. Steps involved, how to collect and analyse data.

Apply risk management, optimized inspections, actual damage, damage modes and associated risks.

Understanding consequence effects and calculation of risk numbers with practical application of RBI for enhanced focus.



Contents

Introduction

Introduction

What is Risk Based Inspection - RBI?

Why to invest in RBI?

Probability basics for risk management

Planning RBI initiative

Basic overview of API RP 580 / 581

Benchmarking plant inspection

How to collect data

Proposed Case Studies

- *Risk Based Inspection fundamentals*
- *Vocabulary*
- *Terminology*

How to perform the analysis

How to perform the analysis

Corrosion & its effects.

Understanding failure of assets

Qualitative methods

QRA methods foundation

Proposed Case Studies

- *Definition of POF.*
- *Understanding damage mechanisms.*
- *Modes of failure & optimizing inspection.*
- *Fitness for service assessment basics.*

RBI

RBI & other plant studies

How to calculate risk number.

In-service inspection intervals

How to define risk criteria

How to form RBI teams

RBI communication skills

Defining RBI responsibilities

Proposed Case Studies

- *Definition of COF and understanding consequence effects.*
- *Failure mode and consequence effects*
- *Estimation methods & trends.*

RBI Pitfalls

RBI pitfalls & sustaining the journey

Reassessments

Why are reassessments required?

RBI as a revenue generating model

Proposed Case Studies

- *Calculation of risk numbers.*
- *Ranking at facility level & at equipment level.*



Instructor

Senior Mechanical Engineer and master's in business administration (MBA). **More than 25 years of experience in design, calculation and fabrication of pressure vessels, heat exchangers, storage tanks, piping systems and structures in general.**

Duties of the above-mentioned positions cover the entire cycle of an equipment, **from the very conception, drawings, design and calculation, technical specifications, technical requisitions, vendor drawings, to the manufacturing phase and installation assistance.** Among the developed projects, clients such as SHELL, EXXON, REPSOL, CHEVRON, GALP, CEPESA, TUPRAS and SAUDI ARAMCO can be found.

Vast experience providing specific training sessions in both classroom and online methodologies. More than 75 training courses carried out in different institutions and in-company, courses oriented to graduates, designers, engineers and experienced professionals.

Tailored Training

The most effective training is one that satisfies the needs of each company's business focus and deliverables. **We adapt our training programs to each specific requirement, offering bespoke solutions for each need.** The result, 100% tailored programs, developed to maximize the time investment and deliver tangible and intangible returns to the work teams.

After an assessment phase, a tailored training plan is designed jointly with the client. This plan is specifically tailored to meet the client's needs, focusing on effectively enhancing the capabilities of the work team. **We provide practical, dynamic and hands-on training,** making available the best instructors in each subject.

Arveng Training

Arveng Training has developed effective and practical solutions for today's industrial challenges by delivering specific, high-quality engineering courses utilizing three different approaches: classroom, online, and tailored training. We are proud to have taught more than 500 classroom courses, 1800 online courses, and over 200 in-company sessions. Our training activities have benefitted over 6000 professionals, our greatest accomplishment of all.

We consider our students' time to be of utmost importance. For this reason, all our courses have been designed with the main objective of quickly improving the professional skills of the participants through our expert instructors in different disciplines. **We stimulate creativity, innovation, and initiative to make the participants inquisitive, bringing good engineering practices and lessons learned to the field, that benefits their professional lives in the long term.**

Our Company

Arveng Training & Engineering SL is a leading company providing Training and Engineering services based in **Madrid, Spain.** Our mission and vision are to be a leading training and engineering services company, providing our clients with the best in the sector. We are a team of highly motivated, talented, highly qualified professionals with over 20 years of experience. We aim to exceed expectations by offering efficient, innovative, cost-effective, and transparent services.

Established in July 2010, mainly oriented to the industrial sector, from the very beginning Arveng has always worked with closeness, responsibility, and commitment in all areas of activity.

Through experience gained by partaking in multidisciplinary engineering projects in sectors such as Petrochemical, Energy Generation, and Industrial, we provide answers and solutions to concrete requirements, making the effort to build long-lasting and mutually beneficial relationships.