DIGITAL SOLUTIONS

TRAINING CATALOGUE

Asset integrity management

Synergi

Global training
Our increased focus on global training, including basic and advanced user courses, and the high level of expertise of our team of instructors, benefit users in all regions. Our training catalogue lists our many and varied technical courses and workshops spread across all brands. In addition we run customer specific courses. Many of these courses are held jointly by our own software support team and by engineers from DNV GL, who bring essential expertice domain

Want to know more
Contact support and training
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E-mail: software.support@dnvgl.com
www.dnvgl.com/software-training

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RBI ONSHORE TRAINING ACCORDING TO API 580/581

Course code: SY-10
Duration: 4 days

Prerequisite:
This course is suitable for new users and for more experienced users who have not attended a formal training course or would like a refresher course. A working knowledge of asset integrity management for new or ageing pressure and process equipment and piping is recommended. Alternatively, experience of design, fabrication, operation or maintenance of pressure systems and associated codes/standards is recommended.

Description
The training course will include an in-depth understanding of the RBI methodology accordaning to API 580/581, hands-on exercises and practice on a case study using the Synergi Plant RBI Onshore software.

The following topics are covered:
- API 580/581 Methodology
- Probability of Failure and consequence of failure calculation background
- Data gathering and organization
- Risk calculation and interpretation of results
- Formulation of inspections plans
- Process plant RBI case study to apply acquired knowledge

The Synergi Plant RBI Onshore software will be used throughout for hands-on examples and the case study.

Learning objectives
This API 580/581 course will help you apply RBI technology using the Synergi Plant RBI Onshore software. Upon completion of the course you will be able to do detailed risk calculations and produce an optimized inspection plan based on risk in accordance with API 580/581. The exercises are based on typical pressure vessels, heat exchangers, piping and pressure relief devices.

Target group
The course is aimed at the downstream and midstream onshore refining, petrochemicals, and gas processing industries. It is suitable for integrity, materials or corrosion engineers, non-destructive testing engineers and in-service inspectors, plant and maintenance engineers and planners; and associated engineering contractors and consultants.

SYNERGI PLANT FOR RBI OFFSHORE USING DNVGL–RP–G101 AND API 580

Course code: SY-11
Duration: 4 days

Prerequisite:
This course does not require participants to be licensed user of the RBI Offshore module in Synergi Plant. A working knowledge of asset integrity management for new or ageing pressure and process equipment and piping is recommended. Alternatively, experience of design, fabrication, operation or maintenance of pressure systems and associated codes/standards is recommended.

Description
This is and introductory course for the application Risk Based Inspection (RBI) to equipment in oil and gas production. The course will teach you the qualitative and quantitative RBI methodology within DNVGL-RP-G101 and API 580.

The course includes practical exercises including:
- Damage mechanism assignment
- Probability of failure
- Consequence of failure and risk calculations
- Interpretation of assessment results
- Formulation of inspections plans

The focus of DNVGL-RP-G101 is upstream, offshore pressure systems where escalating failure consequence are an important safety consideration, but with the use of appropriate data it can be applied onshore as well.

Learning objectives
This DNV-RP-G101 course will help you apply RBI technology. Upon completion of the course you will understand inspection planning via probability and consequence of failure in accordance with DNVGL-RP-G101. This is the only published recommended practice for risk based inspection of offshore, upstream topside static mechanical equipment. The exercises are based on typical pressure vessels, heat exchangers and piping.

Target group
The course is aimed at the offshore and onshore upstream oil and gas production sectors. It is suitable for integrity, materials or corrosion engineers, non-destructive testing engineers and in-service inspectors, plant and maintenance engineers and planners; and associated engineering contractors and consultants.

SYNERGI PLANT FOR RBI ONSHORE USING API 581 AND API 580

Course code: SY-12
Duration: 3 days

Prerequisite:
This course does not require participants to be licensed user of the RBI Offshore module in Synergi Plant. A working knowledge of asset integrity management for new or ageing pressure and process equipment and piping is recommended. Alternatively, experience of design, fabrication, operation or maintenance of pressure systems and associated codes/standards is recommended.

Description

This iis an introductory course for the application Risk Based Inspection (RBI) to safety critical equipment in onshore refinery, petrochemicals and gas processing. The course will teach you the qualitative and quantitative RBI methodology within API 581 and API 580.

The course includes practical exercises including:
- Damage mechanism assignment
- Probability of failure
- Consequence of failure and risk calculations
- Interpretation of assessment results
- Formulation of inspections plans

The training applies to the refining, petrochemical and oil and gas industries.

Learning objectives

The API 581 course will help you apply RBI technology. Upon completion of the course you will understand inspection planning via probability and consequence of failure in accordance with API 581. API 580 presents guidelines for developing a RBI programme whereas API 581 provides quantitative RBI methods to establish an inspection programme. The exercises are based on typical pressure vessels, heat exchangers and piping.

Target group

The ccourse is aimed at the downstream and midstream onshore refining, petrochemical, gas processing industries. It is suitable for integrity, materials or corrosion engineers, non-destructive testing engineers and in-service inspectors, plant and maintenance engineers and planners; and associated engineering contractors and consultants.

ATMOSPHERIC STORAGE TANK (AST) RBI TRAINING

Course code: SY-13
Duration: 2 days

Prerequisite:
An evaluation version of Synergi Plant - RBI AST will be installed on the participants computers in advance.

DESCRIPTION
This course will give a brief introduction to risk based inspection (RBI) management and how RBI supports an effective inspection management process, combined with hands-on exercise with the basics of calculations, methodologies and standards for storage tank RBI. You will understand the RBI AST principles and be able to conduct RBI for an aboveground storage tank. Synergi Plant - RBI AST software will be used for the calculations.

The following topics are covered:
- Introduction to inspection management and work processes
- Introduction to RBI AST methodology
- AST bottom assessment - consequences, internal and external thinning, risk and inspection planning according to API 581
- AST shell assessment features (AST consequences, internal and external shell thinning, internal stress corrosion cracking and brittlefracture) according to API 581
- AST Roof EEMUA 159 evaluation model
- RBI AST data management
- Case studies and exercises with new tanks and old tanks with inspection history

LEARNING OBJECTIVES
Give you insight to widely recognized principles for storage tanks inspection management. Understand the RBI AST principles and basic methodology. Perform standardd RBI AST calculations with concrete examples. Establish optimized inspection plans based on risk targets.

TARGET GROUP
It is suitable for integrity, inspection and maintenace engineers and managers considering application of RBI storage tanks.

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DNV GL
DNV GL is a global quality assurance and risk management company. Driven by our purpose of safeguarding life, property and the environment, we enable our customers to advance the safety and sustainability of their business. We provide classification, technical assurance, software and independent expert advisory services to the maritime, oil and gas, power and renewables industries. We also provide certification and supply chain services to customers across a wide range of industries. Operating in more than 100 countries, our experts are dedicated to helping customers make the world safer, smarter and greener.

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