PETROSYNC
Synchronize Your Skill and Knowledge

PetroSync Global Pte Ltd | PetroSync | PetroSync

Reserve early to avoid disappointment!

API 580 & API 581

Risk-Based Inspection & Base Resource Document

Sculpt Your Skills and Optimize Your Inspection Methods and Frequencies

17th - 21st August 2026 at Kuala Lumpur, Malaysia

30th November - 04th December 2026 at Jakarta, Indonesia

RESERVE NOW



INSTRUCTOR

Chintamani M. Khade

International Certified Trainer

SUMMARY OF PROFESSIONAL ACHIEVEMENT

- API 580 - Specialist Risk Based Inspection - Certificate #50552
- API 570 - Authorized Process Piping Inspector - Certificate #38775
- API 510 - Authorized Pressure Vessel Inspector - Certificate #36311
- API 653 - Authorized Aboveground Storage Tank Inspector - Certificate #27295
- API 571 - Specialist Materials & Damage Mechanisms - Certificate #50420
- API SIRE - Authorized Source Inspector Rotary Equipments - Certificate #63572
- NDE Level III (ASNT) (UT, MT, RT, PT, VT, LT, ET, & IR) - Certificate #126348
- LEvel III (EN 473 / ISO 9712) (UT, MT, PT, RT & VT) - Cert. No 07-502-04964
- Welding Inspector (TWI) (CSWIP 3.1) - Certificate #58523

PARTIAL CLIENT LIST

- RIL (Reliance Industries Limited)
- GASCO
- Bangchak Petrochemicals
- Bharat Oman Refinery Limited
- Standard Rolling Mills
- Dacon Inspection Services, Thailand
- Cryeng Australia
- ZADCO
- Qatar Petroleum, Massaid Refinery
- Ras Gas
- QAFCO

ATTEND THIS INTENSIVE COURSE TO MASTER:

- Introduction to the basic concept of Risk-Based Inspection and the basis for the API 580 RBI program and methodology.
- Understand the purpose, scope, and examination of the critical steps in the RBI process.
- Overview of deterioration mechanisms and failure modes affecting the plant equipment.
- Introduction to the risk-based inspection priority matrix and the means to utilize its results in determining inspection priorities.
- Introduction to the ISO risk plot and its use, especially in combination with the risk-based inspections priority matrix.
- Discussion of risk-based inspection documentation and record-keeping needs.
- Understanding of the basic concepts of risk acceptance, risk assessment, risk perception, risk mitigation and managing residual risk.

Limited Attendees
The course has limited seats to ensure maximum learning and experience for all delegates.

Certificate of Attendance
You will receive a Certificate of Attendance bearing the signatures of the Trainer upon successful completion of the course. This certificate is proof of your continuing professional development.

Interactive Training
You will be attending training designed to share both the latest knowledge and practical experience through interactive sessions. This will provide you with a deeper and more long-term understanding of your current issues.

High Quality Course Materials
Printed course manual will provide you with working materials throughout the course and will be an invaluable source of reference for you and your colleagues afterward. You can follow course progress on your laptop with soft copies provided.

API 580 & API 581 : Risk Based Inspection (RBI) & Base Resource Document

17th - 21st August 2026 at Kuala Lumpur, Malaysia | 30th November - 04th December 2026 at Jakarta, Indonesia

PROGRAM OVERVIEW

The course is based on API RP 580 Risk-Based Inspection and API Publication 581, Base Resource Document. The course first explains feasible means and alternatives for achieving a successful RBI program without undue complications. This course deals with RBI framework and methodology in a simple straight forward manner to establish and implement a risk-based inspection program best suited for the company objectives.

Its utility is based on the premise that a few vital equipments in a process plant contribute a majority of the risk. Consequently, if these few equipments can be identified, then testing and inspection can be focused on them rather than several low-risk items. RBI helps to prioritize their equipment for inspection, optimize inspection methods and frequencies, and develop effective inspection plan commensurate with the risk contribution and equipment condition.

The course is focused on methodology of actual implementation of RBI in Oil and Gas industry. It covers advanced knowledge of RBI implementation in addition to the knowledge required for passing the Certification Examination. The candidates should possess at least one certification out of API 510, API 570 or API 653 certifications.

AUDIENCE

This course will specifically benefit Engineers, Supervisors, and Managers and Individuals who are responsible for implementing risk- based inspection programs within their own company or plant facility such as Mechanical integrity, Equipment Reliability, and Inspection Personnel who are responsible for maintaining the serviceability of process plant equipment based on a cost-effective inspection program.

Each attendee must bring a Laptop Computer with Microsoft operating system and Scientific Calculator

PROGRAM SCHEDULE

08:00	Registration (Day1)
08:10 – 10:00	Session I
10:00 – 10:15	1st Tea Break
10:15 – 12:30	Session II
12:30 – 13:30	Lunch Break
13:30 – 15:00	Session III
15:00 – 15:15	2nd Tea Break
15:15 – 16:00	Session IV
16:00	End of Day

**Schedule may vary for each training*

Supported by

CONFERENCE locate.com WorldOils OilVoice ECF 中国能源 EnergyChinaForum.com

API 580 & API 581 : Risk Based Inspection (RBI) & Base Resource Document

17th - 21st August 2026 at Kuala Lumpur, Malaysia | 30th November - 04th December 2026 at Jakarta, Indonesia

COURSE AGENDA

Day 1

- **Bench Mark Quiz**
- **Introduction to RBI**
- **Introduction To API 580**
- **API 580 Section 1 : Scope and Applications**
- **API 580 Section 3 : Important Definitions**
- **API 580 Section 4 : Basic Risk Assessment Concepts**
  - What is Risk
  - Risk Management and Risk Reduction
  - The evolution of Inspection Interval and Due dates
  - Overview of Risk Analysis
  - Inspection Optimization
  - Relative Risk VS Absolute Risk
- **API 580 Section 5 : Introduction to Risk Based Inspection**
  - Key Elements of RBI Program
  - Consequence and Probability for RBI
  - Types of RBI Assessment
- **API 581 Edition 2000 - Case Study on Qualitative Analysis**

Day 2

- **API 580 Section 5 : Introduction to Risk Based Inspection**
  - Precision VS Accuracy
  - Understanding how RBI can help to manage operating Risk
  - Management of Risk
  - Relationship between RBI and other Risk Based and Safety Initiatives
  - Relationship between Jurisdictional requirement
- **API 580 Section 6 : Planning the RBI Assessment**
  - Getting Started
  - Establishing Objectives and Goals of RBI
  - Initial Screening
  - Establishing Operating Boundaries
  - Selecting a type of RBI
  - Estimating Resources and Time required
- **API 581 – 2016 - Part 1 – Inspection Planning using API RBI Technology**
  - Probability of Failure
    - Generic Failure Frequency
    - Management Systems Factor
    - Damage Factors
  - Consequence of Failure
    - Level 1 Analysis
    - Level 2 Analysis
  - Risk Analysis
    - Determination of Risk
    - Risk Matrix
  - Inspection Planning Based on Risk Analysis
    - Risk Target
    - Inspection Effectiveness
    - Inspection Planning
- **API 581-2016 – Part 2 – Determination of Probability of Failure in an API RBI Assessment**
  - Determination of Probability of Failure
  - Damage Factor Combination for Multiple Damage Mechanisms
  - Inspection Effectiveness Category
  - THINNING DAMAGE FACTOR
  - SCC DAMAGE FACTOR – CAUSTIC CRACKING
  - SCC DAMAGE FACTOR – SULFIDE STRESS CRACKING
  - SCC DAMAGE FACTOR – HIC/SOHIC-H2S
  - SCC DAMAGE FACTOR – CLSCC
  - CUI DAMAGE FACTOR – FERRITIC COMPONENT
  - PIPING MECHANICAL FATIGUE DAMAGE FACTOR
  - HTHA DAMAGE FACTOR
- **Case Studies and Discussions on Probability of Failure**

Day 3

- **Case Studies and Discussions on Probability of Failure (continued)**
- **API 580 Section 7 : Data and Information Collection for RBI Assessment**
  - RBI Data needs
  - Data Quality
  - Codes and Standards – National and International
  - Sources of Site-specific Data and Information
- **API 580 Section 8 : Damage Mechanism and Failure Modes**
  - Damage Mechanisms
  - Failure Modes
  - Accumulated Damage
- **API 580 Section 9 : Assessing Probability of Failure**
  - Unit Measure of Probability Analysis
  - Types of Probability Analysis
  - Determination of POF

API 580 & API 581 : Risk Based Inspection (RBI) & Base Resource Document

17th - 21st August 2026 at Kuala Lumpur, Malaysia | 30th November - 04th December 2026 at Jakarta, Indonesia

Day 4

- **API 581- 2016 -Part 3 Consequence of Failure**
  - Consequence Analysis – Level 1
    - Determine Representative Fluid and Associated Properties
    - Release Hole Size Selection
    - Release Rate Calculations
    - Estimate the Fluid Inventory Available for Release
    - Determine the Release Type (Continuous or Instantaneous)
    - Estimate the Impact of Detection and Isolation Systems on Release Magnitude
    - Determine the Release Rate and Mass for Consequence Analysis
    - Determine Flammable and Explosive Consequences
    - Determine Toxic Consequences
    - Determine Non Toxic, Non Flammable Consequences
    - Determine the Component Damage and Personnel injury Consequence Areas and Final Consequence Areas
    - Determine the Financial Consequences
- **Case Studies and Discussions on Consequence Analysis – Level 1**
- **API 580 Section 10 : Assessing Consequence of Failure**
  - Types of Consequence Analysis
  - Unit Measure of Consequence Analysis
  - Consequence effect Categories
  - Determination of Consequence
- **API 580 Section 11 : Risk Determination, Assessment and Management**
  - Determination of Risk
  - Risk Management Decisions and Acceptable Level of Risk
  - Risk Presentation
  - Risk Management

Day 5

- **API 580 Section 12: Risk Management with Inspection Activities**
  - Managing Risk by Reducing Uncertainty Through Inspection
  - Identifying Risk Management Opportunities from RBI Results
  - Establishing an Inspection Strategy Based on Risk Assessment
  - Managing Risk with Inspection Activities
  - Managing Inspection Costs with RBI
  - Assessing Inspection Results and Determining Corrective Action
  - Achieving Lowest Life Cycle Costs with RBI
- **API 580 Section 13: Other Risk Management Activities**
- **API 580 Section 14: Reassessment and Updating RBI**
  - RBI Reassessments
  - Why Conduct an RBI Reassessment?
  - When to Conduct an RBI Reassessment
- **API 580 Section 15 : Roles, Responsibilities , Training and Qualifications**
  - Team Approach
  - Team Members , Roles and Responsibilities
  - Training and Qualifications for RBI Application
- **API 580 Section 16 : RBI Documentation and Record Keeping**
- **API 580 Section 17 : Summary of Risk Based Inspection Pitfalls**
- **Discussion**

API 580 & API 581 : Risk Based Inspection (RBI) & Base Resource Document

17th - 21st August 2026 at Kuala Lumpur, Malaysia | 30th November - 04th December 2026 at Jakarta, Indonesia



INSTRUCTOR

Chintamani M. Khade

International Certified Trainer

Chintamani M. Khade is a specialist on Materials & Damage Mechanisms. He has more than 19 years experience as Department Head of NDT, Welding Inspection, In Service Inspection in India, Middle East, Southeast Asia & Africa.
Currently, he is the technical director of Empirical Technocrats.

He conducted training for various API Certification Preparatory, NDE methods, ASNT & ISNT Level III, advanced NDT Methods, welding inspection, Construction codes, ASME Sections II, Section IX, Section V, ASME Sec. VIII div. 1, ASME B31.1, ASME B31.3, AWS D1.1, UT, MT, PT, VT, RT & Basic for ISO 9712 level 2 & level 3.

He has been a team leader of 100+ multidiscipline NDT technicians, metallurgists & Welding inspectors during various shutdown jobs in Qatar Petroleum, Massaid refinery, Qatar in March – June 2005, March - April 2009 & October November 2009. Executed in service inspection of nearly 800 pressure vessels, Static & rotary equipments, Plant process piping & storage tanks as shutdown coordinator.

Summary of Professional Achievement:

- API 580 - Specialist Risk Based Inspection - Certificate #50552
- API 571 - Specialist Materials & Damamge Mechanisms - Certificate #50420
- API 653 - Authorised Aboveground Storage Tank Inspector - Certificate #27295
- API 510 - Authorised Pressure Vessel Inspector - Certificate #36311
- API 570 - Authorised Process Piping Inspector - Certificate #38775
- API SIRE - Authorised Source Inspector Rotary Equipments - Certificate #63572
- NDE Level III (ASNT) (UT, MT, RT, PT, VT, LT, ET & IR) - Certificate #126348
- Level 3 (EN 473 /ISO 9712) (UT, MT, PT , RT & VT) - Cert. No 07-502-04964
- Welding Inspector (TWI) (CSWIP 3.1) - Certificate #58523

Partial Client List:

- RIL - Reliance Industries Limited
- GASCO
- Bangchak Petrochemicals
- Bharat Oman Refinery Limited
- Standard Rolling Mills
- Dacon Inspection Services, Thailand
- Cryeng Australia
- ZADCO
- Qatar Petroleum, Massaid Refinery
- Ras Gas
- QAFCO
- Oman LNG
- Shell
- ExxonMobil
- Total
- Chevron
- EQUATE
- GASCO
- ATB Caldereria sPa.,Italy
- Hindustan Lever Ltd.
- Tororo Cement Industries Ltd., Tororo, Uganda
- Qatar Fuel Additives CO.
- ADGAS, DAS ISLAND, Abudhabi - UAE
- L&T Hazira
- Ranoli
- Tata projects Ltd.,
- JP Industries Ltd.,
- Premier Ltd.
- McNally Bharat Engg. Co. Ltd.,
- Ravi Industries
- Pune & Sprklet Engineering, Mumbai
- Pudmjee Paper mills, Ltd.,
- Thermax Ltd., Pune
- Walchandnagar Industries Ltd.,
- TEMA Exchangers India Ltd., Gujrat
- Century Enka Ltd., Pune
- Rajashri Polyfils Gujrat
- Garware Polyestrs Ltd, Aurangabad
- Larson & Toubro Ltd. Gujrat
- Essar Oil Ltd., Gujrat
- Intervalve (I) Ltd, Pune
- Oman Methanol Co., Sohar, Oman
- Emirates Industrial Laboratory, Dubai, UAE
- Olayan Descon Engg. Co., Jubail & Yanbu works KSA
- HEMRL, ISRO
- TPT petrochemical Thailand
- Polyprima-Indorama, Indonesia
- Numaligarh Refineries Ltd. Assam.
- Sparklet Engineers
- Al Shabia, Dubai
- TUV SuD, Jubail
- KSA
- Yantrik Engineers
- NLNG
- NNPL
- Injo technical Services

INVESTMENT PACKAGES

Please checklist the package that you are attending!

	API 580 & 581 Risk-Based Inspection and Base Resource Documents SCHEDULES	LOCATION	PRICE
☐	17th - 21st August 2026	Kuala Lumpur, Malaysia	USD 3,450
☐	30th November - 04th December 2026	Jakarta, Indonesia	USD 3,450

** All prices are subject to change without notice and are not guaranteed, except that prices for an order that have been accepted by PetroSync is not subject to change after acceptance*

** Price is nett excluding Withholding Tax if any and will be quoted separately. Please send us the withholding tax payment receipt.*

** We can help to register API exam certification which incur **USD 100** administration fee per application.*

** For API Exam late application, there will be additional **USD 200** borne by the participant*

DELEGATE DETAILS

1st Delegate Name _____ Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Others ☐

Direct Line Number: _____ Email: _____

Mobile Number: _____ Job Title: _____

Department: _____ Head of Department: _____

2nd Delegate Name _____ Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Others ☐

Direct Line Number: _____ Email: _____

Mobile Number: _____ Job Title: _____

Department: _____ Head of Department: _____

3rd Delegate Name _____ Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Others ☐

Direct Line Number: _____ Email: _____

Mobile Number: _____ Job Title: _____

Department: _____ Head of Department: _____

**Please fill all the details including mobile number. This help us to contact participant if they are late in class or if there is any urgent update (through whatsapp/call)*

INVOICE DETAILS

Attention Invoice to: _____

Direct Line Number: _____ Fax: _____

Company: _____ Industry : _____

Address: _____ Postcode: _____

Country: _____ Email: _____

Please note:
- Indicate if you have already registered by Phone ☐ Fax ☐ Email ☐ Web ☐
- If you have not received an acknowledgement before the training, please call us to confirm your booking.

PAYMENT METHODS

☐ **By Credit Card**

☐ **By Direct Transfer : Please quote invoice number(s) on remittance advice**

PetroSync Global Pte Ltd Bank details:
Account Name : PetroSync Global Pte Ltd
Bank Name : DBS Bank Ltd
Bank Code : 7171 • Bank Swift Code : DBSSSGSGXXX • Branch code : 288
Account No : 0288-002682-01-6-022 (USD)
Bank Address : 12 Marina Boulevard, Level 3. Marina Bay Financial Centre Tower 3. Singapore 018982

All bank charges to be borne by payer. Please ensure that PetroSync Global Pte Ltd receives the full invoiced amount.

Confirmation

I agree to PetroSync's terms & conditions,payment terms and cancellation policy.

Authorized Signature : _____

Date : _____

PAYMENT TERMS : Payment is due in full at the time of registration. Full payment is mandatory for event attendance.

PROGRAMME CONSULTANT

Contact : Cay Aagen

Email : registration@petrosync.com

Phone : +65 3159 0800

TERMS AND CONDITIONS

DISCLAIMER

Please note that trainers and topics were confirmed at the time of publishing; however, PetroSync may necessitate substitutions, alterations or cancellations of the trainers or topics or location (classroom / Virtual). As such, PetroSync reserves the right to change or cancel any part of its published programme due to unforeseen circumstances. Any substitutions or alterations will be updated on our web page as soon as possible.

DATA PROTECTION

The information you provide will be safeguarded by PetroSync that may be used to keep you informed of relevant products and services. As an international group we may transfer your data on a global basis for the purpose indicated above. If you do not want us to share your information with other reputable companies, please tick this box ☐

CANCELLATION POLICY

Delegates who cancel after the training is officially confirmed run by email, are liable to pay the full course fee and no refunds will be granted. You may substitute delegates at any time as long as reasonable advance notice is given to Petrosync.

In the event that PetroSync cancels or postpones or change the trainer or change the training location (classroom / virtual) of an event for any reason and that the delegate is unable or unwilling to attend in on the rescheduled date, you will receive a credit voucher for 100% of the contract fee paid. You may use this credit voucher for another PetroSync to be mutually agreed with PetroSync, which must occur within a year from the date of postponement.

PetroSync is not responsible for any loss or damage as a result of the cancellation policy. PetroSync will assume no liability whatsoever in the event this event is cancelled, rescheduled or postponed due to any Act of God, fire, act of government or state, war, civil commotion, insurrection, embargo, industrial action, or any other reason beyond management control.

CERTIFICATE OF ATTENDANCE

80% attendance is required for PetroSync's Certificate of Attendance

DETAILS

Please accept our apologies for mail or email that is incorrectly addressed.
Please email us at registration@petrosync.com and inform us of any incorrect details. We will amend them

Find us on Social Media:

PetroSync Global Pte Ltd

PetroSync

PetroSync

CHARGES & FEE(s)

- For Payment by Direct TelegraphicTransfer, client has to bear both local and oversea bank

- For credit card payment, there is additional 4% credit card processsing fee.