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# Course: API 653 ABOVE GROUND STORAGE TANK INSPECTOR

Code	City	hotel	Start	End	price	Hours
816	Frankfurt (Germany)	Hotel Meeting	2024-10-28	2024-11-01	5950 €	25

## PROGRAMME SUMMARY

The API 653 Above Ground Storage Tank Certification Preparation course is designed to provide individuals with a basic understanding of above ground storage tank inspection, repair, alteration, and rebuilding.

This training session is meant to provide a thorough overview of the engineering knowledge required for In-Service Storage Tanks, with a focus on the API (Body of Knowledge) syllabus for the stated test.

It contains all of the code parts alluded to by the API 653 committee to the extent that they are required from an inspection standpoint. This preparatory course will define the core purposes of all codes required for study, teach participants how to read code rulings, and build confidence in their ability to make decisions.

## OBJECTIVE

- Prepare for the Certification Exam by learning the primary concepts and technical content of the API 653 Code and other reference codes.
- Reduce the risk of inspection delays caused by regulatory requirements by improving management control of storage tank inspection, repair, alteration, and rebuilding.
- Learn the fundamentals of storage tank design (API 650).
- Learn the valuation of tank shell, bottom, and roof integrity.



- Know how to calculate the thickness based on expected or amended design conditions.
- Know the importance of cathodic protection and tank bottom liner.
- Evaluate and decide on a course of action for the Tank settlement.
- Estimate the tank's remaining life and determine inspection intervals.
- Select the right inspection tools and intervals
- Calculations for re-rating, remaining life, and retirement thickness
- Develop the skills of the trainees and raise their competence in the understanding of the basic principles of API 653 standard for storage tanks testing theory & quality & its applications.
- Development skills in the field of the ( NDT ) testing for materials & welding operations and various derivatives and their physical and chemical specifications and Chemical.

## **WHO SHOULD ATTEND**

- Applicable to all personnel working in the oil, gas and petrochemical industry, and who are involved in the design, procurement, engineering construction, operation, maintenance and inspection of storage tanks and related facilities.
- The training will be extremely valuable to all maintenance engineers, inspectors, managers, corrosion engineers, plant operation engineers, design personnel involved in integrity assessments of in-service tanks, repairs and replacement of old tanks, and preventative maintenance of storage tanks and those who wants to take API 653 certification examination
- Managers, engineers and technicians, and all involved and work-related to inspection & laborites in oil refinery operation of various public institutions and private companies and various ministries.

## **Outline**

### **Module (1) Storage Fundamentals, Design and Construction of a tank (API**



## **650):-**

- Stress levels that are acceptable Design of the shell, roof design, and bottom design
- Shell thickness calculations, bottom plate thickness, roof plates, and nozzle apertures
- Material selection, API 650 impact test requirements, and impact test results
- API 650 Tank Fabrication, Erection, NDT, and Leak Testing Requirements

## **Module (2) Getting to Know the Storage Tank Inspection Code (API 653):-**

- API 653: Introduction, Scope, Definitions, and Organization
- Inspection intervals and inspection scope
- Roof, Shell, and Bottom data review and corrosion assessment
- API 653 Inspection and Testing Practices, Estimation of Corrosion Rate
- Checking for brittle failure
- Various decomposition-prevention measures
- Inspection frequency and scope, data analysis

## **Module (3) Getting to Know the Storage Tank Inspection Code (API 653):-**

- Storage tank repairs, renovations, and reconstruction
- Tank relocation and re-erection, as well as tank bottom replacement
- Using a hot tap on the tank`s shell
- Extensive coverage of material corrosion and degradation (API 571)
- Non-destructive testing (NDT) of tank repairs and leak testing
- Checking for bottom settlement

## **Module (4) Inspection of the storage tank (study of other codes and standards):-**

- Discussions on soil corrosion cathodic protection methods (API RP 651)



- Storage tank inspection techniques that should be followed (API RP 575)
- Discussions on the lining of storage tank bottoms (API RP 652)
- An overview of ASME Section IX and its provisions
- Qualification of welding procedures and welders, as well as case studies of PQR and WPS inspections

## **Module (5) Discussions on Corrosion Protection & Quality of Welding**

- Discussions on Lining of bottoms of storage tanks (API RP 652)
- Discussions on API RP 577, welding inspection
- Understanding the difference between Inspection and Examination
- Various NDE methods to detect flaws in metals
- Understanding rules imposed by ASME Sec. V for various NDE techniques
- Final examinations Conclusion and Recommendation



**The Scandinavian Academy for Training and Development employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:**

- **Theoretical Lectures:**

- We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.

- **Scientific Assessment:**

- We evaluate trainees skills before and after the course to ensure their progress.

- **Brainstorming and Interaction:**

- We encourage active participation through brainstorming sessions and applying concepts through role play.

- **Practical Cases:**

- We provide practical cases that align with the scientific content and the participants specific needs.

- **Examinations:**

- Tests are conducted at the end of the program to assess knowledge retention.

- **Educational Materials:**

- We provide both printed and digital scientific and practical materials to participants.

- **Attendance and Final Result Reports:**

- We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.

- **Professionals and Experts:**

- The programs scientific content is prepared by the best professors and trainers in various fields.

- **Professional Completion Certificate:**

- Participants receive a professional completion certificate issued by the Scandinavian Academy for Training and Development in the Kingdom of Sweden, with the option for international authentication.

- **Program Timings:**

- Training programs are held from 10:00 AM to 2:00 PM and include buffet sessions for light meals during lectures.