

OJT TRAINING · MECHANICAL STATIC ENGINEER

Storage Tank Design (Manual Calculation) As Per API 650

For : **Mechanical Engineering**

API 650 storage tank training: design oil tanks by manual calculation with real project data.

- 12 trainings
- 66 lessons
- 100% online
- Mentor: Tito Febrianto, ST – Senior Mechanical Static Engineer



ABOUT THIS OJT

Learn straight from real projects with OJT Storage Tank Design (Manual Calculation) As Per API 650

Besides designing Pressure Vessels, a STATIC EQUIPMENT ENGINEER must also be able to design oil storage tanks (Storage Tanks), following API 650.

In practice, the design process uses dedicated software such as TANK, but software is only a tool; without understanding the concept, design errors will happen. That is why, before relying on software, you should first master the manual calculation of Storage Tank design as per API 650.

In this OJT you will learn how to design a Storage Tank as per API 650 in detail through our recorded videos, and practise manual calculations for every part of the Storage Tank using Excel spreadsheets.

At the end of the training you will fully design a Storage Tank using data from a real project.

After this training you are expected to be able to design a storage tank without helper software, and naturally, when you do use software, you will already master the design concept according to API 650.

CURRICULUM

What you'll learn

12 trainings · 66 lessons

1 Welded Tank Introduction 3 lessons
API 650 scope · Standard Reference and Tools · Scope of Design

2 Material Selection 8 lessons
Standard References for Material · Plates · Sheets · Structural Shapes · Piping, Forgings, Flanges · Bolting · Welding Electrodes · Impact Test Requirements

3 Welding & Load Design 7 lessons
Vertical Shell plate joint (figure 5.1) · Horizontal Shell plate joint (Figure 5.2) · Roof joint (Figure 5.3a) · Bottom plate joint (Figure 5.3a,b,c) · Load consideration · Allowable stress · Study case

4 Shell Plate Design (1 foot method) 5 lessons
References · Minimum shell thickness · Allowable stress · Calculation thickness by 1Foot Method · Study Case 1Foot Method

5 Bottom Plate Design 5 lessons
Minimum information data · General information · Annular plate thickness calculation · Annular plate width calculation · Study Case

6 Wind Girder Design 5 lessons
References · Stiffening ring type · Top wind girder · Intermediate wind girder · Study case

7

Roof Design 3 lessons

Type of Roof · Roof Comparison · Roof consideration

8

Shell Opening & Manway Design 8 lessons

References · Opening type · Cover plate and bolting flange · Manway neck · Manhole diameter and bolt circle diameter · Reinforcement · Bolt and Gasket · Study case

9

Nozzle & Fitting Design 8 lessons

References · Opening type · Reinforcement · Bolt and Gasket · Shell nozzle · Flush type cleanout fitting · Flush type shell connection · Study case

10

Shell Design (Variable Design Point Method) 6 lessonsReferences · Calculation thickness by Variable Design Point Method · First Course (t_1) Calculation · Second Course (t_2) Calculation · Upper Course (t_x) Calculation · Study Case

11

Storage Tank With Small Internal Pressure 7 lessons

References · Scope of Design · Permissible Details of Compression Rings · Maximum Design Pressure · Test Pressure Procedure · Design of Roof Plates · Study Case

FP

Final Project 1 lessons

HOW IT WORKS

From first lesson to certificate

- 1 Download all materials from the link we give you
- 2 Watch the video tutorials carefully
- 3 Do the per-component calculation exercises in Excel
- 4 Complete the quiz for each chapter
- 5 Complete the Final Project designing a Storage Tank from the real project data provided
- 6 Consult your Final Project with the mentor via WhatsApp/email
- 7 Prepare the Storage Tank datasheet from your calculation
- 8 Once your project is approved, your certificate is issued

CHOOSE A PACKAGE

SINGLE OJT

OJT Storage Tank Design (Manual Calculation) As Per API 650

Skills required for a role in Storage Tank Design (Manual Calculation) As Per API 650

66 video lessons · real-project case studies · mentor discussion · 100% online

Rp 1.750.000

COMPLETE PACKAGE **Best value**

OJT Mechanical Static Engineer Complete Package

The right choice if your goal is to work as Mechanical Static Engineer: no skill left behind, one single payment.

2 OJT Trainings at once: every skill you need to work as Mechanical Static Engineer.

Pressure Vessel Design (Manual Calculation) As Per ASME Section VIII Div.1	Rp 1.750.000
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Storage Tank Design (Manual Calculation) As Per API 650 (this OJT)	Rp 1.750.000
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~~Rp 3.500.000~~ **Rp 3.000.000** Save Rp 500.000 (14%)



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Questions? Chat on WhatsApp:

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