FACT SHEET (ONLINE)

API 650 – Aboveground Storage Tanks Part I

**What to Expect?**

- **Get familiar** with the code organization and acquire vocabulary and fundamentals
- **Learn** to design and calculate the main parts of an Aboveground Storage Tank
- **Benefit** from Lessons Learned and Best Practices from different international projects

**Methodology**

Available in English and Spanish
Self-guided Hands-On
40 hs Dedication, 60 days Open
Self-paced course
Available 24/7
“Learn by doing” concept
Non-scheduled sessions
Start anytime!
Available on **iPhone / Android**

**Resources Available**

Study Notes
Introductory Videos
Multiple Choice Assignments
Real Data Sheets
Calculation Sheets Included
Extra Material
Instructor Support
Virtual Campus: Schoology

**Who Should Attend?**

This course is intended for graduates (or soon to be), designers, freelancers, technicians and engineers involved in: calculation, design, selection, manufacturing, safety, quality and maintenance of systems and equipment in industrial processes.

Previous knowledge of this subject is not required to attend to the course.

**Training Objectives**

The main objective of this course is to transfer to participants the theoretical and practical skills required in projects, obtained from experience and sound engineering practices.

Storage Tanks design for general applications: Code Organization and Scope, Shell Thickness calculation, Selection of the different parts of Nozzles, Bottom & Annular plates.
Contents

Aboveground storage tanks
Design codes
**API 650 code**
Code organization, Scope
Other applicable codes
**Material selection**
Corrosion types, Corrosion Allowance
Essential properties of materials
Material designation
**Design conditions**
Design loads
Internal and External pressure
Design temperature
**Tank shell design**
Thickness calculation by the 1-foot Method
**Tank bottom design**
Annular ring
**Nozzle Selection**
Standard flanges
Nozzle necks
Reinforcements
Nozzles in tanks

Complementary Parts

**Part II**: Analysis due to Wind, External Pressure, Shell Rings Design and Wind Overturning.

**Part III**: Roof types and Support Structure Design, Seismic & Anchor Bolts Calculations.

All three parts together cover the complete design of a Storage Tank.

Case Studies

**Module 1**: vocabulary, terminology, organization of the code, design conditions and material selection.

**Module 2**: shell thickness calculation according the one-foot method.

**Module 3**: nozzle selection. Design of the different parts to be taken into account.

**Module 4**: design and calculation of bottom and annular plates.

Instructor

**Javier Tirenti**. Senior Mechanical Engineer and Master in Business Administration (MBA). More than 20 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, CEPSA, TUPRAS and SAUDI ARAMCO can be found.

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