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بروجاكس للتدريب والتطوير
Projacs Training and Development

Sewage Networks - Planning and Design

تخطيط وتصميم شبكات مياه الصرف الصحي

16-20 June 2019

Cairo/Egypt

A Member of:



PROJACS ACADEMY



ProjacsAcademy.com



Introduction

The intent and objective of this course is to provide the participants with the information relative to the basic concepts and principles involved with the design, installation, and function of plumbing system including drainage, water supply and central heating system , design, maintenance and management procedures.

It is preferable for participants to bring their projects to make their own design for those projects separately by using elite software program.

Objectives

After attending this course you will be able to:

- Know about design concepts of plumbing system networks for different applications
- How to make a maintenance plan for networks

Course Outline

- General Design procedures
- Plumbing, fire protection, and site systems
- Site work
- Building work
- Cold water supply system
- Central Hot water system
- Boiler and heat exchangers selection
- Calculation forms
- Maintenance plane
- Hydraulic pressure test procedures
- Flushing techniques

Outlines.

Day (1)

Procedures for the design of plumbing work

- Preparation of plumbing drawings

- Items to be checked when completing a project

Plumbing systems

- Conformity with requirements
- Preliminary plumbing utility loads
- Energy conservation possibilities in plumbing systems

Site work

- Drainage systems
- Water supply systems
- Domestic water supply system
- Fire protection system

Day (2)

Building work

- Principles of design
- Drainage system
- Storm-water system
- Vent system
- Laboratory waste-water drainage and vent
- Garage drainage and vent
- Domestic water supply
- Street pressure system
- Boosted pressure system
- Hot water system
- Boiler and heat exchanger selection
- Chilled-drinking water system
- Distilled water system
- Demineralized water system
- Swimming pools
- Decorative pools and fountains

Day (3)

Building work (cont.)

- Gas systems
- Fire stand pipe system
- Sprinkler systems
- Fire extinguishers
- Dry-chemical fire extinguishers
- Foam fire extinguishers
- Compressed air system, pipe sizing and equipment
- Vacuum cleaning system, pipe sizing and equipment
- Gasoline system principles of design
- Insulation principles of design
- Plumbing fixtures

Day (4)

Calculation forms

- Electric connection data sheet
- Storm water drainage
- Water riser sizing
- Water main sizing
- Characteristic curves
- Hot water recirculation system sizing

Actual Project

- **Every participant will have a part from a real project and apply what he knows from this course on the project and make the following:**
- Drainage network
- Water network distributions
- Hydraulic calculations
- Pump room arrangements
- Control stations
- Boiler room arrangement , design and calculations

Day (5)

Maintenance plane preparation outline

- Field check list
- Plumbing drawing check list
- Hydraulic pressure test procedures
- Flushing techniques
- Machine failure trouble shooting table

The Instructor:

Dr. Hatem Sadek

Dr. Hatem is Prof of Fire Fighting Systems, Turbo-machines and Fluid Mechanics in Mechanical Power Engineering who has a long teaching and consulting experience in the area of fluid flow and turbo machines. He has over 26 years experience in the Design of Plumbing, Fire Fighting and HVAC works for consulting offices. He is a senior Consultant and trainer with Projacs International as mechanical head department. He delivered tens of courses covering design methodology, operation, maintenance, and trouble shooting. These courses include compressors and blowers, gas turbines, pumps, alarm systems,

security and CCTV systems, safety topics, pipelines and pumping systems, fire fighting systems and design of HVAC systems.

Throughout Dr. Sadek practical experience he headed and participated in more than 1385 consulting assignments such as design, testing and inspection.

Dr. Sadek has a book in the Basics of Fire Fighting Sprinkler System. It was published and distributed all over Middle East universities. He is also the first Arab Professor who teaches fire-fighting system in a university as a subject and all over the Middle East.

Dr.Sadek is a President of Assosiation of Safety, Disasters, and Fire Fighting Engineers (ASDFE).

Dr.Sadek is a Head of the Mechanical Engineering Division and a member of supreme consultative committee in Egyptian Syndicate of engineers.

Dr. Sadek is a certified member in National Fire Protection Association (NFPA), USA.

Also He is a certified member in Royal Society for the Prevention of Accidents (ROSPA),UK.

Dr.Sadek has many inventions in fire fighting systems registered in World International Property Organization (WIPO) all over 134 countries.

Training Method

- Pre-assessment
- Live group instruction
- Use of real-world examples, case studies and exercises
- Interactive participation and discussion
- Power point presentation, LCD and flip chart
- Group activities and tests
- Each participant receives a binder containing a copy of the presentation
- slides and handouts
- Post-assessment

Program Support

This program is supported by interactive discussions, role-play, and case studies and highlight the techniques available to the participants.

Schedule

The course agenda will be as follows:

- Technical Session 08.30-10.00 am
- Coffee Break 10.00-10.15 am
- Technical Session 10.15-12.15 noon
- Coffee Break 12.15-12.45 pm
- Technical Session 12.45-02.30 pm
- Course Ends 02.30 pm

Course Fees*

- **2,950USD**
**VAT is Excluded If Applicable*

Many Global and international organization with 20 years of experience, fifteen of which as a trainer