Training - Utilities - Environment Management

UTILENV-EN-P | Face-to-face only | 5 days

Utility production processes and equipment (water, steam, electrical power, air) Management of environmental issues (air, water, waste, management system)

Level

Knowledge

Public

Engineers and supervisors from operations and technology departments of Refining/Petrochemical sites

Objectives

Attendees will be able to implement the following skills:

- List the design and optimization criteria of a utility production scheme (steam, electricity, water, air) with regard to environmental constraints
- Identify operational optimization points for utility units and networks, taking into account environmental constraints

Pedagogical & technical resources

- Videos to demonstrate the implementation of the various technologies
- Practical exercises on the design and/or operation of each utility
- Actual case studies, learning games and quizzes to test participants' learning

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

BFW QUALITY - STEAM PRODUCTION — 1 day

Boiler feed water quality, drawbacks resulting from impurities. Production of boiler feed water. Condensate recovery. Steam pressure levels, user types, network control, turbines, static expansions. Water-tube boiler: water and steam circuits, air and stack (equipment and control). Other boiler types.

ELECTRICAL POWER PRODUCTION & SUPPLY — 0.5 day

© IFPTraining

Quality requirements: power and voltage. Production: generators, gas turbines, cogeneration.
Electrical network: key-equipment, transducers, grounding, back-up supply, safety and reliability.

COMPRESSED AIR GASES — 0.5 day

Process requirements and reasons, air supply criticality. Instrument air: compressors, dryers.
Network, back-up supply. Nitrogen production: design, uses and risks. Uses and risks of O2 and CO2.

INDUSTRIAL WATER NETWORKS — 1 day

Cooling water networks (open, closed, semi-open). Use of sea water, design and operations.
Cooling tower design: key parameters, sizing rules, prevention of operational concerns.
Fire fighting water network: key design elements, main equipment, good practices.

AIR POLLUTION MECHANISMS & PREVENTION — 1 day

Main atmospheric pollutants (CO2, SOx, NOx, VOC). Environmental impacts (global warming, acid rains, ozone).
Measurement of atmospheric pollution, reaction procedures.
Main sources of pollution. Prevention methods: combustion and storage equipment.
Vapor recovery units. Sensitization. Flare systems. Vent and drain networks.

WATER POLLUTION & WASTE WATER TREATMENT — 0.5 day

Pollution sources in refining. Waste water effluent typical specifications. Quality control.
Treatment of oily water (settling, floatation, biological) and process water. Finishing options.

ENVIRONMENTAL MANAGEMENT SYSTEM — 0.5 day

Other pollution mechanisms: soil, solid waste, noise, smells. Prevention and remediation.
Importance of environmental regulations. Environmental impact assessment. ISO 14001 standard.

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com

© IFPTraining