

NPP Basics Secondary Overview

This lecture will present the basics of a nuclear power plant's Secondary circuit, including Water Steam Cycle and Heat Balance diagram, Steam Generator, Steam Turbine, Condenser and Feedwater heating system.

Duration: 3h30

Language: English

Participants: 10 to 30

Location: classroom



Basics

Prerequisites: None

Your profile

Master 1-2 level student in a partnering university, wishing to acquire a global vision of a Pressurized Water Reactor (PWR).

During the training, you will:

- Get overview on Water Steam Cycle and Heat Balance Diagram (example)
- Discover the Steam Generator's main components and their function
- Understand the Steam Turbine Types and Energy Conversion
- Understand the Condenser function
- Discover the Feedwater heating system
- Understand the arrangement of the components

After the training, you will be able to:

- Name the Main Components and state their functions
- Sketch the Steam Turbine Process in the Ts-Diagram
- Describe why the removal of moisture is necessary
- Explain how the cooling water temperature influence the efficiency of the thermodynamic cycle

Advantages

- Face-to-face training

Content

Theoretical module:

- Introduction
- Steam Generator
- Steam Turbine
- Condenser
- Feedwater heating system
- Arrangement of the components
- Conclusion

Evaluation

- None