

PHYSICA

Illustration on 1300MWe PWR¹

Training path: SYSTEMA/ ELECTRA/ PHYSICA/ OPERA

Duration: 5 days (35 hours)

Language: French – English

Participants: 08 – 12

Location: Paris, other location on request

Level: Advanced

Contact: formation.reacteurs@framatome.com

You are:

An engineer or technician having already acquired a good experience of PWR and willing to deepen her/his knowledge of physical phenomena inherent to accidental transients

Prerequisites:

Basic knowledge of the 1300MWe PWR main systems

During the training you will:

- Study physical phenomena in abnormal or accidental situations
- Get to know 1300MWe PWR response in abnormal or accidental situations

After the training, you will be able to:

- Explain the dynamics and interactions of requested systems during 1300MWe PWR accidental transients

Course strengths:

- Involvement of specialists and experts
- Use of simulator
- Knowledge sharing

Program

Theoretical learning

- LOCA²
- Reactivity accident

- Loss of coolant accident during shutdowns
- Secondary accidents MSLR³, MFWLR⁴ and SGTR⁵
- Transients without reactor trip ATWT⁶
- Probabilistic approach to safety
- Severe accidents

Applications on simulator

- Natural circulation (thermosiphon)
- LOCA transients
- MSLR, MFWLR and SGTR transients
- ATWT
- Physical phenomena in deteriorated situation

¹ Pressurized Water Reactor

² Loss of coolant accident

³ Main Steam Line Rupture

⁴ Main FeedWater Line Rupture

⁵ Steam Generator Tube Rupture

⁶ Anticipated Transients Without Trip