



SOTERIA TRAINING SCHOOL

Valencia | 3-7 September, 2018

AGENDA

SOTERIA TRAINING SCHOOL DAY 1

Monday 3rd September

SESSION 1: REACTOR PRESSURE VESSELS (RPV)

9:00 – 9:45	General introduction: RPV
9:45 – 10:30	Irradiation effects on RPV: microstructure & mechanical properties
10:30 – 11:15	Fundamentals on mechanical testing
11:15 – 11:45	Coffee break
11:45 – 12:20	Fundamentals on microstructural techniques
12:20 – 13:00	Surveillance programmes and RPV integrity assessment
13:00 – 14:30	Lunch
14:30 – 15:10	Pressure-temperature limit curves
15:10 – 15:50	RPV Long-term operation (LTO) issues
15:50 – 16:30	Effect of materials heterogeneities on mechanical properties at initial state
16:30 – 17:00	Coffee break
17:00 – 17:45	Effect of materials heterogeneities on microstructure and mechanical properties at irradiated state

SOTERIA TRAINING SCHOOL DAY 2

Tuesday 4th September

SESSION 1: REACTOR PRESSURE VESSELS (RPV)

9:00 – 9:45 Flux effect

9:45 – 10:30 Thermal stability of irradiation induced solute-vacancy-carbon complexes in RPV materials

SESSION 2: INTERNALS

10:30 – 11:15 General Introduction: Internals

11:15 – 11:45 Coffee break

11:45 – 12:20 Fundamentals on corrosion, stress corrosion cracking (SCC)

12:20 – 13:00 Irradiation effects on Internals: microstructure & mechanical properties

13:00 – 14:30 Lunch

14:30 – 15:10 Irradiation assisted stress corrosion cracking (IASCC)

15:10 – 15:50 Engineering models used for plant life management (PLiM)

15:50 – 16:30 Physically-based constitutive equations for irradiated RPV and internals

16:30 – 17:00 Coffee break

17:00 – 17:45 Dose-dependent nano-features and their effect on intergranular cracking susceptibility

SOTERIA TRAINING SCHOOL DAY 3

Wednesday 5th September

SESSION 2: INTERNALS

9:00 – 9:45 Flux effect on the radiation damage of austenitic steels

9:45 – 10:30 Effects of He on IASCC susceptibility

SESSION 3: MULTISCALE MODELLING

10:30 – 11:15 Nanoscale modelling techniques (RPV)

11:15 – 11:45 Coffee break

11:45 – 12:20 Mesoscale modelling techniques (RPV)

12:20 – 13:00 Polycrystal-scale modelling techniques (RPV)

13:00 – 14:30 Lunch

14:30 – 16:30 Interactive Session 1: RPV Embrittlement

16:30 – 17:00 Coffee break

17:00 – 17:45 Interactive Session 1: RPV Embrittlement

SOTERIA TRAINING SCHOOL DAY 4

Thursday 6th September

SESSION 3: MULTISCALE MODELLING

9:00 – 11:15 Interactive Session 1: RPV Embrittlement

11:15 – 11:45 Coffee break

11:45 – 13:00 Interactive Session 2: Internals

13:00 – 14:30 Lunch

14:30 – 16:30 Interactive Session 2: Internals

16:30 – 17:00 Coffee break

Horchata tour and workshop (18:30 – 20:30)

Invited dinner (21:00)

SOTERIA TRAINING SCHOOL DAY 5

Friday 7th September

SESSION 3: MULTISCALE MODELLING

9:30 – 10:15 Nanofeature models due to irradiation for RPV and Internals

10:15 – 11:00 Improvement of the physically-based constitutive equations and the post-irradiation fracture response of RPV steels

11:00 – 11:30 Coffee break

11:30 – 12:15 Fracture models for RPV and for the IASCC of Internals

12:15 – 13:00 **Wrap-up and conclusions**