



*The Materials Ageing Institute
and RosenErgoAtom*

offer

Materials Degradation Course For Engineers in the Nuclear Industry

November 29th to December 3rd, 2021

Moscow Time UTC+3

DIGITAL EVENT





The Materials Ageing Institute (MAI) and RosenErgoAtom offers a Materials Degradation Course for Engineers in the Nuclear Industry

Course Scope

Degradation of reactor components is a significant challenge for the long-term operability and economic viability of the existing fleet of light water reactors (LWR). The objective of this course is to start from the fundamentals and provide an integrated and up-to-date picture of materials management in the current LWR fleet, with a special emphasis on PWR and VVER. Field experience and degradation management approaches will be described and linked to our current understanding of degradation mechanisms of carbon and low alloy steels, stainless steels, nickel-based alloys, concrete and polymers under LWR service conditions.

Selected Topics to Be Covered By Industry Experts

- Design and operation of LWR plants
- LWR environment (water, temperature, radiation, stress)
- Materials used in various components and why, fabrication, welding
- History of corrosion and mechanical degradation in operating plants
- Fundamentals of metallurgy, plant chemistry, corrosion, mechanical damage, irradiation effects and nondestructive testing
- Reactor pressure vessel integrity issues, NDE, degradation, analysis and mitigation
- Reactor pressure vessel internals integrity issues, NDE, degradation, analysis and mitigation
- Steam generator integrity issues, NDE, Degradation analysis and mitigations, repairs and replacements
- Piping and nozzles degradation issues and flow assisted corrosion
- Degradation issues of other systems and components, service water, concrete and polymer materials (cables, seals,...). Electrical equipments (turbines, transformer, electronic devices,...) are not in the scope of the course.

Target Audience: The course is suitable to the engineers and researchers who are new to the plant materials degradation issues, and to the managers who do not have a background in nuclear power plant materials. The course will also be suitable to anyone who wants to refresh the knowledge related to materials aging managements.

The course will be conducted in English. English to Russian translation will be provided

Duration : November 29th to December 3rd, 2021 with one day break on December 1st



Registration

Please click the following link to register

[Registration MDC](#)

Note: If you encounter problems during the registration, please contact: Chaveli.Bitsindou@edf.fr

Fees

Russian participants/Residents in Russia/MAI Members	Free
All Others	200€

