



The Materials Ageing Institute

**in Collaboration with
Suzhou Nuclear Power Research Institute**

**Offers
Materials Degradation Course
For Engineers in the Nuclear Industry**

**April 22-25, 2014
Glamor Hotel, Suzhou, China**





This is the fourth offering of a successful course that has been given by the MAI since 2010. It is designed for the working engineer in the nuclear industry and addresses both PWR and BWR issues.

Course Scope and Objective

Degradation of reactor components is a significant threat to the long-term 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 LWR operations and materials used in the current fleet.

Particular emphasis will be placed on corrosion-related degradation of components.

Field experience and degradation management approaches will be described and linked to our current understanding of the degradation mechanisms of carbon and low alloy steels, stainless steels, nickel-base alloys, concrete and polymers under LWR service conditions.

Selected Topics to Be Covered By Industry Experts

- Design and operation of nuclear power plants
- 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 and its internals integrity issues, NDE, degradation, analysis and mitigation
- Steam generator integrity issues, NDE, Degradation analysis and mitigations, repairs and replacements
- Degradation issues of concrete and polymer materials
- Regulatory and Code/Standards requirements, industry organizations and self regulation
- Long term plant operation (LTO) challenges, 60-80 years plant life extension



Contact

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Venue, Schedule and Registration

The course, in English, will be given at the Glamor Hotel (www.glamorhotel.com) in Suzhou, China (100 Km west of Shanghai). Originally founded in 514 BC, Suzhou has over 2,500 years of rich history, and relics of the past are abundant to this day. The city's canals, stone bridges, pagodas, and meticulously designed gardens have contributed to its status as one of the top tourist attractions in China. Suzhou is often dubbed the «Venice of the East» or «Venice of China».

If interested in participation or have questions, please contact info@themai.org so that additional information can be sent to you as it becomes available. For registration, agenda and additional information, please visit the **www.themai.org**

Costs

Course registration fee is 475 Euros for MAI members, 950 Euros for others and 150 Euros for students. Participants are responsible for their own travel and lodging costs. Lunches and breaks will be provided during the course as part of the course registration fee.

Administrative Office for the Course

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