

Webinar Invite

Join us on June 24, 2021, 8:30 am EDT (UTC-4)

In Service Inspection and Repair Developments for SFRs and Extension to Other Gen4 Systems

In Service Inspection is a major challenge to consider for future Generation IV Reactors safety. Therefore, a large focus of R&D work has been performed since 2010 in France for the Sodium Fast Reactor systems (SFR), mainly dedicated to the inspection of reactor block structures, primary components and circuits, and Power Conversion System main components (Heat Exchangers). In Service Inspection requirements have to be taken into account since the early pre-conceptual design phase, then consolidated through the basic design phase with more detailed specifications leading to increase the inspection tools ability for immersed sodium structures of SFRs, at about 200°C (shut down conditions). Inspection within the main vessel should be performed either with transducers immersed in sodium (with associated in sodium robotics) and with transducers located out of sodium medium. Nondestructive Examination, Telemetry and Imaging are qualified with experimental in-water and then in-sodium testing, using ultrasonic transducers. Experimental results are then compared to simulations using French CIVA software platform results. Repair was also part of this program, with laser system development. This webinar provides a technical overview of this ISI&R program that involves specific international collaborations done through GENIV mainly. Of course, it also benefits to other Gen4 systems.

Free webcast!



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Who should attend:

R&D people, NDE operators, Nuclear regulators, Managers, Students, General public



Dr. François Baqué works as a Senior Expert on inspection for fast reactors at CEA Cadarache IRESNE in the Nuclear Technology Department.

Previously, he was the Manager of R&D activities associated with In Service Inspection and Repair for ASTRID Project at CEA (2010-2019). During this period, he led CEA organizations engaged in the development and qualification of ultrasonic and electromagnetic sensors and related inspection methods. He supervises PhD works on ultrasonic methods in the French University and National Centre for Scientific Research. He is an active participant to the Gen4/SFR-CD&BOP (Component Design and Balance of Plant) group for inspection systems and methods.

Dr. Baqué has published several papers on associated studies and participated in relevant international conferences (ICAPP, FR, ANIMMA...). He was a former Manager of French Sodium School (2004-2010) who developed international activities.

Upcoming Webinars

27 July 2021
Evaluating Changing Paradigms Across the Nuclear Industry, Ms. Jessica Lovering, Winner of the ANS 2020 Pitch your PhD Competition

26 August 2021
Comparing and Contrasting Approaches to Quality Assurance for Nuclear Applications, Mr. Vince Chermak, INL, US

23 SEP 2021
Experimental R&D in Russia to justify Sodium Fast Reactors, Dr. Ukyzina, IPPE