

# **INTEGRITY ASSESSMENT OF REACTOR PRESSURE VESSELS FOR LONG-TERM OPERATION (RPV-LTO)**

**Workshop**

**9 – 10 July 2025**

**Final Call for Participation**

Hosted by

GRS Cologne, Germany

## **1 ORGANISATION AND HOST**

The RPV-LTO workshop will be held on 9 – 10 July 2025 in Cologne, Germany, hosted by GRS.

The location is [GRS](https://www.grs.de), Schwerternegasse 1, 50667 Cologne, Germany, Room 611. Access routes are given on [www.grs.de](https://www.grs.de). Online participation is also possible.

## **2 BACKGROUND AND OBJECTIVES**

In all countries with operating nuclear power stations facing long-term operation (LTO), the safety of the RPV with postulated cracks has to be demonstrated in case of postulated loss of coolant transients in the frame of pressurised thermal shock (PTS) analyses. A PTS assessment is a complex process involving different disciplines, especially thermal hydraulic, structural and fracture mechanics assessments based on plant specific material properties for end of life conditions with consideration of neutron embrittlement. Simplified conservative approaches are reaching their limits in RPV integrity assessments under LTO conditions. In this context the prediction of uncertainties propagation and quantification is a challenging task.

The objective of the RPV-LTO activities of GRS is to assess the differences in country-specific regulatory approaches for the brittle fracture safety assessment of the RPV. For that two generic examples with realistic assumptions have been used as case studies. To limit the effort involved in this complex task, the focus of the work is on comparing the fracture mechanics assessments.

The objective of this workshop is to provide a current overview of the methods used in RPV integrity assessments as well as experiences from their application, taking into account the relevant regulations. Further, discussions between international experts will be settled to share their experience and opinions regarding future activities.

### 3 WORKSHOP PROGRAM

According to the enclosed agenda the workshop will include lectures by international experts on different aspects regarding RPV integrity assessment for LTO conditions. Further, GRS will present preliminary results on two case studies comparing different national approaches. The discussions will be summarized, and conclusions will be drawn based on the presentations of the participants. The presentations will be made available to the participants.

### 4 REGISTRATION

Participants who wish to attend the workshop on-site or online are asked to fill out and submit the registration form under <https://www.grs.de/en/Workshop-RPV-LTO> before the **6<sup>th</sup> of June 2025**. If you have already registered, you can ignore the message.

Participation is free of charge.

If you have any questions on technical aspects you may contact [Juergen.Sievers@grs.de](mailto:Juergen.Sievers@grs.de) (phone: +49 221 2068-747). If you need information on organizational aspects please contact [Nicole.Brueckner@grs.de](mailto:Nicole.Brueckner@grs.de) (phone: +49 221 2068-775).

We recommend to make your hotel reservations via the established booking portals in good time.