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Non-destructive & destructive testing on accelerator's components and materials at the European Spallation Source

Thursday 5 June 2025 15:30 (2 hours)

The European Spallation Source - ESS, has achieved its major construction in Lund, Sweden and is currently continuing in parallel the commissioning of its first systems. ESS aims to install and commission the most powerful proton LINear ACcelerator (LINAC) designed for neutron production and a 5MW Target system for the production of pulsed neutrons from spallation. In support of this ambitious goal, the Mechanical Measurements Lab (MML) at ESS provides an array of investigative solutions such as Resonant Ultrasound Spectroscopy (RUS), Transient Grating Spectroscopy (TGS), Modal Analysis, Structural Health Monitoring (SHM), Strain and Stress Analysis and Destructive Testing, guaranteeing full support to all the groups that have the mandate to install all the different components of the machine. The scope of this contribution is to describe the current status of the undergoing studies, together with the applied methodology and the definition of the testing apparatuses.

Footnotes

Paper preparation format

LaTeX

Region represented

Europe

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