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【705】 Texture analysis capabilities at the neutron strain diffractometer POLDI at PSI

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Neutron strain scanners have been proven to be a key tool for non-destructively determining the crystallographic texture at selected locations within a macroscopic object. Here we will present the implementation of a novel data analysis methodology to perform spatially resolved texture analyses in bulk specimens at POLDI, the Pulse Frame Overlap diffractometer at Paul Scherrer Institute. The method is based on the determination of several incomplete pole figures after splitting POLDI's diffraction detector, with an angular range of 30° , into several units of smaller angular coverage. We will present demonstration experiments on additive manufacturing specimens and Zr-based components of nuclear power plants.

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