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RESEARCH WORK ON THE TITAN FACILITY AT THE WWR-K RESEARCH REACTOR, INP, ALMATY, KAZAKHSTAN

At the moment, all leading international neutron institutes are working on the topic of creating and promoting experimental methods for conducting experiments on neutron radiography and tomography. The method of neutron radiography is to obtain an image of an object, and neutron tomography 3D spatial distribution of an object using neutrons. The difference between neutron radiography and tomography and X-ray tomography: Neutrons penetrate deeper, which allows them to study fairly large objects, depends on the atomic number of the element, interacts well with light elements such as hydrogen, lithium, etc., so neutron radiography and tomography are used to study construction materials, archaeological and geological objects, etc.
In Kazakhstan there is the only neutron radiography and tomography facility TITAN (Transmission Imaging with ThermAl Neutrons) at the WWR-K research reactor, INP, Almaty, Kazakhstan.
This paper will show the technical characteristics of the TITAN facility and will show examples of its use in applied research.

Section

Energy and materials science (Section 2)

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