

## FAST NEUTRON IRRADIATION FACILITIES IN MARIA REACTOR

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The MARIA reactor is well suited to material testing by thermal neutron treatment. Beside of that some fast neutron irradiation facilities are operated in MARIA reactor as well. One of them is thermal to 14 MeV neutron converter launched in September 2014. Is especially devoted to fusion devices material testing irradiation. The ITER & DEMO research thermonuclear facilities are to be run using the deuterium - tritium fusion reaction. Fast neutrons (of energy approximately 14 MeV) resulting from the reaction are essential to carry away the released thermonuclear energy and to breed tritium. However, constructional materials of which thermonuclear reactors are to be built must be specially selected to survive intense fluxes of fast neutrons. Strong sources of 14 MeV neutrons are needed if research on resistance of candidate materials to such fluxes is to be carried out effectively. Nuclear reactor-based converters capable to convert thermal neutrons into 14 MeV fast neutrons may be used to that purpose. Such a converter currently under development at the MARIA reactor will be presented.