

ROMANIAN EXPERIMENTAL RESEARCH on FUEL PERFORMANCE

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A B S T R A C T

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One of the main objective of the Institute for Nuclear Research (ICN) - "Nuclear Fuel" R&D Programme is the development of the fuel bundle based on: Natural Uranium (NU), Natural Uranium Equivalent (NUE), Slightly Enriched Uranium (SEU), Recycled Uranium (RU) and Mixed Oxide of Thorium and Uranium.

In this paper a synthetic presentation will be carried out concerning the main irradiation tests performed in TRIGA Research Reactors: type tests (power ramp and overpower), parametric tests (measuring of central temperature and evolution of pressure gas release) and tests on accidental conditions (RIA type). The assessment of the experimental fuel elements performance was done using ROFEM and TRANSURANUS Computer Codes.

The second part of the paper will be dedicated to a rundown of the main irradiation tests that are proposed for 2016 - 2017.