

# International Conference on Fast Reactors and Related Fuel Cycles: Next Generation Nuclear Systems for Sustainable Development (FR17)



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## Sodium testing of fast reactor components

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Fast reactor components are required to work in hostile atmosphere of sodium, high temperature and radiation. Sodium testing of components before installation in reactor is essential for design validation and safe operation of the reactor. Components like Transfer arm, Inclined fuel transfer machine, Control and Safety Rod Drive Mechanism (CSRDM) and Diverse Safety Rod Drive mechanism (DSRDM), Under sodium ultrasonic scanner (USUSS) and Air Heat Exchanger of Safety Grade Decay Heat Removal system etc were sodium tested.

In vessel purification for the primary sodium in future Indian fast breeder reactors is envisaged due to

An Under Sodium Ultrasonic Scanner (USUSS) has been developed for scanning the above core plenum to ensure

Integral testing of Transfer Arm was carried out in sodium at the fuel handling temperature of 200oC for 6

Leak collection trays are provided below the secondary sodium pipe of PFBR. Functionality of one such leak

Two new sodium test facilities have been designed and are being erected for conduction of various componen

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