

# Design Progress of Advanced Fusion Neutron Source for JA/DEMO Fusion Reactor

*Wednesday, October 24, 2018 8:30 AM (4 hours)*

Based on results from the IFMIF/EVEDA project in the Broader Approach (BA) activities, a conceptual design of the Advanced Fusion Neutron Source (A-FNS) in Rokkasho aiming at obtaining material irradiation data up to 20 dpa for a fusion DEMO reactor is presented in this paper. The A-FNS is composed of an accelerator facility with a 40 MeV and 125 mA deuteron beam, a test facility and a post irradiation examination facility. A particular attention in the design is paid on an integration of the test facilities by adopting a newly designed test specimen module for A-FNS. Recently, the nuclear analysis of test module has been progressed to optimize the irradiation of test pieces and then it was clarified that our original module enabled the test pieces to be irradiated uniformly.

## Country or International Organization

Japan

## Paper Number

FIP/P3-6

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**Session Classification:** P3 Posters

**Track Classification:** FIP - Fusion Engineering, Integration and Power Plant Design