



IAEA FEC 201

Contribution ID: 302

Type: Poster

Accomplishment of DEMO R&D Activity of IFERC Project in BA activity and strategy toward DEMO

Friday, 21 October 2016 14:00 (4h 45m)

International Fusion Energy Research Centre (IFERC) has implemented DEMO research and development activities for 10 years under the Broader Approach (BA) activity. Five common issues on blanket technologies were selected and corresponding R&D has been carried out. The accomplishments of R&D were; successful production of reduced activation ferritic/martensitic steel in DEMO scale production technology, preparation of SiC/SiC composite material property handbook as the functional structural material in the advanced blanket concept, a major technical breakthrough on the fabrication of beryllide pebbles as the advanced neutron multipliers, successful fabrication and demonstration of Li rich Li-titanete pebbles as the advanced tritium breeder, and the development of a new scintillation system as a tritium analysis tool and first analyses of retained hydrogen isotope and beryllium on dust particles of JET ITER like wall. Interaction with DEMO design activity reveals the severe needs for further R&D to qualify these developed technologies as the concrete technical background of the DEMO design.

Paper Number

FIP/3-1Ra

Country or International Organization

Japan

Primary author: Dr TANIGAWA, Hiroyasu (Japan Atomic Energy Agency)

Co-authors: Dr ISOBE, Kanetsugu (Japan Atomic Energy Agency); Dr OCHIAI, Kentaro (Japan Atomic Energy Agency); Dr NAKAMICHI, Masaru (Japan Atomic Energy Agency); Dr NOZAWA, Takashi (Japan Atomic Energy Agency); Dr HOSHINO, Tsuyoshi (Japan Atomic Energy Agency)

Presenter: Dr TANIGAWA, Hiroyasu (Japan Atomic Energy Agency)

Session Classification: Poster EX/7, EX/8, TH/5, TH/6, EX/11, TH/9, FIP/3, FIP/4, PD

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