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# Series Production of ITER TF Coil Winding Pack in Japan

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National Institutes for Quantum and Radiological Science and Technology, (QST), as Japan Domestic Agency in ITER, has responsibility to procure 9 ITER Toroidal Field (TF) coils. QST completed series production of the first seven double-pancakes (DP), all of which are for the first TF coil. The target tolerance of impregnated DP, 2 mm flatness, was achieved in all these DPs. These DPs were stacked and ground insulation was wound around the stuck DPs. The impregnation of these stuck DPs to form winding pack (WP) is being prepared. In addition, series production of DPs for later TF coils are being proceeded. Including the first TF coil DPs, Winding of 26 DPs, heat treatment of 21 DPs, fabrication of 16 radial plates (RP), transfer of 16 DPs and cover plate (CP) welding of 13 DPs were completed until end of Feb. 2017. Challenging tight tolerances in conductor length, +/-0.01%, was achieved to enable transfer of heat-treated conductor into RP groove. 1 mm flatness was achieved in RP, whose height and width are 13 m and 9 m. In addition, about 2.5 mm flatness was achieved after CP welding by optimizing welding sequence. The flatness of 2 mm could be achieved for all DPs completed and DPs for the first WP was successfully implemented. These results justify that series production of TF coil DP in Japan is going well.

## Submitters Country

Japan

**Author:** Dr KOIZUMI, Norikiyo (National Institutes for Quantum and Radiological Science and Technology)

**Co-authors:** Dr MATSUI, Kunihiro (National Institutes for Quantum and Radiological Science and Technology); Dr HEMMI, Tsutomu (National Institutes for Quantum and Radiological Science and Technology); KAJITANI, Hideki (National Institutes for Quantum and Radiological Science and Te); Ms NAKAMOTO, Mio (National Institutes for Quantum and Radiological Science and Technology); Mr YAMANE, Minoru (National Institutes for Quantum and Radiological Science and Technology)

**Presenter:** Dr KOIZUMI, Norikiyo (National Institutes for Quantum and Radiological Science and Technology)

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