Contribution ID: **199** Type: **not specified**

FCC Conductor Development in Japan

Tuesday, May 30, 2017 9:00 AM (20 minutes)

A high Jc Nb3Sn conductor development program has been launched jointly by CERN, KEK, Tohoku and Tokai Universities. The scope of the program is to develop, produce in representative lengths and characterize Nb3Sn wire with enhanced characteristics. The final goal is to achieve, in representative unit lengths of material, the following development targets on the basis of magnets performance, for the Nb3Sn conductor:
A non-copper critical current density at 4.2 K and 16 T (Jc(4.2 K, 16 T)) of at least 1500 A/mm2;
A wire diameter of not more than 1 mm;
A fraction of stabilizer to superconductor in the wire of at least 1;
An equivalent diameter of the superconducting Nb3Sn filaments of less than 50 m;
A low electrical resistivity of the copper stabilizer of the wire, i.e. a Residual Resistivity Ratio (RRR) of the copper after wire reaction of above 150.
First R&D conductor has been ordered to a Japanese company and the second order will be placed in April 2017. The performaces of those conductor will be reported in the presentation.

Primary author: OGITSU, Toru

Co-authors: SUGANO, Michinaka; NAKAMOTO, Tatsushi

Presenter: OGITSU, Toru

Session Classification: Conductor