



Contribution ID: 54

Type: **Poster Presentation of 1h45m**

## Mechanical properties of ITER CICC jacket in China

*Wednesday 30 August 2017 13:15 (1h 45m)*

The ITER Cable-In-Conduit Conductor (CICC) used in the superconducting magnet system consists of a cable made of 300 to 1440 strands housed in a stainless steel jacket. China needs to provide six different kinds of conductor. The jackets are circular, square, as well as circle-in-square jackets made of either a very low carbon AISI 316LN and AISI 316L grade stainless steels. The mechanical properties of jacket were tested at room temperature and/or cryogenic temperatures ( $<7$  K) at predefined mechanical deformation and heat treatment condition. The mechanical tests such as tensile strength, fracture toughness, and fatigue crack growth rate were performed. This paper will introduce the results, and compare them among different kinds of jacket.

### Submitters Country

China

**Primary author:** QIN, Jinggang

**Presenter:** QIN, Jinggang

**Session Classification:** Wed-Af-Po3.10

**Track Classification:** F8 - Structural Materials for Magnets