



Contribution ID: 334

Type: **Contributed Oral**

Wed-Mo-Or3-02: Recent status of RE-based High Temperatures Superconductors at Fujikura

Wednesday 2 July 2025 11:30 (15 minutes)

RE-based High Temperatures Superconductors (HTS) are expected to be applied in various fields due to their high in-field critical current (I_c) and mechanical properties.

Fujikura Ltd. has developed high-performance RE-based HTS using Ion Beam Assisted Deposition (IBAD) and Pulsed Laser Deposition (PLD) techniques, and has supplied to various customers for many years.

Fujikura mainly has two types of 2G HTS tapes. One is an artificial pinning (AP) type with HTS layer of EuBCO+BHO and the other is a Non-AP type with GdBCO.

Users can select RE-based HTS suitable for their operation temperature and magnetic field.

Our RE-based HTS has uniform and high I_c characteristics with small lot-to-lot variation. Recently, we have shipped uniform HTS for developing compact fusion energy reactors as a mass-production. Since we have applied a laser slitting technology to fabricate 2-4 mm-width tapes over ten years, our HTS with a crack-free HTS layer perform good mechanical properties. Recently, we also have shipped uniform 1km unit length HTS with 4mm width as a mass-production.

Then, we have expanded HTS production capacity with reliable and excellent quality. In this presentation, recent status and activities of RE-based HTS at Fujikura Ltd. are presented.

Author: DAIBO, Masanori (Fujikura Ltd.)

Co-authors: OHSUGI, Masaki (Fujikura Ltd.); KIKUTAKE, Ryo (Fujikura Ltd.); Dr IIJIMA, Yasuhiro (Fujikura Ltd.); ADACHI, Yutaka (Fujikura Ltd.); FUJITA, shinji (Fujikura Ltd.)

Presenter: DAIBO, Masanori (Fujikura Ltd.)

Session Classification: Wed-Mo-Or3 - REBCO Manufacturing