

Progress in Development and Fabrication of YBCO-Coated Conductors at EHTS-Bruker

Alexander Usoskin

European High Temperature Superconductors GmbH & Co. KG, Siemensstr. 88, D-63755
Alzenau, Germany; e-mail: alexander.usoskin@bruker-ehs.com

Abstract - An overview of recent technical progress in development of YBCO-coated conductor (CC) at EHTS-Bruker is provided. Technological route employed for tape fabrication is based on alternating ion-beam-assisted deposition and high-rate pulsed laser deposition, which were shown earlier to be cost-effective. Following this route, 100m length of YBCO tape was continuously produced with a critical current of 253 A/cm-width. Production equipment with much higher processing speed has been developed and will be installed soon. Galvanic plating of CC with Cu allowed us to improve significantly mechanical and electrical parameters of CCs, reducing, for instance, critical bending radius to 6mm.

Manuscript Submitted September 4, 2007; accepted October 20, 2007; Reference No. ST8;
Category 5