

YBCO Coated Conductor by RABiTS - PLD Process

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High temperature superconductors (HTS) offer a great promise for electrical power applications, most of which require flexible, long lengths of HTS tapes capable of carrying high currents in presence of magnetic fields. Multiple approaches are used to make texture template, buffer layers, and superconducting layer, respectively. Many different combinations of process to make textured template and superconducting layer are used to fabricate long length coated conductor. RABiTS process which is a simple and low cost process, is based on the deposition of an epitaxial oxide buffer layer on a deformation textured metal substrate made by cold rolling and annealing. PLD technique is one of the most popular and versatile process for the deposition of oxide superconducting films. In this study, we fabricated several meters of YBCO coated conductor continuously by combination of RABiTS and PLD process and characterized. The results will be presented together with the detailed manufacturing processing.

keywords : YBCO, coated conductor, RABiTS, PLD

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