

# Mechanical strengths of joints for RE123-RE123 coated conductors and Bi2223-Bi2223 tapes fabricated by CJMB method

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Abstract: We have been suggested a joint method of crystalline joint by melted bulk (CJMB), recently. In current study, a superconducting joint was obtained between RE123 coated conductors and between multi-filamentary Bi2223 tapes with critical current of 21 and 12 A at 77 K, respectively. In this study, the mechanical strength under tension or pressure is investigated for application in magnet, such as NMR. In order to improve the mechanical strength, an Pd alloy sheet with thickness of 0.1 mm is also joined to each wire around the joint part during superconducting joint process. Compared to the screw type fixing jig, it is thin in size and light in weight, and considered to be useful for practical use in magnet, such as installing the joint at inside of coil. The experiment methods and results will be presented in MEM2018 at Andong.