

WBP8-2

Laser scribing of stacked coated conductors laminated with solder

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We have studied the multi-filamentary structure in the stacked coated conductors (CCs) laminated with solder by laser scribing. When the filament-width is comparably narrow with the size of defects, the defects act as origin of filament-I_c degradation. This is the reason for low yield of scribed tapes. The objective of this study is to reduce the probability of the filament-I_c drop. The laser scribing was performed for the specimens that laminated a normal CC to the artificially defect introduced CC. As a result, it was found that a certain critical current can be obtained even in a filament with defects. This work was supported by NEDO.

Keywords: coated conductors, laser scribing