Hysteresis Loss of YBCO Thin Film Strip with Filamentary Structure

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For ac applications a detailed understanding of the AC power losses associated with different conductor configurations is of crucial importance. YBCO thin films were divided into parallel filaments with widths of 1, 2, and 4 mm to reduce hysteresis losses. In this paper the influence of the film width on the hysteresis loss in YBCO thin film strips is discussed. The results are compared with theories describing the behavior of Type II superconducting strips in perpendicular magnetic field.

keywords : YBCO tape, Filament, Magnetization, Hysteresis loss