



MT 26
International Conference
on Magnet Technology
Vancouver, Canada | 2019

Contribution ID: 824

Type: **Poster Presentation**

Tue-Mo-Po2.09-08 [70]: Performance Degradation of YBCO Tape with Different Stabilizing Layers under Cyclic Mechanical Stress

Tuesday, 24 September 2019 08:45 (2 hours)

High temperature superconducting tapes are subject to periodic stresses and strains during AC applications, which may cause performance degradation of HTS tapes. In response to this problem, we built a periodic stress fatigue test platform for HTS tapes, and tested the critical current degradation characteristics of YBCO tapes with two different stabilizing layers under periodic stress. The causes of the critical current degradation of YBCO tape are analyzed. The effect of stabilizing layer materials on the fatigue properties of YBCO tapes are also discussed.

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Session Classification: Tue-Mo-Po2.09 - REBCO Wires & Cables I