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## Suppression of persistent-current magnetization of Nb<sub>3</sub>Sn strands by transport current

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For Nb<sub>3</sub>Sn strands used in magnets, persistent-current magnetization must be carefully considered because it is an important contributor to field errors in magnets. Compared with the usual measurements by magnetometers, the true magnetizations of Nb<sub>3</sub>Sn strands used in magnets are in fact smaller because the transport currents they are carrying suppress their magnetizations. In an earlier work we investigated this influence on a cylindrical wire with constant  $J_c(B)$  by finite element modeling (FEM). In this work we experimentally measure the magnetization of a practical Nb<sub>3</sub>Sn strand with transport current using a lab-designed device equipped with two Hall probe magnetometers. This experiment yields a quantitative estimation of the dependences of the strand magnetization on transport current and magnetic field.

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