

## **The Local Depolarization Field of Two-Dimensional 180° Bloch-Type Boundaries**

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The approximate analytic solution of the constitutive micromagnetic equations yields a selfconsistent expression for the inhomogeneous two-dimensional distribution of the depolarization field within 180° Bloch walls. As a consequence of the assumed constraints, the field distribution is symmetric with respect to the central wall plane and depends, apart from the lateral coordinate, critically upon the actual distance to the crystal surface. The derived results permit a check of the phenomenologic Neel approach as well as a closer discussion of the recently observed wall polarization-reversal process.