

Explicitness of Jiles-Atherton Model Parameters Identified During the Optimization Process

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Abstract. Paper presents analyze on explicitness of parameters of Jiles-Atherton model determined during the optimization process. Recently implemented, differential evolution based method together with two-step optimization process proved, that parameters of Jiles-Atherton model can be determined in reasonable time. However, paper indicates, that in the case of isotropic materials, Bloch domain wall interaction coefficient α has not enough significant influence on the shape of hysteresis loop to be determined during the optimization. As a result, for fundamental physics analyses, α should be estimated on the base of physical properties of magnetic material.