

عنوان مقاله:

An Efficient Eddy-Current Method for Online Determination of the Radius of a Finite-Length Conductive Rod

محل انتشار:

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نویسندگان:

Maryam Shamgholi - *PhD Candidate, Amirkabir University of Technology*

Seyed Hossein Hesamedin Sadeghi - *Professor, Amirkabir University of Technology*

خلاصه مقاله:

In this paper, an efficient method is proposed to determine the radius of a cylindrical conductive rod of finite length, using eddy current data. In this method, first, the output signals of an eddy current probe in the presence of the rod is simulated using a finite element solver. A fast regression method is then introduced for online calibration of the probe, relating the probe output signal to the rod radius for various probe standings. The validity of the proposed method is demonstrated using various simulation and experimental results.

کلمات کلیدی:

Eddy Current Probe, Cylindrical Conductive Rod, Finite Length, Edge Effect, Radius Measurement, Regression method, COMSOL

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