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SIMULATION OF ELECTROMAGNETIC-ACOUSTIC CONVERSION PROCESS UNDER TORSION WAVES EXCITATION. PART 3

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Abstract

Mathematical simulation and calculation of electromagnetic fields in the electromagnetic-acoustic transducer of rational design are performed under non-dispersive torsional waves excitation in tubular electrically conductive ferromagnetic hollow rods of small diameter, taking into account spatial, frequency, energy and material factors. The results of the research can be used to simulate and construct exciting EMATs for measuring, monitoring, and

diagnostic equipment in the energy, nuclear, chemical and other industries in view of ultrasonic studies of ferromagnetic tubular products. References 10, figures 5.

Key words: mathematical simulation, ultrasonic transducer model, non-dispersive torsional waves, tubular product, skin layer, conversion loss.

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