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INFORMATION-MEASURING ELECTROMECHANICAL TRANSDUCERS FOR ASSESSING THE QUALITY OF THE SURFACE OF FERROMAGNETIC METAL ITEMS BY ULTRASONIC WAVES RAYLEIGH

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Abstract

Variants of highly sensitive electromagnetic acoustic transducers for converting electrical energy into ultrasound and conversely are designed. They are intended for the excitation and

reception of high frequency ultrasonic pulses of surface waves in metal products by the use of magnetic and electromagnetic fields. The transducers may be used to detect defects in products as with a flat or curved surface, to carry out a productive control of large areas of surfaces (plates, pipes of large diameter, a large number of produced products and operated objects). The use of such devices is expedient as primary transmitters of information-measuring systems in the power industry, metallurgy, chemical industry, transport and other sectors. Refer ences 7, figures 9.

Key words: electromechanical transducer, electromagnetic acoustic method, ultrasound diagnostics, Rayleigh wave, metal products, quality of surface.

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