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# Radiation pattern of ultrasonic transducer with polymer-powder matching layer

Fazlyyyakhmatov M.

*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

## Abstract

© 2018 IEEE. The work is devoted to the study of the radiation pattern of the ultrasonic transducers. Transducers modified by deposition in the electrostatic field of a protective matching quarter-wave polymer-powder layer. It is shown that the use of the matching layer does not significantly change the radiation pattern of the transducers. The presented results show the dependence of the radiation pattern on the frequency. It is shown that the width of the main lobe of the radiation pattern becomes narrower with an increase in the resonance frequency of the transducer.

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## Keywords

Matching layer, Piezoceramics, Radiation pattern, Ultrasonic transducer

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