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MEASUREMENTS OF THE MECHANICAL BARKHAUSEN NOISE IN FERROMAGNETIC STEELS

ABSTRACT *This paper presents a new technique for measuring the mechanical Barkhausen noise in ferromagnetic steels. We study the effect of tempering time of P91 grade steels on: parameters of mechanical Barkhausen noise, mechanical hardness and magnetic coercivity. All of these quantities are compared. The variations in amplitude of root mean square of mechanical Barkhausen noise for different tempering times are revealed to be greater than those of hardness and coercivity.*

Keywords: *mechanical Barkhausen noise, ferromagnetic steels, NDT, nondestructive testing, tempering*