

# Effect of Heat Treatment on the Hardness and Wear of Grinding Balls

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## Description

The effect quenching and tempering by different regimes on Rockwell hardness and wear processes of grinding balls 50 and 70 mm in diameter made of two melts of chromium-molybdenum cast iron is studied. The heating temperature for quenching is 850, 950, and 1050°C; the tempering temperature is 250, 400, and 600°C. Iron is analyzed in an electron microscope. Diffraction patterns are obtained. A model of cast iron wear is suggested and compared to the Davis model and to experimental results. An optimum heat treatment regime is proposed.