

Structural and microstructural characterization of an as-cast chromium white iron used for the production of grinding balls

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Description

Structural and microstructural characterization of an as-cast chromium white iron used for the production of grinding balls. This work consists in the structural, microstructural and mechanical characterization comparing grinding balls from various origins. They have different mechanical properties in terms of wear and shock resistance despite having very similar chemical compositions. For the imported ball, the results reveal the presence of three phases: austenite, martensite and M3C carbide. Microhardness values are significant; they are homogeneous for imported balls and varying more for the local balls.