

Improvements in Material Characteristics Core Centrifugally Cast Rolls

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The paper describes the influence of metallurgical processing on the microstructural characteristics of spheroidal graphite cast iron. The iron is used for casting the core of double layer centrifugally cast rolls. Low carbon content in the core spheroidal graphite cast iron supporting metastable solidification was eliminated by managing of metallurgical processing of spheroidal graphite cast iron. The metallurgical quality of the cast iron was controlled by using thermal analysis during all time i.e. melting furnace, through modification and inoculation. The metallurgical quality is documented by metallographic analysis, determination of surface proportion and amount of graphite on surface etched specimen. Test rolls were cast in operating conditions in roll foundry Vítkovické foundries, spol. s r.o. Evaluation of melts and microstructures were made in the laboratories of the VSB-TU Ostrava.

Keywords: Centrifugally cast rolls, metallurgical quality, spheroidal graphite cast iron, inoculation

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