

Investigation of Factors Reducing Foundry Coreshop Productivity

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Abstract

Mechanised core shops use core blowing machines. Core making is done using organic and inorganic binders. The cores are either cured with a gas or warm air to make them solid. The core making process is influenced by several factors from sand quality, machine operation and machine design and other related parameters. The foundry relies on the core shop to supply cores to be able to produce the hollow features in castings. An unreliable core shop becomes a bottle neck to the overall foundry process. This study was performed in a foundry investigate the causes of reduced core shop productivity based on the numbers of defective cores produced in relation to recorded production parameters which were the operators, core shooters and sand quality. The analysis showed that all parameters recorded resulted in defective cores to varying extents. Certain elements of the chosen parameters where also shown to be more problematic than others.