

Distribution of some active elements in primary graphite precipitates

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The distributions of cerium and oxygen in the matrix and in graphite precipitates of a pure Fe-C-Ce cast iron sample have been studied using scanning Auger microscopy. It is shown that there is no accumulation of any element at the graphite-matrix interface. Cerium was detected in some cases in spheroidal graphite precipitates, most often associated with oxygen. Various non-spheroidal graphite precipitates proved to contain cerium and oxygen suggesting a correlation between cerium content and graphite degeneracy.

Keywords: ductile iron, graphite growth, Auger analysis, cerium, oxygen

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