

Contribution to characterization of the diatomite for industrial application

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Abstract: Diatomite also known Kieselguhr, is a non metallic mineral composed of the skeletal remains of microscopic single-celled aquatic algae called diatoms. The aim of this study was to test and to evaluate the diatomite of Sig region (West Algeria) to substitute the main mold powder used in continuous casting of steel for thermal insulation and lubrication. Generally, fluorine is added to mould fluxes to improve the viscosity. But this leads to the environmental pollution and the equipment corrosion. The laboratory and industrial investigations of diatomite have indicated the good results obtained in continuous casting of steel for thermal insulation and environmental protection against pollution (without fluorine). Also the characterization showed the hot behavior of this product with the various transformations and could give the possibility to other use.

Keywords : diatomite, thermal insulation, lubrication, mold fluxes, fluorine