

Composition and Properties of Magnesia-Alumina Cement

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Increase refractoriness of alumina cements and concrete is actual problem in the production of the refractory products.

In our research the aim of study was the improvement of properties of high alumina cement. For this aim the mixes, contained calcium aluminates CA, CA₂ and MgO were used. Kinetic and thermodynamic analyses were carry out. It was established that spinal MgOAl₂O₃ and calcium aluminates are formed in clinker. Mineral relation depends on composition of initial mixes and the methods of production of clinker (sintering or melting)

Cement on base of clinker is high refractoriness (1800⁰C) and strength equal to 45MPa. Beside that concrete on base of cement has good abrasivity, heat stability and corrosive resistance under the different gases.