

Annexure-II

Technology for high alumina refractory aggregates from off grade Indian bauxite

Abstract

CSIR-CGCRI has developed a technology for the manufacturing of high alumina refractory aggregates from off grade Indian bauxite. It involves processing of the off-grade bauxite with suitable additives and calcinations at 1550 to 1600°C to achieve significantly improved thermo-mechanical properties. This technology is suitable for the bauxites having $\text{CaO} < 2\%$ and $\text{Fe}_2\text{O}_3 < 5\%$. Typical properties achieved are-

- $\text{Al}_2\text{O}_3:\text{SiO}_2$ → 72:28
- Apparent porosity → 1-2%
- Bulk Density → 2.95 to 3.05 g/cc
- RUL → 1550 to 1600 °C