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Development of Light-Weight Refractory Bricks

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Abstract : The heat losses should be controlled during the high temperature processes from energy conservation point of view. For this purpose, refractories with low thermal conductivity, high porosity and good mechanical strength along with low price are desirable. In this work, various combinations of naturally occurring, locally available, cheap raw materials, namely, clay, rice husk and saw dust were used. Locally produced insulating firebricks (IFBs) cannot be used at higher than a few hundred °C and possess low strength as well. Various process parameters were studied and the refractories with desirable properties were produced, which can be used up to 1200 °C.

Keywords : firebricks, mechanical strength, thermal conductivity, refractory bricks
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