Patent Search

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Abstract:

The invention presents eco-friendly thermal insulation bricks made from clay, rice husk ash, natural fibers, Alccofine, and recycled aggregates to provide a sustainable alte to traditional clay bricks. These waste-derived materials—such as hemp, straw, coconut fiber, and cork—lower thermal conductivity, enhance insulation, and improve indo comfort while reducing reliance on heating and cooling systems. The inclusion of Alccofine and recycled aggregates increases strength and durability, ensuring the bricks r construction requirements. Produced through a simple process of mixing, molding, compacting, and curing, the bricks support low-carbon manufacturing and effective wa utilization. Overall, they offer a cost-effective, energy-efficient, and environmentally responsible solution aligned with modern green building standards.

Complete Specification

Description:The construction industry consumes vast natural resources and emits high carbon levels, while traditional clay bricks provide poor thermal insulation. Large amounts of agricultural and industrial wastes—like rice husk ash, hemp, straw, coconut fiber, cork, and recycled aggregates—remain underutilized despite their beneficia properties. Many existing eco-friendly bricks still struggle to balance insulation performance and strength. This invention develops thermal insulation bricks using clay blended with sustainable waste materials. The resulting bricks offer improved thermal resistance, lower environmental impact, and adequate mechanical strength for gr construction. , Claims:1.An eco-friendly thermal insulation brick composed of clay, rice husk ash, and natural fibers such as hemp, straw, coconut fiber, or cork to reduce thermal conductivity.

2.The brick offers enhanced thermal insulation by increasing porosity and lowering heat transfer compared to conventional clay bricks.

3.The inclusion of Alccofine or recycled aggregates improves the brick's compressive strength and durability while maintaining sustainability.

4.The brick demonstrates improved moisture resistance and reduced water absorption due to the use of natural fibers and waste-based additives.

5.A manufacturing method involving mixing clay, rice husk ash, fibers, and additives, followed by molding, compacting, and curing for 7–28 days to achieve optimal therm and mechanical performance

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