



PENDING

(IN202311032911)

A novel sludge bricks composition and method thereof

NEED

India generates over 200 million tonnes of industrial waste yearly, much of which ends up in landfills. Unsafe disposal of pickling and electroplating sludge leads to toxic leachates contaminating soil and groundwater. But what if these pollutants could be transformed into building materials?

TECHNOLOGY OVERVIEW

This patented composition converts fly ash, pickling sludge, and nickel-chrome sludge into sustainable clay bricks. The process improves compressive strength while reducing environmental hazards, making it a safer and productive way to manage industrial by-products through value-added construction materials.

TECHNOLOGY KEY FEATURES

Utilizes three types of toxic industrial sludge; improves compressive strength; fits into traditional kiln cycles; enables large-scale reuse of hazardous waste in construction without altering existing manufacturing systems.

[Read more here](#)

MARKET ANALYSIS

The global green building materials market is expected to reach \$951.1B by 2033 at 9.7% CAGR. India's eco-friendly brick market is growing due to construction demand and waste regulations. (Sources: Precedence Research, IMARC)

Target Industries

Brick kiln operators and eco-material suppliers (construction-grade applications); Circular economy material startups (sludge reuse and productization); Environmental compliance services (industries managing hazardous waste via monetization)

AT A GLANCE

SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action)

Technology is available for licensing/ co-development.

Reach out to Prof. Deepak Chitkara, Coordinator, BITS Technology Enabling Centre,
BITS Pilani Contact Details: tec.bits@pilani.bits-pilani.ac.in, 91 1596-255913

