# Patent Search

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| Invention Title | A NOVEL COMPOSITION FOR COW DUNG BRICKS WITH GUAR GUM, LIME AND CLAY AND METHOD THEREOF |
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**Abstract:**

ABSTRACT A NOVEL COMPOSITION FOR COW DUNG BRICKS WITH GUAR GUM, LIME, CLAY AND METHOD THEREOF The present invention describes a novel composition for cow dung bricks with guar gum, lime and clay and method thereof. In the present invention, the cow dung bricks mixed with just 5% guar gum and 10% lime produced a water absorption value of 18% and compressive strength of nearly 14 MPa with almost zero efflorescence, which is quite surprising then earlier made cow dung bricks. On performing microstructural analysis very few micro-cracks are found with improved grain size, and enhanced porosity and swell strength making them a sustainable material. The investigations reveal that with the addition of guar gum and lime resulted in packing voids in cow dung bricks giving improved water absorption capacity along with higher strength which helps in achieving better performance quality parameters for cow dung bricks with sustainable materials. Accompanied Drawing [Figure. 1-9]

Complete Specification

DESC:FIELD OF INVENTION:
This invention generally relates to the field of method for making cow dung bricks, and more particularly relates to a novel composition for cow dung bricks with guar gum, lime and clay and method thereof.
BACKGROUND OF THE INVENTION
In the present invention, unique sustainable materials cow dung bricks are introduced made with available plant products like guar gum and lime in a suitable proportion. In earlier pieces of literature, many trials are done to make novel cow dung bricks but due to porosity and microstructures issues, desired results are awaited. To overcome these issues guar gum, and clay is amalgamated in the whole process. Various tests are conducted to evaluate the engineering properties of the new material.
There are few references are made for the present invention, which is given below:
Title: Strength and Durability Properties of Cow Dung Stabilised Earth Brick (https://core.ac.uk/download/pdf/234677669.pdf) disclosing a better compressive strength at the dry state and after 10 minutes of immersion in water was obtained with cow dung stabilisation at content of 20% by weight of earth. Bricks stabilised with 20% Cow dung contents by weight of earth has a dry and wet compressive strength of 6.64 and 2.27MPa respectively. There is an increase of about 25% in the dry compressive strength of bricks stabilised with 20% cow dung content over that of the plain earth brick without stabiliser The 20% cow dung content resulted in lower migration of water into the brick (i.e., lower permeability). Also, the abrasive resistance increased with increase in the cow dung content up to 20%. The highly decreased in compressive strength after 10 minutes of immersion in water, even with optimum Cow dung content, indicated that appropriate building design that would prevent stabilised earth bricks from coming into direct contact with rainwater is important. The study recommends that appropriate construction specification is necessary to prevent cow dung stabilised earth bricks

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