

THE WORLD OF MUD BRICK HOUSES

1. Mud brick houses have been built around the world for centuries

2. These houses are still built to date

- In developing countries this is due to the cheapness of soil, which is abundantly available and in reach of the most. Sometimes it is the only alternative to acquire shelter
- In developed and rich countries, the environmental factors are of prime considerations. Comfort and cost also attract even the rich to build mud brick houses

3. Mud brick houses are acceptable in the world; both by the poor and rich

4. Compressed mud brick is a descendant of sun dried brick, it is superior

5. The compressed interlocking mud brick is probably the latest form of mud brick. It is superior to normal compressed mud bricks because it allows fast construction, ease of electrical installation and allows provision of reinforcement increase house performance with regard to strength and stability. Larger and disaster resistant houses can safely be constructed.



A mud brick house



Sun dried bricks



Young men happily casting the sun dried bricks



**Mud brick house acceptable and enjoyable
(decorated)**



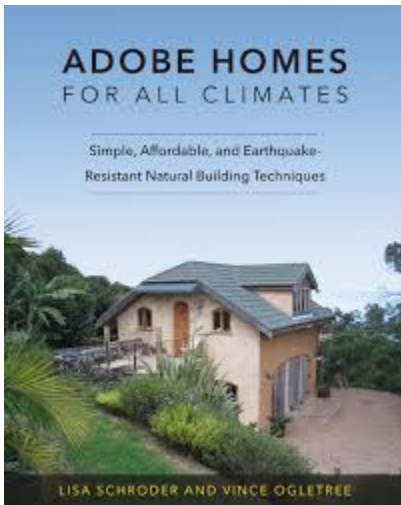
This house declares the acceptability of mud house by the society



The Cinva ram machine for production of compressed mud bricks



The best compressed mud bricks comes from clayey soils



Mud brick houses in sub urban areas

Mud brick house in developed world



A decent mud brick house



A rural brick house



A decent mud brick house



Construction process for mud brick house



The decorated Adobe house



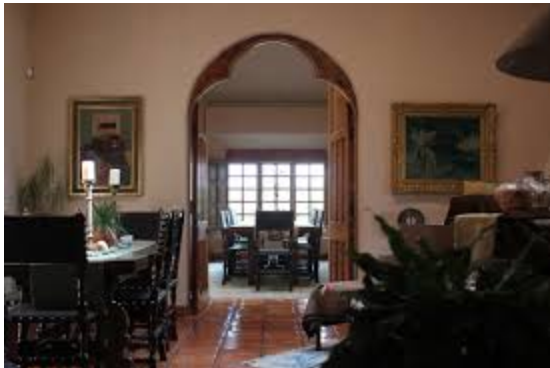
Mud brick house in Africa



Another beautiful mud brick house



The interior of a brick house



The interior of a brick house, attractive



The interior of a brick house, welcoming



Bridging the openings with arches



Bridging the openings with arches



Multiple and large openings can be bridged by arches and beams



Large buildings can be built of mud bricks, compressed mud bricks and the interlocking compressed mud bricks will just perform wonderfully.



A mud brick house roofed with tiles (heavy material)



A town with large mud brick houses - Shibam



Mud brick houses are easily destroyed by natural disasters



Mud brick houses are easily destroyed by natural disasters



Both large and small buildings are crushed easily by disasters



Unreinforced mud brick houses collapse suddenly during disasters, giving no chance to escape, therefore the losses of life and property are higher than other buildings.



Strong winds also impose threat and damage to mud brick houses



Houses damaged by ground shaking

MY SOLUTION

1. Production of interlocking bricks from soils with high clay contents for stronger bricks
2. Construction of wall with thickness 300mm, in dry bond but where necessary mud mortar or dry sand can also be used
3. Provide reinforcement in strips or beams and columns formed in cores of wall by means of special bricks
4. Design the house according to the rule of thumb or by engineering methods
5. Protect all parts of the house from all sorts of moisture
6. Reinforcement can be welded mesh, round bars or ribbed bars with specified characteristics
7. Concrete can be of any specified grade according to design requirements but, no less than grade 20. Coarse aggregate for areas with small cross sectional area to be of pea size and not more than 1/4 inch (grouted).
8. Mud plaster to be applied on constructed walls followed by other specified and appropriate finishes



A demonstration wall of compressed mud interlocking bricks built at NHBRA - Tanzania



A demonstration wall of compressed mud interlocking bricks built at NHBRA - Tanzania

(In the picture Engineer Amri and assistant Juma)



A demonstration wall of compressed mud interlocking bricks built at NHBRA - Tanzania

showing provision for beams casting (Engineer Amri inspecting the work)



A demonstration wall of compressed mud interlocking bricks built at NHBRA - Tanzania
plastered in mud mortar ready for further finishing coats.