$300 Geopolymer CEB House

Compressed earth blocks (CEBs) are typically made with soil and cement. I propose making CEBs out of geopolymer, as pioneered by Professor Joseph Davidovits. The resulting blocks would be actual stone and so the finished homes would be extraordinary.

Solution

Compressed earth blocks (CEBs) are widely popular around the world due to their low cost and suitability for do-it-yourself manufacturing and construction, particularly in developing countries where labor is cheap. Typical CEBs are made of soil mixed with about 10% cement and then compressed in a machine-driven or hand operated press.

This video shows the basic block making process:
Making Compressed Earth Blocks

The primary innovation for this design competition uses geopolymer to make CEBs. Geopolymer was rediscovered by Professor Joseph Davidovits and other researchers at the Geopolymer Institute. The basic process involves combining loose limestone, kaolin clay, sodium carbonate, lime and water – all low cost, commonly available materials.
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