DISSERTATION REPORT

ON

"INTERLOCKING IN MUD BLOCKS FOR IMPROVED FLEXURAL STRENGTH AND EARTH QUAKE RESISTANCE"

Submitted to Visveswaraiah Technological University, Belgaum in partial fulfillment of the requirements for the award of the degree of

MASTER OF TECHNOLOGY
IN
STRUCTURAL ENGINEERING

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Project funded by Karnataka State Council for Science and Technology

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ABSTRACT

The controlling factor for designing an earthquake resistance masonry structure is by improving its flexural strength. The flexural strength of a masonry unit can be improved by providing interlocking in the blocks. The blocks were made using locally available materials such as soil, quarry dust and cement. The blocks made using these materials are called as stabilized mud blocks. A prism of 1m height was made using these stabilized mud blocks. The flexural strength of stabilized mud blocks of normal blocks and interlocking blocks of 20mm and 30mm depth interlocking were found, for this a separate setup was made and the prisms were casted as a cantilever and the horizontal load was applied at the free end. These prisms were further varied by different mortars such as cement mortar, lime-cement mortar and soil-cement mortar. The compression strength of the same type of prisms with 3 blocks was found. All these blocks were made using a machine called Mardini press; interlocking blocks were made by doing some modifications to the same machine.

Details of the experiments carried out have been listed along with results. The 28 days strength of the prisms was found.