R.V College of Engineering, Bengaluru-560059

(An Autonomous Institution affiliated to VTU)

Department of Civil Engineering

PROJECT ON

"INFLUENCE OF PLASTERING ON STRENGTH OF BRICK MASONRY"

(Funded by KSCST)

Submitted in partial fulfillment for the award of degree
Bachelor of Engineering
in
Civil Engineering

Submitted by

NAME OF THE CANDIDATES	USN
Puneeth	**1RV11CV022**
Rathan Singh P S	**1RV11CV023**
Sandeepa	**1RV12CV403**
Vinay kumar H S	**1RV12CV406**

Under the guidance of

Dr. K.S JAGADISH (Former Professor)
Department of Civil Engineering,
Indian Institute of science,
Bengaluru-12.
and
Smt. MADHAVI K (Assistant Professor)
Department of Civil Engineering,
RV College of Engineering,
Bengaluru-59.

ABSTRACT

Masonry buildings are the most common type of construction used for housing purpose both in urban and rural areas. The load bearing walls of masonry structures are usually designed to carry axial loads. However, they are often subjected to lateral loads due to wind and earthquake. The characteristics of brick masonry are influenced by the properties of bricks and mortar. Most of earlier studies conducted are on unrendered brick masonry specimens/panels. Apart from brick and mortar strength, masonry properties are also affected by plastering. In this study, an attempt has been made to investigate the effect of plastering on compressive strength and flexural strength of brick masonry prisms.

Experimental work has carried out to assess the compressive strength and flexural strength of rendered and unrendered brick masonry using compression test, modified bond wrench test and two point loading test. Basic tests were carried out on the materials used in the present experimental investigation as per Indian standard (IS) and American Society for Testing and Materials (ASTM) codes. A total of 30 prisms were tested with different proportions of mortar like 1:4, 1:6 cement mortar, 1:4:4 cement soil mortar and polyester coating in order to study the influence of plastering on strength of brick masonry.

The major conclusions of this experimental study are the plastering increases the compressive and flexural strength of brick masonry. As the strength of the plastering mortar increases the compressive and flexural strength of brick masonry also increases. Modulus of elasticity of the masonry prism increases with the increase in modulus of elasticity of the plastering mortar. Rendered specimens are more stiffer than that of the unrendered specimens since the deformation values of rendered specimens are less.

Key words:- Compressive strength, flexural strength, plastering, prisms and modulus of elasticity.