

# Mortar - lab report example

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**ASSIGN  
BUSTER**

## **Mortar**

- Results
- a) The result of the experimental study has put forward the bond prism strength to be 6989.
  - b) However the shear prism strength was 5 Mpa
  - c) The masonry mortar cylinder average strength was 93.7 % of 4.07 cm.
  - d) The strength of mortar would be 70 (0, 5)Mpa.
  - e) The type of masonry mortar used is type S which is cement based. The lime to cement ratio was 1 : 4
  - f) The failure mode for the test prism specimen was tension failure.
  - g) The failure mode for the shear test specimen was bar slipping failure.

### Discussion

- a) i) The workability of the mortar was not in control and when the mortar was dropped on the flow table it sits and hence flow decreased. It was necessary to add water to the mortar to make it workable. The mortar did not have a smooth plastic quality.
- ii) The strength of the mortar was weak and it has a consistency which was slightly running.
- b) There does not exist a water/cement ratio guideline for mortar because an optimal balance for the mixture of water and cement was not achieved even after many trails .
- c) i) There was some anomalous result like the presence of chemical in the mortar from lime and sand which decreased the mortar strength regarding lime to cement ratio.
- ii) The differences in the strength of the mortar got reflected in the bond test as it was difficult for the mortar to bond with the brick. Also it got reflected in

the shear test as the mortar was slipping away while applied between the bricks.