

## Partially Replacement of Crushed Rock Flour with Fine Aggregate in Concrete

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**Abstract:** This study about the replace partially of fine aggregate with the crushed rock flour and some of the wastes are been used in the land filling in the constructions. Those rocks are been used in the construction for levelling the areas and in the foundation fillings. The compressive strength is been compared in the study, the replacement on the percentages (25, 50 and 75%) at 7, 14 and 28 days, respectively. Then, the compressive strength is tested and tabulated.

**Key words:** Fine aggregate, crushed rock flour, concrete, compressive, replacement, India

### INTRODUCTION

The rocks are mostly available in the mountain areas and hilly places that are crushed and made to chips are powder and used in the (Celik and Marar, 1996) replacement concretes. Almost 20% of shake is changed over into shake flour while pounding rock into total at stone pounding plants. In artistic encasing industry there is a mass disappointment of around 30 to half of the add up to creation because of uncalled for blending of crude materials (Reddy, 2010; Nanda *et al.*, 2010), abundance water ill-advised drying and as well quite a bit of warming. No work has been accounted for utilizing stone tidy and clay scrap together in solid up until now. Compressive strength of concrete using lateritic sand and quarry dust as fine aggregate (Ukpata *et al.*, 2012; Al Bakri *et al.*, 2006) (Fig. 1).



Fig 1: Crushed rock flour

### MATERIALS AND METHODS

**Compressive strength:** The normal compressive quality for various percentages (25, 50 and 75%) at age 7, 14 and 28 days (Hansen, 2004). Figure 2 demonstrates the test of the compressive strength. The graphical portrayal demonstrates the compressive quality of the fire bricks. Launching of new cements in the market (Kumar *et al.*, 2014) for constructing the bridges. Shoreline evolution due to construction of rubble mound jetties at Munambam inlet in Ernakulam (Thiruvencatasamy and Girija, 2014) for testing of new concrete (Fig. 2 and Table 1).

**Table 1: Result compressive strength**

Replacement percentage of crushed rock flour (%)	7 days	14 days	28 days
25	20.15	28.39	40.96
50	26.44	34.81	39.58
75	20.07	26.90	33.68



Fig. 2: Compressive test

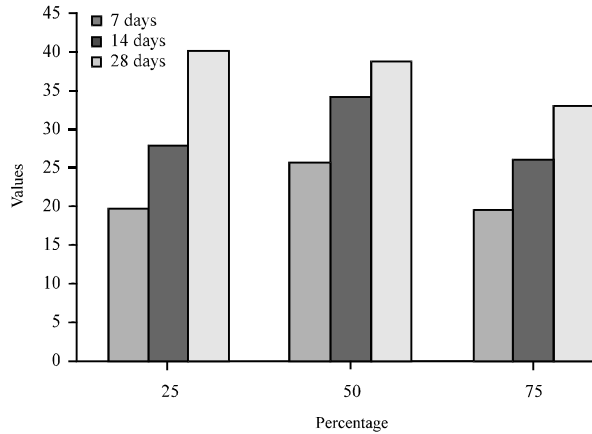


Fig. 3: Graphical representations on the results

### RESULTS AND DISCUSSION

The graphical representations are been shown according to Table 1. The percentages (25, 50 and 75%) are recorded on the duration of 7, 14 and 28 days (Fig. 3).

### CONCLUSION

Thus, the compressive strength is been analyzed for the replaced concrete on demolition waste at the percentages (25, 50 and 75%) at 7, 14 and 28 days

in that results are been recorded above in the result 25 and 50% are efficient than other percentages.

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