

## Utilization of Copper Slag as Fine Aggregate in Cement Concrete

Copper slag is produced as a by product of metallurgical operations in reverberatory furnaces. It is totally inert material and its physical properties are similar to natural sand. A laboratory study was carried out in the Institute to investigate the potential of using copper slag as a partial replacement of sand in cement concrete. Slag was used in Pavement Quality Concrete (PQC) as well as in Dry Lean Concrete (DLC) mixes and its influence on workability, compressive strength, and flexural strength was determined. The study conducted by CRRRI shows that use of copper slag in concrete have no adverse effect on its strength (Fig.) and a blend of copper slag and fine sand with slag up to 40 percent can be used as fine aggregate in pavement quality concrete as well as in dry lean concrete.

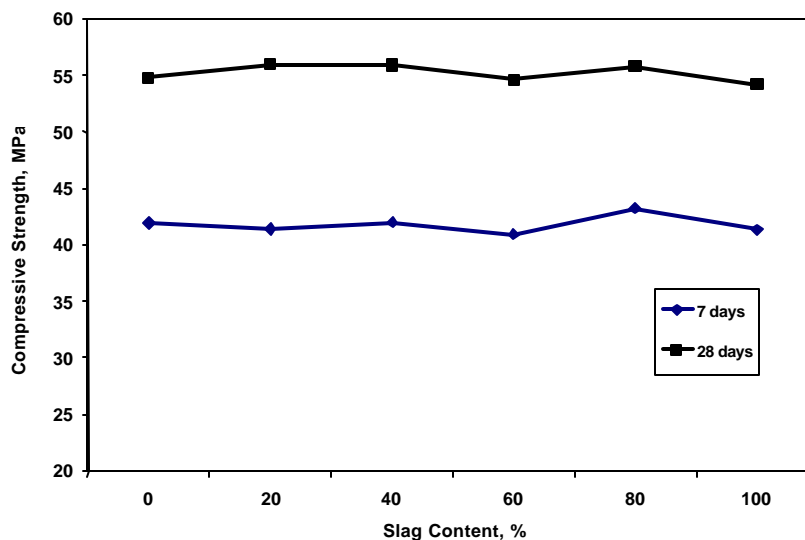


Fig. PQC Compressive Strength vs Copper Slag Content

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