

## Substitution of Natural Aggregates by Crushed Concrete Waste in Concrete Products Manufacturing

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**Abstract :** This paper is aimed to the use of different types of industrial wastes in concrete production. From examined waste (crushed concrete waste) our tested concrete samples with dimension 150 mm were prepared. In these samples, fractions 4/8 mm and 8/16 mm by recycled concrete aggregate with a range of variation from 0 to 100% were replaced. Experiment samples were tested for compressive strength after 2, 7, 14 and 28 days of hardening. From obtained results it is evident that all samples prepared with washed recycled concrete aggregates met the requirement of standard for compressive strength of 20 MPa already after 14 days of hardening. Sample prepared with recycled concrete aggregates (4/8 mm: 100% and 8/16 mm: 60%) reached 101% of compressive strength value (34.7 MPa) after 28 days of hardening in comparison with the reference sample (34.4 MPa). The lowest strength after 28 days of hardening (27.42 MPa) was obtained for sample consisting of recycled concrete in proportion of 40% for 4/8 fraction and 100% for 8/16 fraction of recycled concrete.

**Keywords :** recycled concrete aggregate, re-use, workability, compressive strength

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