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# FLOW CHARACTERISTICS OF MASONRY MORTARS WITH GOLD MINE TAILINGS AS PARTIAL SUBSTITUTE FOR NATURAL SAND

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## ABSTRACT

Influence of partial replacement of sand by gold mine tailings on the gradation of sand and flow characteristics of mortar is investigated. Sand was replaced with 10%,20% and 30% of gold mine tailings and the resulting sand was compared with the grading limits specified in IS: 2116-1980. All the three reconstituted sands comply with the grading limits specified for sand passing through IS sieve sizes 4.75mm, 2.36mm, 1.18mm, 0.6mm and 0.3mm, except for 0.15mm sieve size. The reconstituted sand with 30% of gold mine tailings yields sand which contains 42% medium sand and 26% fine sand. Workability of mortars has been quantified by conducting flow table tests. There is a linear relationship between flow and water-cement ratio of the mortars. Flow increases with increase in water-cement ratio. High flow values can be obtained with reconstituted sands.

**KEYWORDS:** Gold Mine Tailings, Gradation, Reconstitution, Workability