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TITLE OF PROJECT: I-Sand: An Environmental friendly sand used in reinforced cement concrete construction.

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ABSTRACT:

Now a day's erosion of rivers and considering environmental issues, there is a scarcity of river sand. The demand of natural sand is very high in developing countries to satisfy the rapid infrastructure growth. Hence it is necessary to find alternative to 'River Sand'. Benefits of using I sand: Cost reduction; social benefits; Massutilization of waste material is possible in construction by using steel slag as a partial replacement material for fine aggregates in concrete. Waste or discarded materials produced commonly in industries, factories or mechanical plants are increasing daily thereby constituting increased pollution in environment. Global ferrousscrap availability stood at 750 MT in 2017, 630 MT of which was recycled. Even after recycling, around 120 MT (16% of total) scrap disposed in landfill. The scrap is expected to reach about 1 BT in 2030 and 1.3 BT in 2050. Concrete using I-Sand gives equal or more compressive strength than concrete using River Sand. Therefore to reduce threat to environment as well as society due to rapid extraction of sand from river bed, we can use iron waste as partial replacement to river sand.

KEYWORDS: Industrial sand(I- Sand), Fine Aggregate, River sand (RS), Concrete, Compressive Strength

CATEGORY: Environmental Engineering