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Study on Strength Property of Concrete using Hypo Sludge and Waste Foundry Sand

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Abstract : The industrial by-products and waste materials need to be re-used in some way to avoid land contamination. One of the way to reuse such materials is to include in concrete materials. This will reduce pollution and encourage sustainable development in environment conservation. This paper deals with inclusion of hypo sludge (HS) and waste foundry sand (WFS) in concrete. M₂₀ grade of concrete with 0.4 w/c ratio was used. About 6 mixes with 5% HS was kept constant and WFS varied with 0%, 5%, 10%, 15% and 20% were prepared. Strength properties were determined by compressive strength at 7 days and 28 days. The optimum strength was attained as 28.2 N/mm² in H5/F15 mix at 28 days.

Key Words: land contamination, sustainable development, hypo sludge, waste foundry sand, compressive strength.

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