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IMPROVING GROUND WATER RECHARGE AND COMPARATIVE STUDY OF COMPRESSIVE STRENGTH OF PERVIOUS CONCRETE USING RECYCLED COARSE AGGREGATES AND PARTIAL REPLACEMENT OF CEMENT BY FLY ASH AND SILICA FUME

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Abstract:

In order to develop smart cities in India, we need to develop smart technologies and smart construction materials. Pervious concrete is an innovative material and which environmental friendly. This paper focuses on the studying of groundwater recharge by using pervious concrete made of recycled coarse aggregate by partial replacement of cement with fly ash and silica fume by its weight , to increase the compressive strength of pervious concrete in order to sustain heavy loads. If the permeable concrete which has a high porosity is used for the construction of pavements, walking tracks parking lots, well lining, then it can reduce the runoff from the site and help in the groundwater recharge. Such kind of smart materials which play an important role for Indian conditions where government is putting lots of efforts to implement groundwater recharge. This paper also focuses on studying the effect of percentage increase in fly ash and silica fume and their combination on compressive strength characteristics of pervious concrete.