Praise Worthy Prize

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Enhanced Performance of Fracture Strength of Rubberized Concrete Panels by External Reinforcement

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Abstract – *In general, producing environmentally friendly concrete is necessary to conserve concrete material resources and reduce construction costs. Recycled tire rubber has been used to produce concrete in various construction works. In the beginning, rubber concrete mixes are done with different percentages of 0%, 6%, 12% and 24% of rubber tires. Then the slump test and the density of the concrete have been tested, in addition to the compressive strength and tensile strength. The strengthening of rubberized concrete slabs with fibre-reinforced polymer sheets is experimentally investigated to increase strength and durability. Thus, in this paper, twelve rubber concrete slabs have been strengthened by FPR sheets with different methods as external reinforcement in order to improve the fracture and shear strength. It is found out that the strengthening rubbered concrete slabs with inclined angles are unnoticeable higher than the straight strengthening configuration. In addition, the type of failure of rubberized concrete panels is affected by the configuration of external reinforcement.*

Keywords*: Rubberized Concrete, Panels, FPR Sheets, Strengthened*