

## **The Effect of Cement Type on Behavior of Reinforced Concrete against Attack Sulfate Salt**

This research work studies The Effect of Cement Type on Behavior of Reinforced Concrete against Attack Sulfate Salt. Two concrete mixes with the **same** materials content and different cement types were used. First mix was used ordinary Portland cement (Type I) and the second mix was used sulfate resistant Portland cement (Type V). For every mix cubes (100\*100\*100 mm) and cylinders (100\*200 mm) without and with 16 mm steel reinforcement were molded. Samples were exposed to magnesium sulfate solutions ( $MgSO_4$ ) with sulfate concentration of 0%, 5%, 7%, and 10% until time periods 28, 60 and 90 days. The concrete strength (compressive and splitting tensile), and rate of steel corrosion were measured. The sulfate resistance Portland cement (Type V) was improved the resistant of concrete against the sulfate salt about 14.2% for compressive strength, 0.8% for splitting tensile strength, and 2.5% for the rate of steel corrosion than ordinary Portland cement (Type I).