

## **EXPERIMENTAL STUDY ON THE DURABILITY OF POLYESTER RESIN CONCRETE**

Gangadhar<sup>[1]</sup>, DakshayiniR S<sup>[2]</sup>, Dr. B.P. Annapurna<sup>[3]</sup>

<sup>[1]</sup> Faculty of Engineering- Civil, St. Martin's Engineering College. Hyderabad. India

Email: [gangadharsajjanshetty13@gmail.com](mailto:gangadharsajjanshetty13@gmail.com)

<sup>[2]</sup> Research Scholar, Faculty of Engineering- Civil, Bangalore University, Karnataka. India

Email: [dakshayinirs@gmail.com](mailto:dakshayinirs@gmail.com)

<sup>[3]</sup> Professor, Faculty of Engineering- Civil, Bangalore University, Karnataka, India.

Email: [annapurna2124@gmail.com](mailto:annapurna2124@gmail.com)

### **Abstract::**

The effect of polyester resin on durability of concrete is been studied for varying percentages of resin from 10% to 100% by volume of coarse aggregate, with a variation of 10% (10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90% and 100%). The properties of polyester resin concrete is been studied for durability. The grade of concrete considered is M30. Tests are been carried out as per recommended procedures of relevant code. The results are compared with conventional concrete. It is been found that with the replacement of coarse aggregate by polyester resin varying percentage of resin from 10% to 100% the weight of polyester resin concrete reduces varying from 2% to 23.8%. The durability of polyester resin is tested for chemical resistance of sulphate, chloride acid.



**UGC AUTONOMOUS**