

عنوان مقاله:

AN INVESTIGATION ON EFFECT OF USING PP FIBERS AND DIFFERENT CEMENTITIOUS MATERIALS ON MECHANICAL PROPERTIES OF EPS CONCRETE

محل انتشار:

سومین کنفرانس بین المللی بتن و توسعه (سال: 1388)

تعداد صفحات اصل مقاله: 10

نویسندگان:

A. Sadrmomtazi - Assistant professor, Dept of Civil Engg, Faculty of Engg, University of Guilan, Rasht, Iran

M.A Mirgozar Langeroudi - M.S. Student, Dept of Civil Engg, Faculty of Engg, University of Guilan, Rasht, Iran

A Fasihi - M.S. Student, Dept of Civil Engg, Faculty of Engg, University of Guilan, Rasht, Iran

A.K Haghi - Professor, Dept of Textile Engg, Faculty of Engg, University of Guilan, Rasht, Iran

خلاصه مقاله:

The use of lightweight concrete in many applications of modern construction is increasing, owing to the advantages that lower density results in decreasing the magnitude of dead load of the structure which lead to smaller cross sections for load bearing elements. Expanded polystyrene (EPS) beads are a type of artificial lightweight nonabsorbent aggregates which can be used to produce low density concretes by replacing with normal aggregates, either partially or fully, depending upon the requirements of density and strength. Also plastic shrinkage is the dimensional change that occurs in all fresh cement based materials within the first few hours after it has been placed which is not unacceptable in itself, but it is some times accompanied by development of cracks that are unsightly and objectionable. Polypropylene and other synthetic fibers are added to concrete as secondary reinforcement in order to control this plastic shrinkage. On the other hand, the addition of fibers affects on the properties of hardened concrete like compressive and tensile strength, elastic modulus and toughness. The present study covers the use of polypropylene fibers at contents equal to 0.1%, 0.3%, 0.5% and 1% by volume of EPS concrete in order to study about the effects of its addition into the EPS concrete matrix on mechanical properties. Also the effects of using Silica .fume and Rice husk as two supplementary cementitious materials were investigated

کلمات کلیدی:

EPS concrete, PP fibers, silica fume, rice husk, mechanical properties

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/60646>

