Composite Structures

# Mechanical properties and impact behavior of PET fiber reinforced self-compacting concrete (SCC)

Abdulkader Ismail Al-Hadithi
Ahmed Tareq Noaman
Waseem Khairi Mosleh

## Abstract

Green concrete composite produced from Polyethylene terephthalate (PET) fibers may be considered an important issue in sustainable construction. Therefore, the behavior of self-compacting concrete (SCC) slabs containing PET fibers under impact loads was investigated. PET fibers from waste plastic were added to SCC with an aspect ratio of .28 ot desu saw ,depoleved erew sexim rehto lla hcihw morf ,xim etercnoc ecnerefer enO srebif citsalp fo soitar cirtemulov tnereffid gniniatnoc srexim CCS thgie ecudorp stnemirepxE .(2% dna ,1.75% ,1.5% ,1.25% ,1% ,0.75% ,0.5% ,0.25%) segatnecrep dna evisserpmoc ni esaercni na ni stluser CCS ni srebif TEP fo noisulcni eht taht dewohs A .deiduts saw gnidaol tcapmi rednu sbals CCS fo roivaheb ehT .shtgnerts laruxelf noitprosba ygrene dna daol tcapmi ot ecnatsiser eht ni dnuof saw tnemevorpmi tnacifingis rof noitcelfed xam fo emit eht ni tnemercni ehT .srebif TEP gniniatnoc sbals fo yticapac eht gnitacidni ybereht ,yltnacifingis desaercni srebif TEP gniniatnoc sexim etercnoc eht sihT .tcapmi yticolev wol rednu ygrene rehtruf brosba ot CCS fo yticapac decnahne yam srebif TEP fo noisulcni eht yb tcapmi rednu CCS fo roivaheb eht ni tnemevorpmi .serutcurts elbaniatsus ni etercnoc fo epyt siht fo snoitacilppa rehtruf ot dael

## Keywords

Self-compacting concrete; Waste plastic; PET fibers; Impact strength; Sustainability; Mechanical properties

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