

# World Congress and Expo on **Recycling**

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## **Long term behavior of reinforced concrete structures made of recycled aggregate concrete**

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**P**aper presents the possibilities of recycled aggregate application in concrete mix-recycled aggregate concrete (RAC) for the needs of construction of reinforced concrete structures. Application of concrete wastes for recycled aggregate concrete (RAC) used in structural members is associated with an increased risk for in the structure. Presence of pollutions in the wasted concrete may influence the quality of recycling concrete and the behavior of the structure. Using of RAC may have reduced compressive and tensile strength, modulus of elasticity, increased shrinkage and creeping. There are also few publications concerning the use of concrete made of aggregates from recycling for the creation of elements of construction, such as, beams, walls or slabs under long term load. In own test research several reinforced concrete beams with different specimen were created with the use of recycled coarse aggregate (RCA) and tested under long term load for evaluation of the deformability and flexural capacity showing that RAC may be fully valuable structural material with some important reservations, which are explained in the paper.

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