

Evaluation of the Rheological and Hardened Properties of Sustainable Self Compacted Concrete Incorporating Recycled Aggregate and Waste Crumb Rubber



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Abstract

The influence of utilizing waste tires (crumb rubber) in the performance of self-compacted concrete in fresh and hardened state has become the concern of this review. The waste crumb rubber can be used as a replacement level with natural fine aggregates in order to produce a sustainable and eco-friendly concrete. The use of waste materials could have some benefits including keep the environment from un used waste materials, conserve the natural resources, and produce a cost-effective material.

پوخته

بهكارهينانی كه مرستهی بهكارهاتوو له بهرهمهينانی كۆنكریتدا بووته ههنگاوێکی بنهڕهتی بهرهو بهرزکردنهوهی بهردهوامی كۆنكریت. كۆكراوهی لاستیکی تایهی لهكاركهوتوو دهتوانیت جیگرموهییهکی بهرخ بێت بۆ قوم و چهگلی سروشتیهكان له بهرهمهينانی جوړهها كۆنكریتی بهردهوام. كۆنكریتی خۆپهستین (SCC) ، وهك جوړیكی تاییهتی كۆنكریت، توانای چهسپاندن و پرکردنهوهی بۆشاییهكانی نێوان كۆنكرهتی شیشدار و گۆشهكانی ههیه بهی بهكارهينانی ئامیری ههژاندن یان كۆمپاكتهر. کاریگهری بهكارهينانی تایهی پاشماوه له سهر تهبهتمهندیی كۆنكریتی خۆپهستین له دۆخی شل و رهفدا بووته خالی سهرمکی ئهم پێداچوونهوهیه. بهكارهينانی پاشماوه دهتوانیت چهند سوودی ههیبیت لهوانه پاراستنی ژینگه له پاشماوه بهكارنههینراوهكان، پاراستنی سهرچاوه سروشتیهكان و بهرهمهينانی مادهیهکی کاریگهر له رووی تێچوونهوه.

المخلص

اصبح تحقيق متطلبات الاستدامة للخرسانة ضرورة ملحة في قطاع الانشاءات . توظيف المواد المعاد تدويرها في انتاج الخرسانة اصبح خطوة اساسية باتجاه تعزيز الاستدامة للخرسانة و اختزال استنزاف المصادر الطبيعية للركام الطبيعي و الحفاظ على البيئة.

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About Soran University

[Soran University \(SUN\)](#) is located in the city of Soran, which is about a two-hour drive north-east of [Erbil](#) (Arbil, Hewlér), the capital of the [Kurdistan Region](#) of Iraq (KRIQ). The city is flanked by the famous Korek, Zozik, Henderén, and Biradost mountains. The medieval mountain village of [Rewandiz \(Rawanduz, رەواندێز\)](#) is a stone-cast away, and the two cities share this lovely, harmonious upland. While waiting for its green, environmentally friendly building to be erected on a hilltop overlooking the cities of Soran and Rewandiz, its existing city campus has been meticulously set out to accommodate the lovely natural landscape. The new campus will be the first of its type, being walkable, balanced, powered by renewable energy, and compliant with all international environmental regulations. There are 5 Faculties in [SUN](#); [Faculty of Arts](#) (FAAR), [Faculty of Science](#) (FSCN), [Faculty of Education](#) (FEDU), [Faculty of Law](#), Political Science, and Management (FLAW/PSM), and [Faculty of Engineering](#) (FENG). Also, there is SUN research centre. Moreover, at SUN, there is a Language Center. SUN signed many Memoranda of Understandings (MoU) with many International Universities,

How to get here

Soran University (SUN) is located in the heart of the city of Soran. The main city campus is easily found on Google Maps for direction.