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Research Article

Open Access Research Article PTZAID:JCEES-4-130

Environmental Impact Assessment (EIA) of a gold mine tailing through the multi-criteria decision making tool

Published On: December 27, 2018 | Pages: 061 - 066

Author(s): AK Darban*, RD Webster, HH Yarhosseini, B Malekmohammadi, AR Yavari and Arabyarmohammadi

Gold mine tailings dams are a high risk part of mining as they contain hazardous materials such as cyanide, mercury and arsenic from processing operations which present a risk to the public and to the environment. When tailing dams fail, the impact is disastrous for humans and the natural environment. The International Commission on Large Dams (ICOLD) collected 221 ca ...

Abstract View Full Article View DOI: 10.17352/2455-488X.000030

Open Access Research Article PTZAID:JCEES-4-129

Sustainable water supply: Potential of recycling laundry wastewater for domestic use

Published On: November 13, 2018 | Pages: 056 - 060

Author(s): Omolara Lade* and Zainab Gbagba

To reduce the consumption of freshwater in the laundry industry, a new trend of separating waste water has resulted in the reuse/recycling of water. In this study, the characteristics of domestic laundry wastewater was evaluated using wastewater samples from four selected laundries. The samples were analysed for the physicochemical and bacteriological characteristics ...

Abstract View Full Article View DOI: 10.17352/2455-488X.000029

Open Access Research Article PTZAID:JCEES-4-128

Potentials of increasing levels of recycled waste plastic on the physical characteristics of concrete

Published On: October 30, 2018 | Pages: 050 - 055

Author(s): Charles A Ogbu* and Abimbola Y Sangodoyin

This research focused on the integration of waste plastic into concrete in a bid to restrain water ingress when exposed to water. Polyethylene water sachet (PWS) was the source of waste plastic used. Waste plastic concrete treatments were designed and cast successfully with percentage waste plastic contents of 0, 0.25, 0.50, 0.75 and 1.00. It also involved a constant ...

Abstract View | Full Article View | DOI: 10.17352/2455-488X.000028

Open Access Research Article PTZAID:JCEES-4-127

Optimal composition of plaster mortar reinforced with palm fibers

Published On: October 22, 2018 | Pages: 044 - 049

Author(s): Rachedi Mokhtar*

The aim of this study is the use of local materials (plaster, sand dunes and date palm fiber) for the region of southern Algeria. By expand areas of the use of these materials in the field of construction. Despite the large ament of gypsum, its use is limited to some secondary operations like coatings and decorative elements. The sand dunes and palm fiber, its use in ...

Abstract View | Full Article View | DOI: 10.17352/2455-488X.000027

Open Access Research Article PTZAID:JCEES-4-126

Experimental study on flocculation performance of Chitosan-Based Flocculant using a Novel Jar Tester

Published On: October 04, 2018 | Pages: 038 - 043

Author(s): Kazuhiro Fujisaki*

The effectiveness of chitosan as a flocculant was tested with a novel experimental apparatus. Using a newly developed flocculation tester, a large number of flocculation rate processes were measured. The novel jar tester included a photocoupler and switching timer. Mixing was paused for a period and the floc-settling velocity and residual turbidity were measured durin ...

Abstract View Full Article View DOI: 10.17352/2455-488X.000026

Open Access Research Article PTZAID:JCEES-4-125

Study on characteristic strength of partially replaced natural aggregates by flyash aggregates in concrete

Published On: September 06, 2018 | Pages: 034 - 037

Author(s): Geena George* and Asha K

To explore more benefits of flyash in construction industry, a study has conducted on strength characteristics of M30 grade concrete using manufactured flyash coarse aggregate as a partial replacement of natural granite coarse aggregate. The aggregates were manufactured using cement in lesser quantities and flyash in excess quantity various trail mixes were conducted ...

Abstract View Full Article View DOI: 10.17352/2455-488X.000025

Open Access Research Article PTZAID:JCEES-4-124

COMAMMOX - a new pathway in the nitrogen cycle in wastewater treatment plants

Published On: August 23, 2018 | Pages: 031 - 033

Author(s): Sobotka D*, Kowal P, Zubrowska-Sudo M and Mkinia J

The complete nitrification process, i.e. complete oxidation of ammonia to nitrate (COMAMMOX), by only one microorganism was experimentally confirmed only two years ago. That discovery is now considered a real breakthrough in the nitrogen cycle in the environment and it opens new questions regarding the nitrogen metabolism by

microorganisms. Moreover, it also brings op ...

Abstract View | Full Article View | DOI: 10.17352/2455-488X.000024