



Volume 58, Issue 1

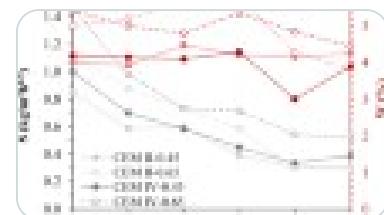
February 2025

53 articles in this issue

Impact of RAP as recycled aggregate on durability-related parameters of structural concrete

Nicoletta Russo, Andrea Filippi, Elena Redaelli

Original Article | Open access | 30 January 2025 | Article: 53



Heavy metals stabilization in lead zinc mine tailings by using mechanical, mechano-chemical, and microwave oven activation; tailing waste utilization in building materials

Karim Nawaz, Guangwei Yu, Wisal Ahmad

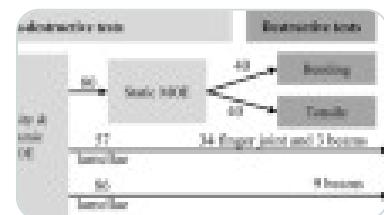
Original Article | 28 January 2025 | Article: 52



Assessment of *Populus tremuloides* (Michx) mechanical characteristics for glulam production

Oscar Eric Gabriel Legrais, Pierre Blanchet, João Vítor Felippe Silva

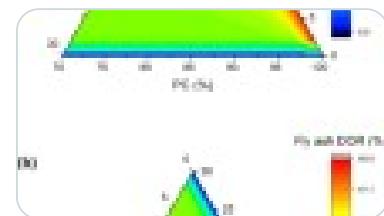
Original Article | 27 January 2025 | Article: 51



Phase diagrams for Portland cement-slag-fly ash ternary cements

Aron Berhanu Degefa, Solmoei Park

Original Article | 25 January 2025 | Article: 50



Degradation and mechanical properties of concrete made with metallurgical sludge waste in long-term

Marie HorňákováJan PizoňPetr Lehner

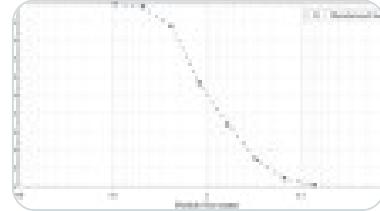
Original Article | Open access | 24 January 2025 | Article: 49



Mechanical characteristics of controlled low-strength materials (CLSM) activated with alkaline solution

Osman OkuyucuSuraj D. KhadkaPriyantha W. Jayawickrama

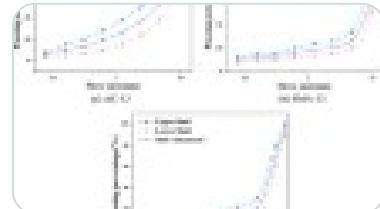
Original Article | 24 January 2025 | Article: 48



Investigation on void connectivity characteristics of steel slag asphalt mixture subjected to dry–wet cycles and microwave heating utilizing computed tomography technology

Bowen GuanXuanhao CaoZhenqing He

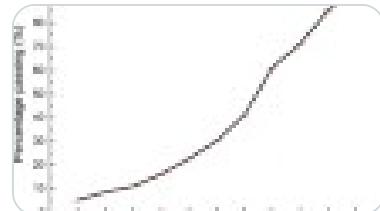
Original Article | 22 January 2025 | Article: 47



Enhancing fatigue resistance and low-temperature performance of asphalt pavements using antioxidant additives

Yongping HuXu ChengGordon D. Airey

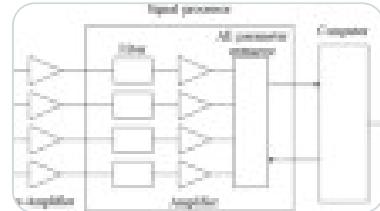
Original Article | Open access | 21 January 2025 | Article: 46



Recommendation of RILEM TC 269-IAM: damage assessment in consideration of repair/retrofit-recovery in concrete and masonry structures by means of innovative NDT

Tomoki ShiotaniKazuo WatabeRILEM Technical Committee

RILEM TC Recommendation | Open access | 20 January 2025 | Article: 45



Efficacy of octadecylamine-functionalized graphene versus graphene nanoplatelets and graphene oxide as asphalt binder modifiers for high-temperature performance

Hashem Khaled Almashaqbeh Mohammed Majdoub Ahmed Al-Ostaz

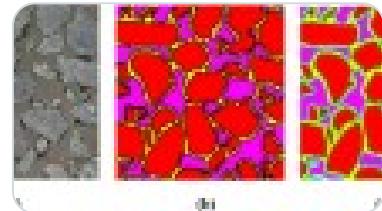
Original Article | Open access | 20 January 2025 | Article: 44



Numerical analysis of mechanical properties at the internal interface of SFP material using a digital image algorithm

Xiaoyu Liu Kuanghuai Wu Marco Pasetto

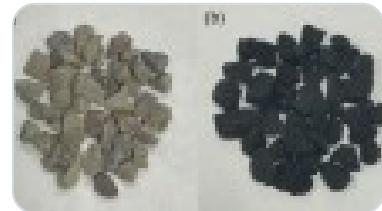
Original Article | 20 January 2025 | Article: 43



Development of highly conductive and self-sensing cement concrete using PVA/nano CB-impregnated recycled coarse aggregate

Jinxia Xu Manlin Hou Wenku Dong

Original Article | 19 January 2025 | Article: 42



Hygrothermal performance of wood-cement walls across various climate conditions

Amer Bakkour Salah-Eddine Ouldboukhitine Sofiane Amziane

Original Article | 17 January 2025 | Article: 41



Reviewing numerical studies on sensible thermal energy storage in cementitious composites: report of the RILEM TC 299-TES

Mohammad Rahjoo Antonio Caggiano Jorge S. Dolado

RILEM TC Report | Open access | 15 January 2025 | Article: 40



Part of 2 collections:

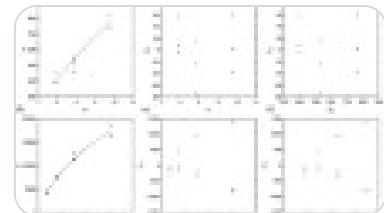
RILEM TC 299-TES: Thermal energy storage in cementitious composites

RILEM TC 299-TES: Thermal Energy Storage in Cementitious Composites

Transformation and regression statistics of the size-effect method for determining fracture energy and process zone size in quasi-brittle materials

Madura PathirageGilles Pijaudier-CabotGianluca Cusatis

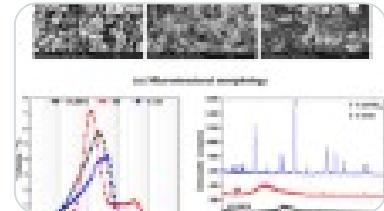
Original Article | 15 January 2025 | Article: 39



Novel cementless ultra-high performance concrete using calcium carbide residue as activator by the aid of combined curing

Gai-Fei PengPeng-Ju WangHong Ding

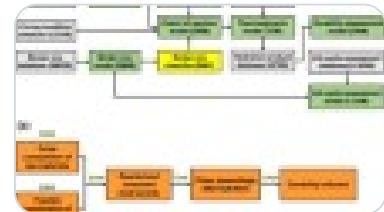
Original Article | 15 January 2025 | Article: 38



Integrated computational assessment of concrete properties, durability, and environmental impacts

Meng GaoNiko HeerenRupert J. Myers

Original Article | Open access | 15 January 2025 | Article: 37



RILEM TC 275-HDB round-robin tests and proposals: moisture buffer value of vegetal concrete

Florence ColletStijn MertensPaulina Faria

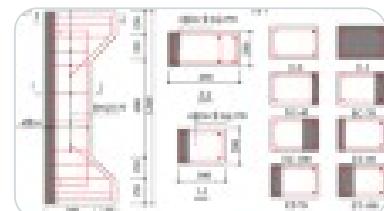
RILEM TC Report | 14 January 2025 | Article: 36



Experimental and analytical study of RC columns strengthened with cementitious grout under small eccentric compression

Gang PengXiaopeng HuShuai Zhong

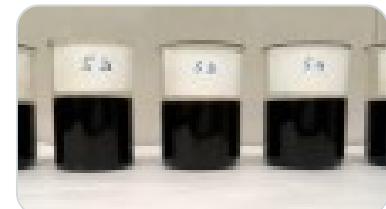
Original Article | 13 January 2025 | Article: 35



Correction: Cementitious versus alkali-activated textile reinforced mortars for combined energy and seismic upgrade of masonry panels

Panagiotis KapsalisParaskevi D. AskouniThanasis C. Triantafillou

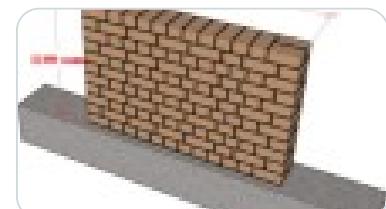
Correction | Open access | 13 January 2025 | Article: 34



Thermal, chemical, and rheological characterization of bio-asphalt prepared using sugarcane molasses

Dheeraj MehtaNikhil Saboo

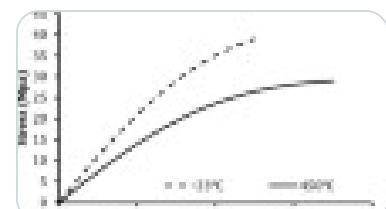
Original Article | 10 January 2025 | Article: 33



Effect of prior in-plane damage on the out-of-plane behavior of adobe block walls

Daxing ChenKang YuanZihao Li

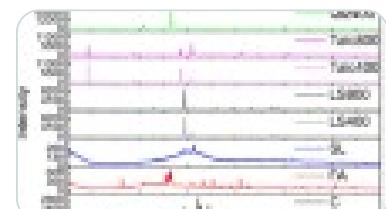
Original Article | 10 January 2025 | Article: 32



Impact of loading protocol on the repair efficiency of heat-damaged concrete beams with SNSM CFRP ropes

Rami H. HaddadRawan S. Obeidat

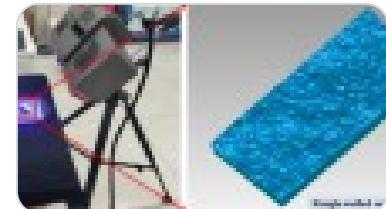
Original Article | 09 January 2025 | Article: 31



Enhancement in stability of air bubbles in mortar at fresh state with different SCMs

Qian JiangCheng YuQian Zhang

Original Article | 09 January 2025 | Article: 30



Investigation of the seepage property of a concrete fracture in a marine environment

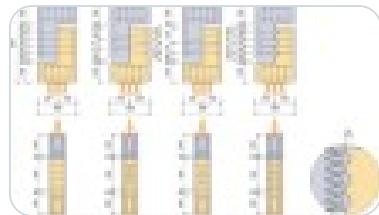
Yun ChenShuaishuai MiaoGuowei Ma

Original Article | 09 January 2025 | Article: 29

Evaluation of connectors' influence on the interface behaviour between concrete layers

Juozas MasėnasJuozas Valivonis

Original Article | Open access | 09 January 2025 | Article: 28



Study on chloride penetration resistance of hybrid fiber-reinforced concrete in winter construction

Yi LiMudan QiShengpeng Ji

Original Article | 26 December 2024 | Article: 27



Cellulose nanofibrils in pervious concrete: improving mechanical properties and durability

Jingchen LiWeidong CaoYingjian Li

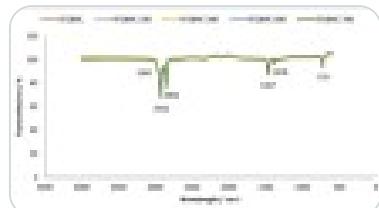
Original Article | 26 December 2024 | Article: 26



The effect of thermal cycling on the thermal and chemical stability of paraffin phase change materials (PCMs) composites

Ahmad WadeePete WalkerVeronica Ferrandiz-Mas

Original Article | Open access | 24 December 2024 | Article: 25



Effect of design parameters on low-temperature cracking resistance of recycled hot-mix asphalt mixtures

Yuquan YaoJiangang YangShukai Yu

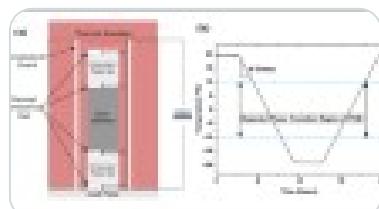
Original Article | 22 December 2024 | Article: 24



Evaluating long-term thermal and chemical stability and leaching potential of low-temperature phase change materials in concrete slabs exposed to outdoor environmental conditions

Robin DebMohammad Irfan IqbalYaghoob Farnam

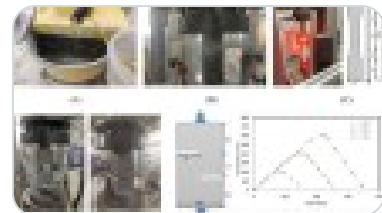
Original Article | Open access | 18 December 2024 | Article: 23



The effects of fiber hybridization on the direct shear behavior of UHPC subjected to elevated temperature

Maha M. S. Ridha

Original Article | 17 December 2024 | Article: 22



Single-parameter concrete carbonation model for varying environmental exposure conditions

Rakesh GopinathMark AlexanderHans Beushausen

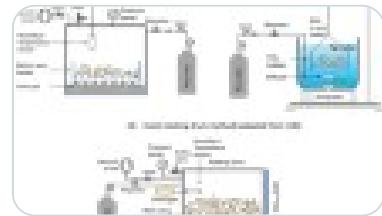
Original Article | Open access | 16 December 2024 | Article: 21



Carbonated recycled concrete aggregates in construction: potential and bottlenecks identified by RILEM TC 309-MCP

Yury Villagran-ZaccardiLucy EllwoodRuben Snellings

RILEM TC | 16 December 2024 | Article: 20



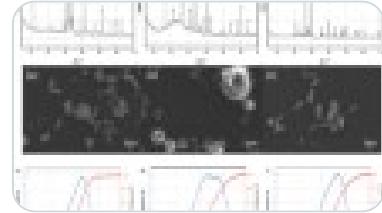
Part of 1 collection:

RILEM TC 309-MCP: Mineral Carbonation for the Production of Construction Materials

Air-entrainment for tailoring multi-scale pore structures in shield synchronous grouting materials

Wenwu DengDawei Huang

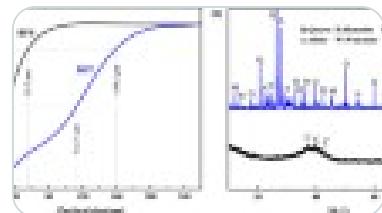
Original Article | 14 December 2024 | Article: 19



A novel electromagnetic wave absorption geopolymers originated from iron tailings and blast furnace slag

Xuwen NingLang YangHanhui Huang

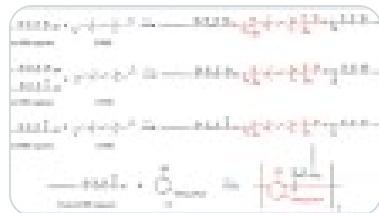
Original Article | 13 December 2024 | Article: 18



Evaluation on performances restoration and warm-mix effect of rejuvenated SBS modified bitumen incorporating a compound rejuvenator

Jiange LiZhiXiang WangBin Tang

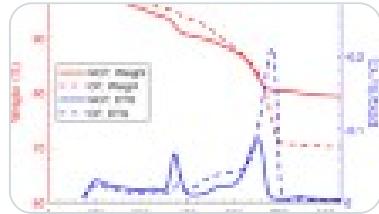
Original Article | 12 December 2024 | Article: 17



Effect of accelerated carbonation on long-term water absorption behavior of cement-based materials

Fangzhou RenChunsheng ZhouUeli Angst

Original Article | 10 December 2024 | Article: 16



Bond strength and flexural performance of repair composites incorporating nanofibrillated cellulose (NFC) modified mortar

Obinna OnuaguluchiShen WangNemkumar Banthia

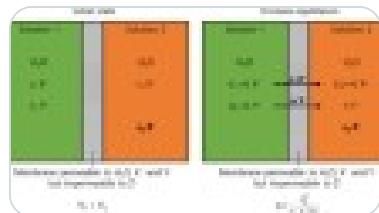
Original Article | 10 December 2024 | Article: 15



The colloidal nature and osmotic potential of alkali-silica reaction products and their role for the ASR expansion mechanism

Colin GiebsonKatrin Seyfarth

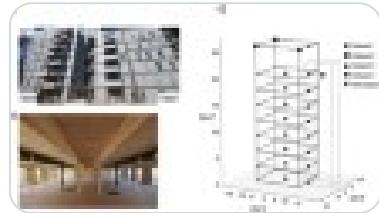
Original Article | Open access | 10 December 2024 | Article: 14



8-storey CLT building dynamical properties analysis and monitoring from construction to operating phase

Dorian JanotFlorent Vieux-ChampagneAxel Jung

Original Article | 09 December 2024 | Article: 13



Thoroughgoing sustainability indices to support the development of a forward-looking market for innovative construction materials

Davide di SummaEsteban CamachoNele De Belie

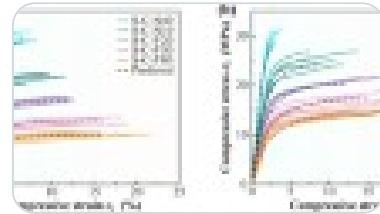
Original Article | 09 December 2024 | Article: 12



Compressive stress–strain relationships of laminated bamboo under service temperature

Shanyue GuanJiucheng ZhaoHongwei Zhao

ORIGINAL ARTICLE | 09 December 2024 | Article: 11



Study on pore structure characteristics of circulating fluidized bed fly ash-based lightweight foamed filler based on X-ray computed tomography

Jingchao YangXingyi WangXiaohong Bai

Original Article | 07 December 2024 | Article: 10



Study on the shrinkage and restrained cracking of concrete with different surface curing methods

Jiahe WangHuajian LiYu Gao

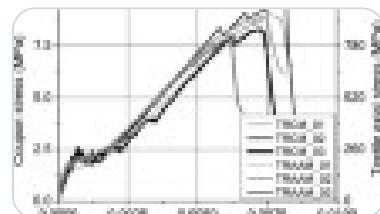
Original Article | 07 December 2024 | Article: 9



Cementitious versus alkali-activated textile reinforced mortars for combined energy and seismic upgrade of masonry panels

Panagiotis KapsalisParaskevi D. AskouniThanasis C. Triantafillou

Original Article | Open access | 06 December 2024 | Article: 8



Designing low-carbon ultra-high performance concrete with co-combustion ash of sewage sludge and rice husk

Yan XiaDaquan ShiJianhua Yan

Original Article | 06 December 2024 | Article: 7



Early-age compressive behavior and stress-strain relationship of high -strength SSP-cement mortar

Guohua ShengHuiyu TianZheng Wei

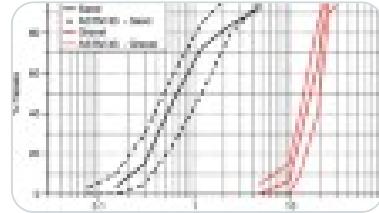
Original Article | 06 December 2024 | Article: 6



Depassivation of reinforcing steel due to accelerated-carbonation in limestone calcined clay cement concretes

Luis Felipe Salazar-MayorgaJuan Lizarazo-MarriagaJuan F. Arango-L

Original Article | 05 December 2024 | Article: 5



Temperature dependence of the cohesive strength of asphalt binder in low- and medium-temperature zone and its mechanism

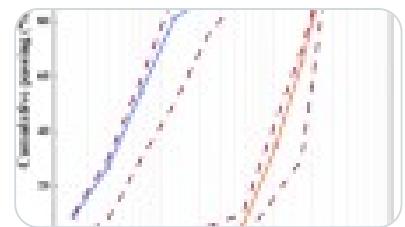
Zhenfeng SongChuanfeng ZhengHaisong Luo

Original Article | 04 December 2024 | Article: 4

Mechanical and microscopic properties of low alkali sulfoaluminate and magnesium phosphate cement slurries modified recycled aggregate concrete

Jun LiuHaoshen ZhaoJianhe Xie

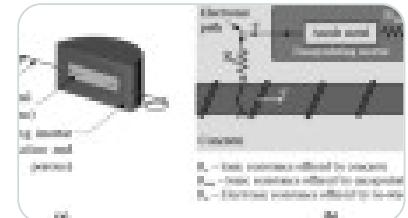
Original Article | 03 December 2024 | Article: 3



Service life estimation, failure mechanisms, and specifications of galvanic anodes for corroding reinforced concrete structures

Karthikeyan ManickamDeepak K. KamdeRadhakrishna G. Pillai

Original Article | 02 December 2024 | Article: 2



Shear versus flexural bond tests of Textile-Reinforced Mortar applied to masonry substrates

Paraskevi D. AskouniCatherine G. Papanicolaou

Original Article | 02 December 2024 | Article: 1

