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Editorial – Construction Materials June 2017

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It is a pleasure to introduce this issue of Construction Materials, which features articles spanning a wide range of important topics related to the use of innovative and traditional materials in the field of Civil Engineering.

The first article featured in this issue is a Briefing by Foster and Ramage (Foster & Ramage, 2017) describing advances in the use of timber as a structural material in innovative super-tall construction, in particular the conceptual design of the Oakwood Tower (London). This includes research in material, fire, and structural considerations, and highlights the need for future research in some of these aspects to enable super-tall timber to become a reality.

Anagnostopoulos (2017) describes the mechanical properties of a series of epoxy resin-soil-cement mixtures produced to replicate the deep mixing method of soil improvement, with important benefits for geotechnical and foundation work using low-cost epoxy resins as a binding component.

Hussein et al. (2017) provide insight into the use of innovative combinations of metallic foaming agents and a weak surfactant to stabilise bubbles within lightweight cement mortars, bringing improvements in the strength-density relationship for these materials by making a more uniform void structure.

Hover et al. (2017) outline a new methodology for applying particle tracking velocimetry to monitor cracking of steel-fibre reinforced concrete beams under flexural load, which offers the scope for use of this technique in material design for steel fibre-reinforced concrete tunnel linings.

Finally in this issue, Islam and Ghafoori (2017) describe the role of alkalis supplied by cement in determining the mortar bar expansion observed in tests designed as modifications of the ASTM C1260 method for alkali-silica reaction. This work highlights the importance of the interplay between material properties and testing protocols in defining the outcomes of accelerated alkali-silica reaction tests, identifying that the influence of the alkalis supplied by the cement is heightened when a lower external alkali content is used in testing.

On behalf of the Editorial Board, I hope that this issue of Construction Materials will be of interest and value to the readers.

References

Anagnostopoulos CA (2017) Strength properties of epoxy resin-soil-cement mixtures. Construction Materials **NN(n)**:XX-XX

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