Proceedings of the Institution of Civil Engineers
Structures and Buildings 162
October 2009 Issue SB5
Page 289
doi: 10.1680/stbu.2009.162.5.289

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Editorial

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Welcome to the second of the two themed issues of *Structures and Buildings* on the use of fibre-reinforced polymer composites (FRPs) in construction. The original intention was to have a single themed issue, but the response to the call for papers was such that it has been necessary to have two issues, which shows the level of interest in FRPs in construction. These advanced materials have been used for many years in the aerospace, shipbuilding and sports equipment industries and are now being used in a variety of construction based applications. To name a few: strengthening or stiffening existing metal (steel, wrought and cast iron), concrete, masonry and timber structures, new build and seismic upgrade.

The papers in the themed issues cover all these topics and present the latest research findings and practical applications. The biggest application of FRPs has been for strengthening reinforced concrete (RC), and the papers in this second issue will be mainly concerned with RC applications. The first paper in this issue is on the seismic assessment of a reinforced concrete chimney strengthened with carbon fibre[1]. There is real potential for seismic upgrade using advanced composite materials so this paper is particularly topical.

The remaining papers are on various aspects of using composites in conjunction with concrete. There are papers on the mechanics of debonding[2] and stress localisation[3], areas of concern when ensuring the integrity of the adhesive bonding of composites to concrete. The paper on deep embedment for shear strengthening[5] will be of interest because shear strengthening of reinforced concrete is less well understood than flexural strengthening.

There are two papers concerned with the strengthening of beam-to-column joints[4] and flexural strengthening[6]. The final paper is on fatigue behaviour[7], again an area which needs further research. The authors are all prominent in the area of FRP research, indeed several are world leaders. I trust that the readers of the journal will find the contents interesting and challenging and that they will be persuaded to use these fascinating materials in yet more applications.

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