University of Western Sydney

Research Directions

Office of Research Services

UNLOCKING SHEAR INTERACTION OF CONCRETE KEYS

Dr Andrew Wheeler, School of Engineering has received funding from MP Engineers Pty Ltd to find a way to determine the strength of structural concrete keys used in multi storey and medium sized buildings.

Concrete keys are precast concrete shapes used to aid structural alignment in building construction. 'A new experimental method will be worked out that will examine the behaviour of the mechanical interlock and the friction developed in the connection of loads applied in the same direction as the concrete key' explained Dr Wheeler.

Once the experimental method has been developed, two concrete pours will be required to model the pouring of the two intersecting parts. These experiments will develop new methods of distinguishing between the interlock and friction of the keys.

'The behaviour of these key joints is a new area of research and could significantly alter existing design methods for these types of connections' say Dr Wheeler.

Guidelines for the safety and strength of these components will also be developed by the investigation process.

Funding has been set at $13,500.00.

Project title: *Shear Interaction of Concrete Keys in the Longitudinal Direction.*

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