Innovative solutions for moment resisting precast concrete connections for framed structures.

Sid daher[1]
Arslan Awan[2]
[1] Leviat
[2] Australia & New Zealand

Moment resisting concrete framed structures are often adopted as the structural system for large footprint, open plan, low rise structures such as multi-storey carparks, shopping malls, and hospitals. This is because these structures typically have small and eccentric cores relative to the footprint of the building, making them ineffective to resist the lateral loads.

The repetitive grid layout of these structures also makes them ideal candidates for precast construction due to the economies of scale and simplistic structural elements, however in-situ concrete is generally adopted due to the limited economical and practical options for moment resisting precast connections.

This paper will review the traditional methods of achieving moment resisting precast connections and provide a comparison with innovative solutions utilising proprietary products.