

Fall Prevention in Facade Works Through Design and Application of Fit-For-Purpose Tools – Hong Kong Experience

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ABSTRACT

Objective: Truss-out Bamboo Scaffold (TBS) is a common type of working platform in Hong Kong used for repair, maintenance, alternation and addition works at external walls of built high-rise buildings. TBS platform is supported by a few I-shape metal brackets temporarily installed at the external wall. Scaffolders usually must overstretch their upper bodies or even get outside of window to install anchor bolts to secure metal brackets and construct the TBS platform. Such hazardous work resulted in fatal fallings from time to time. **Method:** OSHC is attempting to tackle the issue through two low-tech but new methods. First, the design and distribution of a Rapid Demountable Platform (RDP). Second, re-engineering I-shape brackets with improved design. RDP is an aluminium alloy platform assembled from prefabricated parts. During erection and dismantling of RDP, scaffolders just stand inside the apartment or work on safe working platform with proper guardrails and toe-boards. Where RDP is not applicable for the work and TBS platform must be used, the improved I- shape bracket would come in handy. The improved I-shape bracket is more versatile, with alternative anchorage points for adding anchor bolts. The overall vertical length is reduced to eliminate the need for scaffolders to overstretch their upper bodies. **Results:** Trial tests were conducted for both RDP and improved I-shape bracket, and results were promising. With the two small but fit-for-purpose “innovations”, Workers working on façade no longer need to work as “Spiderman” and could work safely. **Conclusion:** Small changes resulted in big safety differences.

Keywords: High risks industries, Repair Maintenance Alternation and Addition works, Technology driven change, Safe design
