

UNIVERSITI TEKNOLOGI MARA

**SEISMIC PERFORMANCE OF
INSULATED SANDWICH WALL PANEL
UNDER REVERSIBLE CYCLIC LOADING**

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of the requirement for the degree of
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AUTHOR'S DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

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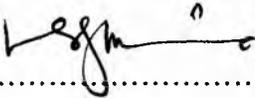
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ABSTRACT

This research study summarises the seismic performance of insulated sandwich wall panel (ISWP). A test was carried out to determine its lateral strength capacity. Load-lateral deformation hysteretic response and hysteresis energy damping were discussed and analysed. One specimen of Polyurethane Sandwich Wall Panel (PSWP) namely WS1 was tested under in-plane quasi-static lateral cyclic loading started with a small percent of $\pm 0.01\%$ drift and were increased gradually until the strength capacity is achieved.

The ultimate strength recorded for WS1 was 5.6 kN. The visual observation and experimental results showed that the cracks start to occur at $+0.3\%$ (both at pushing direction) at the wall-foundation joint. However, WS1 was observed did not have any defect on the surface of wall but the buckling failure at the aluminium frame was occurred. Overall, WS1 did not suffer any yielding condition due to very low of stresses applied.

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