

## SUMMARY

**Farli Aldian**, Department of Civil Engineering, Faculty of Engineering, University of Brawijaya, March 2016, *Flexure Behaviour and Crack Pattern of Panel Walls with Tridimensional Wire Mesh Under Cyclic Loading*, Academic Supervisor: Ari Wibowo, ST., MT., Ph.D and Roland Martin Simatupang, ST., MT., M.Sc.

Walls is one important component of building. Over the last few years the brick is one of the materials used in making the walls of the building. However, with the development of science in the field of construction has emerged again one of the walls that can be used as an alternative in construction, namely panel walls with tridimensional wire mesh (PJKB-3D) consisting of shotcrete, wiremesh and *expanded polystyrene* (EPS). PJKB-3D is generally used as structural components that resist lateral loads but information about the behavior of PJKB-3D is still limited.

In this study used two types of variations, those are walls with M4 and M8. There are 3 specimens which represent those variations, the size of all walls are 900 x 600 mm,  $f_c$  21 MPa and an aspect ratio of 1,5. The research done by providing lateral cyclic load until the walls is over lateral load failure. The data generated from experiment are the load and displacement for each cycle.

Based on the test results indicate that the wall with M4 and M8 have an average capacity of the lateral load is not much different, but a failure mechanism which occurs in the walls with M4 is the flexure-shear while M8 failure of yield penetration in the interface between the beams and walls.

**keywords:** flexure, shear, displacement, failure mechanism, lateral load.