

ABSTRACT

Abstract. Special Region of Yogyakarta, especially Bantul Regency, is a region with high level of seismic activity in Indonesia. Buildings that have the highest risk of collapse to earthquake are non-engineered buildings or residential buildings built without planning or applicable conditions. One of them is the construction of non-engineered buildings located in Serut Village, Palbapang, Bantul Regency, Yogyakarta. This study aims to provide a number of solutions on how the quality of constructions materials for non-engineered buildings in earthquake prone areas in accordance with the Indonesian National Standard. In testing the construction materials, there are several kinds of specimen in the field : concrete, concrete reinforcing steel and bricks to be brought to the laboratory Civil Engineered, Faculty of Engineering, Universitas Muhammadiyah Yogyakarta for Compressive strenght of concrete, compressive strenght of brick, and tensile strenght of steel. The results show than non-engineered house located in earthquake hazard areas can be said to bad earthquake resistance in case of major earthquake. The quality of construction materials in the construction of non-engineered house in Serut Village, Palbapang, Bantul Regency is less good and less feasible, as evidenced by the testing of construction materials in the form of bricks, reinforcing steel and concrete less meet the criteria and requirements of the Indonesia National Standard for bricks not include in the Module with any class , steel reinforcement obtained Ø10 mm found (fy) 401,52 Mpa and Ø12 mm obtained (fy) 393,736 Mpa for steel is good, and for concrete got quality of concrete K125. Mixing of concrete is done manually with 1 : 3 : 2 that is 1 cement 3 sand, and 2 gravel sloof size 15 × 20 cm with 4Ø12 reinforced steel, reinforcement Ø60-150, size coloumn 10 × 15 cm reinforcement with 4Ø12 reinforcement Ø6-150 and size ringbalk 10 × 15 cm with 4Ø10 reinforcement steel, Ø6-150 reinforcement steel

Keywords : Materials, Earthquake, Non Engineered Building, Indonesian National Standard