**Damage due to Earthquake and Reconstruction of Residential Houses**

**after Yogyakarta Earthquake 2006**

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**Abstract**

Residential houses are generally vulnerable to earthquake. On 27th May 2006 an earthquake of magnitude M6.3 hit Special Province of Yogyakarta, Indonesia. Due to Yogyakarta 2006 earthquake, thousands of houses were damaged. More than 200000 houses were estimated to be heavily damaged and collapsed. Those damage are mainly because of the residential houses in Indonesia were usually built by the workers who have no or limited capability on earthquake resistant structures. Therefore, these types of buildings are considered as non-engineered buildings. After the earthquake, the reconstruction has to be started quickly. In order to speed up the recovery time, the government had decided that the majority of rehabilitation and construction processes should be done by the community groups. Due to massive construction activities, the results of construction has to be assured that they fulfil the requirement of earthquake resistant buildings standard. After reconstruction, the survey had been conducted in year 2007 to as many as 42052 houses to measure and assure the fulfilment of the reconstructed housed to the standard that has been decided. From the survey results, some houses have fulfill the standard, and some houses have fulfil only a portion of the standard. For the houses that has not fulfil 100% requirement, the recommendations for the strengthening procedure were provided so that the houses are expected to become less vulnerable to earthquake actions.

Keywords: damage, earthquake, reconstruction, Yogyakarta earthquake, houses, residential buildings