Evaluasi Daur Ulang Material Limbah Gempa Untuk Shelter Gempa Bumi = Evaluation of Disaster Waste Material Recycling for Earthquake Shelter

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Abstrak

Indonesia berada di deretan gunung berapi sepanjang Asia-Pasifik yang sering disebut sebagai ring of fire. Wilayah yang berada di antara pertemuan lempeng dan deretan gunung berapi disebut sebagai zona aktif. Daerah zona aktif umumnya banyak terjadi gempa bumi di area ini. Gempa bumi di Indonesia memiliki peningkatan aktivitas setiap tahunnya. Salah satu isu yang relevan terhadap peristiwa ini adalah tersebarnya material limbah akibat tempat tinggal korban bencana yang hancur. Salah satu hal yang dapat dilakukan dalam mengatasi hal ini adalah dengan mendaur ulang material limbah yang tersebar menjadi shelter. Skripsi ini bertujuan untuk mengevaluasi performa material limbah gempa yang akan didaur ulang sebagai shelter gempa bumi. Untuk mengevaluasi material limbah gempa, pengujian compressive strength dan observasi material limbah gempa untuk shelter di lapangan dilakukan. Hasil pengujian nilai compressive strength material limbah gempa akan dibandingkan dengan standar compressive strength bangunan dan material bangunan baru pembanding. Selain itu, hasil observasi material limbah gempa yang terdapat pada shelter di lapangan akan dibandingkan dengan kriteria material shelter di Indonesia. Dari hasil pengujian compressive strength diperoleh bahwa nilai compressive strength material limbah gempa bumi dan material bangunan baru tidak jauh berbeda. Namun, terdapat pengurangan nilai compressive strength pada beberapa material limbah gempa bumi. Meski begitu, material limbah gempa bumi masih dapat dikategorikan sebagai material yang dapat dipakai untuk shelter gempa bumi menurut standar compressive strength yang diperoleh.

.....Indonesia is in a row of volcanoes along the Asia-Pacific which is often referred to as the ring of fire. The area between the confluence of plates and a series of volcanoes is known as the active zone. The active zone area generally experiences a lot of earthquakes in this area. Earthquakes in Indonesia have an increase in activity every year. One issue that is relevant to this event is the spread of waste materials due to the destroyed homes of disaster victims. One of the things that can be done to overcome this is by recycling scattered waste materials into shelters (environments that provide protection, comfort, and security for disaster victims). This thesis aims to evaluate the performance of earthquake waste materials which will be recycled as earthquake shelters. In order to evaluate the earthquake waste material, compressive strength testing and observations of earthquake waste material for shelters in the field were carried out. The results of testing the compressive strength value of the earthquake waste material will be compared with the standard compressive strength of the building and the comparison of new building materials. In addition, the results of observations of earthquake waste materials found in shelters in the field will be compared with the criteria for shelter materials in Indonesia.From the compressive strength test results, it was found that the compressive strength values of earthquake waste materials and new building materials were not much different. However, there is a reduction in the value of compressive strength in some earthquake waste materials. Even so, earthquake waste materials can still be categorized as materials that can be used for earthquake shelters according to the standard compressive strength obtained.