Investigation on Earthquake Resistance System Design Based on EC8 for Low Rise Building in Malaysia

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ABSTRACT

The purpose of this research is to investigate or study the behavior of the earthquake resistance system design based on Euro Code specifically for base isolator and used on low rise building in Malaysia. Recently, the amounts of public infrastructure are continuously be damaged from earthquake problems and by doing this research it may help in engineering field to reduce the damage happened. Base isolator is installing between column and foundation which act as isolator for the earthquake force. The base isolator in this research is going to be tested with compression and shear test to analyze the behavior of the bearing that applied by a certain load. However, a comparison between theoretical and experimental data needs to be done to get a percentage different and compare both compression and shear stiffness behavior of the material. Another comparison of the deflection that need to be done are between finite element analysis using COMSOL Multiphysics 3.5 with lab result. Lastly, using the Euro code 8 to categories the base isolator which is fulfills the criteria that require.