

A New Type Safety-Door for Earthquake Disaster Prevention: Part I

Authors : Daniel Y. Abebe, Jaehyouk Choi

Abstract : From the past earthquake events, many people get hurt at the exit while they are trying to go out of the buildings because of the exit doors are unable to be opened. The door is not opened because it deviates from its the original position. The aim of this research is to develop and evaluate a new type safety door that keeps the door frame in its original position or keeps its edge angles perpendicular during and post-earthquake. The proposed door is composed of three components: outer frame joined to the wall, inner frame (door frame) and circular hollow section connected to the inner and outer frame which is used as seismic energy dissipating device.

Keywords : safety-door, earthquake disaster, low yield point steel, passive energy dissipating device, FE analysis

Conference Title : ICCAE 2015 : International Conference on Civil Society and Architectural Engineering

Conference Location : Miami, United States

Conference Dates : March 09-10, 2015