

Seismic Isolation System for Irregular Structure with the Largest Isolation Building Area in the World

Authors : Houmame Benbouali

Abstract : This paper introduces the design, analysis, tests and application of a new isolation system used in irregular structure, also briefly introduces the recent research, and development on seismic isolation of civil buildings in China. A very large platform (2 stories RC frame) with plane size 1500m wide and 2000m long was built to cover the city railway communication hub area. About 50 isolation house buildings (9 stories RC frame) with 480,000 M2 were built on the top floor of platform. A new advanced isolation system named Storied-Isolation was used to ensure the seismic safety for this irregular structure with the largest isolation house building area in the world. This new isolation system has been used widely in China. There are over 400 buildings with seismic isolation have been built in China until 2003. This paper will introduce the recent research, and development on seismic isolation of civil buildings in China, including the tendency of application on seismic isolation, different isolation systems, different design level being used, design codes, application status and examples of application. Also the paper makes discussion of some problems on the future development of seismic isolation in China.

Keywords : civil buildings, floor, irregular structure, seismic isolation

Conference Title : ICCSEE 2016 : International Conference on Civil, Structural and Environmental Engineering

Conference Location : London, United Kingdom

Conference Dates : March 17-18, 2016