

A REVIEW ON THE EXISTING SEISMIC RESISTANT CONSTRUCTION TECHNIQUES

SANCHIT BAJAJ¹ & S. B. SINGH²

¹Undergraduate, Civil Engineering Department, Birla Institute of Technology and Science (BITS) Pilani, Rajasthan, India

²Professor, Civil Engineering Department, Birla Institute of Technology and Science (BITS) Pilani, Rajasthan, India

ABSTRACT

Earthquakes are one of the main reasons of the collapse of the structures every year. Many research studies have been focusing on decreasing the impact of seismic waves on the structures. For this, initially there were many passive techniques introduced to decrease the damage caused due to earthquakes. But since the late twentieth century, the focus has shifted to introduce active techniques which are meant to absorb the seismic waves or do not let the waves propagate through the building. Passive techniques are based on decreasing the lateral loads on a structure while the others alter the seismic waves that propagate through the structure. This study is primarily a review of most of the construction techniques designed to resist the earthquakes in masonry and reinforced concrete framed structures. Moreover, some common methods for these structures have also been highlighted. In all these methods, various aspects pertaining to the seismic behaviour of that particular method have been discussed based on the previous research work. Finally, the main conclusion drawn is that whatever method is being chosen based on the location and material availability, it should be properly designed and detailed.

KEYWORDS: Seismic Resistant, Construction Techniques