

Effects on non-structural elements by induced seismicity

Stefano Barone and Barbara Borzi
Eucentre, Pavia, Italy (www.eucentre.it)

This work focuses on the assessment of the effects of induced seismicity on rigid non-structural elements inside flexible moment resisting reinforced concrete buildings. Particular attention is paid to brick masonry infills which are typical of Italian ad built. Seismic hazard caused by seismicity induced by human activities is not considered in regulations in Italy at the time being. This issue is more experienced in countries or areas of them where the natural seismicity is moderate or almost absent and land industrialization has caused events that can undoubtedly be attributed to human activity. These seismic events are characterized by low magnitude and small depth, therefore one can talk about near-field effects on the structures. The signals are characterized by short duration and high frequency content. It is therefore reasonable to expect that a structure even if designed only for gravity loads does not suffer significant damage as a result of these events. However, infills, partitions and non-structural elements in general could instead overcome specific damage conditions.