عنوان مقاله:
Sustainability through Seismic Mitigation in HVAC Systems

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خلاصه مقاله:
Earthquakes are non-predictable natural disasters. No human being is able to foresee a coming earthquake and escape from its consequences. What we can do on the other hand is to observe the results of happened earthquakes, collect empirical data and analyze these for estimating seismic forces subject to future earthquakes. This will be the basis for seismic protection of our buildings and facilities. Today civil engineers can design buildings depending on expected seismic forces. However, an unacceptable mistake is to neglect the importance of seismic restraint fornon-structural systems. This is crucial especially for fire sprinkler pipes, fuel lines, emergency and energy systems, etc. Seismic protection of mechanical and electrical systems in buildings is crucial for human life and for avoiding costs of damages. It is a matter of non-structural seismicengineering design, which must be done by professionals per accepted building codes. This paper starts with basic information on earthquakes and their damaging effects on HVAC systems. It gives necessary knowledge on earthquake standards to clarify when and how to do seismic protection. Professional experiences from a wide perspective is also included in this paper

کلمات کلیدی:
Earthquake, Seismic, Safety, Mitigation, Sustainability