Session ID: TNM-2

Title
SEISMIC DESIGN, RISK MANAGEMENT AND CONSEQUENCE ANALYSIS OF HAZARDOUS INDUSTRIAL FACILITIES

Convenors
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Description
Industrial plants are particularly prone to be highly damaged when subjected to strong earthquakes, which may trigger technological accidents usually referred as natural-technological (NaTech) events. One of the most famous examples is represents by the Fukushima disaster during 2011 Tohoku Earthquake. Nevertheless, the effort in developing new design/assessment methodologies is being more and more important and clearly proven by the rapid increasing of the contributions on this topic. Performance Based Earthquake engineering, which has seen a rapid growing in the field of civil engineering, can be considered rather new in the world of industrial facilities because of the neuralgic role of the consequence analysis, necessary to quantify the individual or societal risk.

This Technical session, promoted by the Working Group 13 of EAEE aims at bringing together the latest methodologies and techniques for a reliable estimation of Na-Tech risk of hazardous facilities. Contributions are called from researchers and industry professionals, strongly involved in this area. Even though this issue should mainly focus on the current state-of-the-art on risk assessment of hazardous facilities subjected to Na-Tech Events, researchers involved in studying innovative techniques to reduce seismic risk are strongly encouraged to submit their contributions. Topics of interest include, but are not limited to:

1. Performance-based design of hazardous industrial facilities
2. Seismic hazard issues in NaTech risk assessment
3. Advanced methodologies for Na-Tech seismic risk assessment
4. Seismic design of industrial structures and non-structural components
5. Design of safety barriers for disaster control of hazardous plants
6. Data Driven SHM for seismic vulnarabilty and damage assessment of facilities
7. Resilience of industrial facilities and the communities
8. Earthquake damage to industrial facilities in Turkey-Syria earthquake series

Invited Speakers
O. Furuya [4], A. Sextos [5], P. Malhotra [6]

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