Workshop on Seismic Performance of multi-component systems in special risk Industrial Facilities (SPIF)

Organized by the Eucentre, University of Aachen, University of Trento and Roma Tre University

Seminar Room of Eucentre
Pavia, September 3rd, 2020

BACKGROUND AND MOTIVATION
Industrial facilities consist of the primary load-carrying structure and various process engineering components (secondary structures), which under seismic loading, may exhibit significant damage that may threaten their structural integrity with severe consequences on the population, the environment and the economy. Structures in industrial facilities vary widely from flexible piping to rigid machining tools, and from small precision equipment to large cranes. Most machine installations have specific functions, including manufacturing precision, number of revolutions, production efficiency, and supply capacity, thus the functional failure is as important as structural failure. This is typical for highly developed information technology processes. Furthermore, piping systems can also exhibit significant damage, which occurs at specific locations, as demonstrated with experimental and numerical investigations.

The analysis of literature reveals that experimental studies have been carried mostly on individual components. Moreover, works on non-structural components are very limited and the available codes and guidelines are usually based on past experiences, engineering judgment and intuition, rather than on objective experimental and analytical results. Therefore, the project SPIF (Seismic Performance of multi-component systems in special risk Industrial Facilities) aims to provide more experimental data, which can be useful for widening the knowledge in this field and improving design guidelines and building codes.

The workshop is aimed at presenting the preliminary outcomes of the project both from the experimental dynamic tests and from the numerical investigations performed.

The workshop will follow the international meeting of WG 13, Seismic assessment, design and resilience of industrial facilities, established at the European Association for Earthquake Engineering.

SCIENTIFIC COMMITTEE
Oreste S. Bursi, Christoph Butenweg, Marko Marinković, Fabrizio Paolacci, Alberto Pavese

LOCAL ORGANIZING COMMITTEE
Alberto Pavese, Igor Lanese, Elisa Rizzo Parisi

WORKSHOP CHAIR
Prof. Alberto Pavese
Fondazione Eucentre, Via A. Ferrata, 1 - 27100 Pavia
WORKSHOP OBJECTIVE
The main objective of this workshop is the illustration of the preliminary results of the SPIF project and getting Practitioners and Experienced Researchers acquainted with the Seismic behavior of industrial installations.

WHO SHOULD ATTEND
Graduated students, postdoctoral researchers and practitioners willing to understand the main issues in seismic design of industrial installations, and in particular primary and secondary elements.

WORKSHOP SCHEDULE
9.45-10.00  
EAEE – WG13 delegates registration

10.00-13.00  
EAEE – WG13 meeting

13.00-14.00  
Lunch break

14.00-14.10  
Workshop registration

14.10-14.20  
Fabio Germagnoli – Eucentre  
Presentation of EUCENTRE Foundation

14.20-14.30  
Alberto Pavese – Eucentre  
Presentation of the Seismology and Earthquake Engineering Research Infrastructure Alliance for Europe (SERA Project)

14.30-14.50  
Fabrizio Paolacci – Roma Tre University  
The new WG13 initiative in the EAEE. Main issues in seismic design of industrial pipe racks

14.50-15.10  
Christoph Butenweg – University of Aachen  
Presentation of the SPIF project - Seismic performance of multi-component systems in special risk industrial facilities

15.10-15.30  
Oreste S. Bursi – University of Trento  
Challenges and special problems in seismic testing of multi-component systems of industrial facilities

15.30-15.50  
Igor Lanese – Eucentre  
Testing issues of the SPIF Project

16.00-16.30  
Visit at the Eucentre laboratory

16.45-17.00  
Conclusions

REGISTRATION
The participation is free of charge but the registration is required. To register please fill in the Registration form by August 31, 2020. For more information please contact: saverio.bisoni@eucentre.it

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VENUE OF THE WORKSHOP
The Workshop will take place at Eucentre Foundation in via Adolfo Ferrata, 1 - 27100 Pavia. For more information please visit: https://www.eucentre.it/where-we-are-contacts/