

**Session ID:** BCI-10

**Title**

ENSURING THE FUNCTIONALITY OF CRITICAL FACILITIES AND SEISMIC QUALIFICATION OF COMPONENTS

**Convenors**

D. Combesure <sup>1</sup>, A. Pavese <sup>2</sup>

**Description**

Important components located in the critical infrastructures (hospitals, emergency centres, communication centres, Seveso industrial installations, dams, electrical power stations, etc.) must remain functional during or after a major seismic event. The demonstration of the operability of these components can be done using numerical modelling (calculations), dynamic tests on shaking table or feedback from major earthquakes. With the exception of equipment important for the safety of nuclear installations and some electrical equipment, the European standards give little indication for the specification of the tests to be carried out, on the practical methods for demonstrating the functionality and on the content of the qualification file or lessons learnt for the components. This technical session is aimed at showing the work done in several working groups and testing facilities related to the functionality of critical facilities and the seismic qualification of components. A similar online Workshop has been organized in 2020 by the French Association of Earthquake Engineering.

The convenors and invited speakers of this technical session will raise the following discussions:

- A proposal of guidelines to insure the functionality of critical facilities, D. Combesure, P-A Naze
- Examples of qualification and certification of products and components, A. Pavese
- Examples of qualification for Industry and large scale tests for nuclear industry, B. Colomies, T. Chaudat
- EU SPIF Project -Seismic performance of multi-component systems in special risk industrial facilities: C. Butenweg, Paolacci, Bursi
- Seismic Certification of Equipment in California Hospitals, A Reflection of 15 Years of Code Enforcement, Andy Coughlin
- Recent seismic damage of mechanical structures in Japan and status of Seismic Qualification of equipment related to nuclear facilities: O. Furuya

**Invited Speakers**

T. Chaudat <sup>3</sup>, B. Colomies <sup>4</sup>, F. Paolacci <sup>5</sup>, O. Bursi <sup>6</sup>, O. Furuya <sup>7</sup>, C. Butenweg <sup>10</sup>, A. Coughlin <sup>8</sup>, P.-A. Naze <sup>9</sup>

**Affiliations**

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