

Seismic Absorbers

Electrical and Control Cabinet Protection Against Earthquakes and Shock-Induced Vibrations

Decrease seismic impact on existing and new electrical or I&C cabinets to improve plant reliability, robustness and ensure the qualification

Challenge

In order to successfully qualify new electrical and I&C equipment, the seismic capacity of concerned structures, systems and components has to be validated.

Due to changing regulations, even installed and previously qualified equipment needs to be assessed or reassessed to determine if higher seismic demands are met. Since these cabinets were originally designed and qualified to meet lower seismic demand, costly replacement or extensive structural upgrades might be necessary.

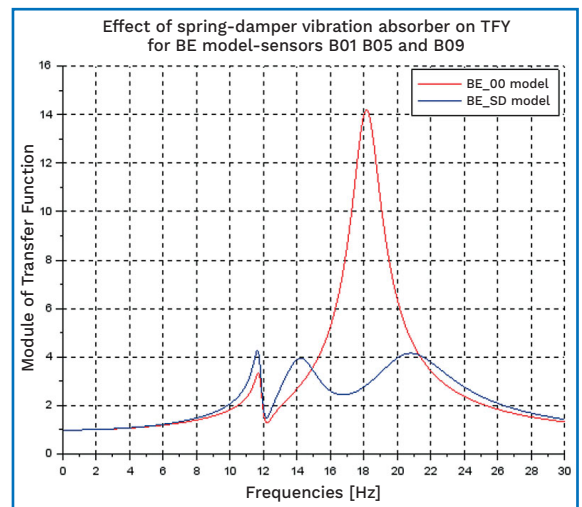
Solution

Our seismic absorbers, once installed, effectively reduce the dynamic response of cabinets and cabinet-like equipment.

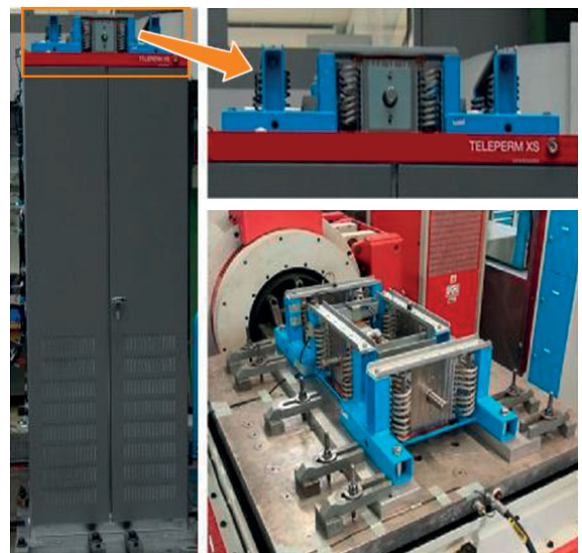
The system drastically reduces earthquake loads and accelerations on the components housed within cabinets. Through calibrated dampening mechanism, the loads and accelerations on components can be reduced to ensure their qualification values. This ensures the integrity and operability of sensitive equipment even in the event of strongly increased seismic events.

Customer benefits

- Increases reliability and robustness of plant equipment by decreasing the chance of damage during seismic activities
- Costly requalification is not required
- The cabinet does not need structural reinforcements and the electrical or I&C qualified devices do not need to be replaced.



Transfer function reduction

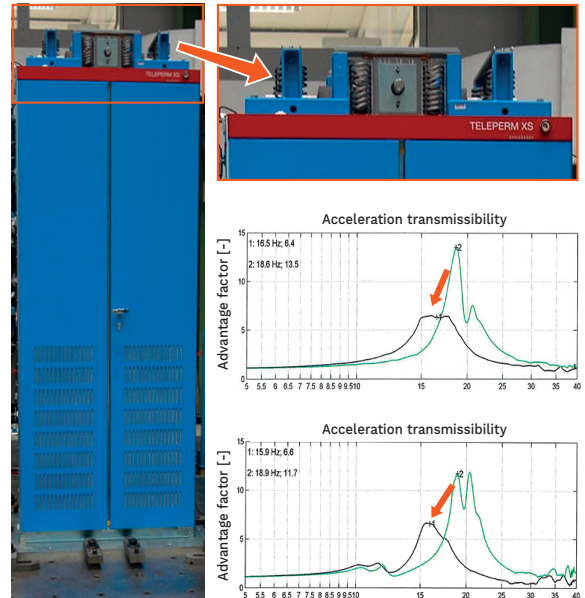
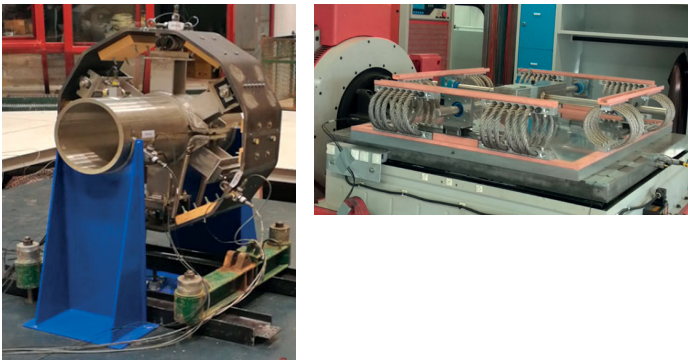


Seismic absorber system with close-up and on the characterization test bench

Your performance
is **our** everyday **commitment**

Technical information

- System tuned to reduce the response in both horizontal directions simultaneously
- Easily fixed on the cabinet top through bolted connections: this does not require any heavy work
- Adaptable to any kind of cabinet by only changing the support and bolted connections design
- Assessment of existing qualifications include the new vibration damper
- Assessment of operational vibrations
- Different applications:
Damping of Operational Vibrations on all kinds of components and structures



System validation test

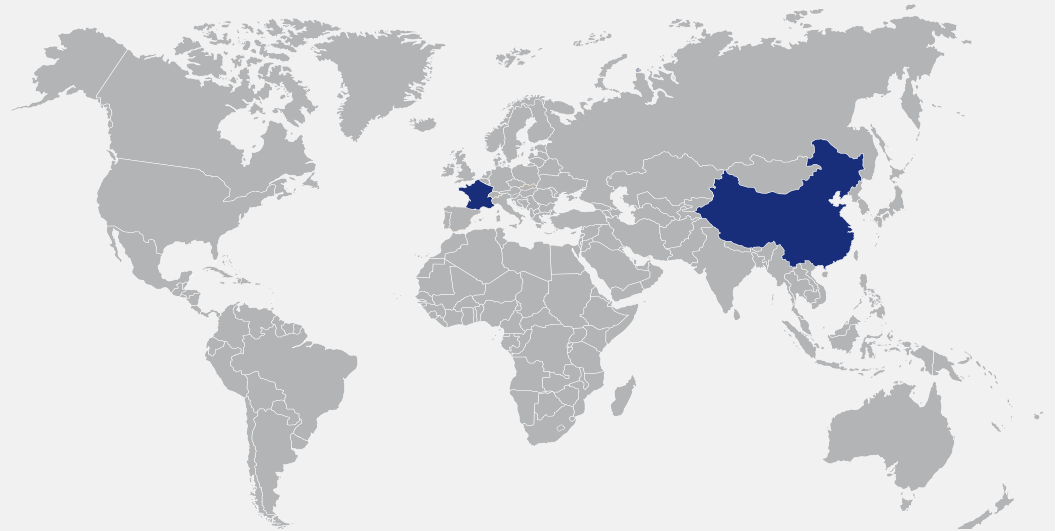
Key figures

Up to **50%** reduction of maximum accelerations within the cabinet

Factor **2-3** reduction of the in-cabinet response spectra peak

References

- FA3
- TSN1
- TSN2



Contact: electrical-systems@framatome.com
www.framatome.com

It is prohibited to reproduce the present publication in its entirety or partially in whatever form without prior written consent. Legal action may be taken against any infringer and/or any person breaching the aforementioned prohibitions.

Subject to change without notice, errors excepted. Illustrations may differ from the original. The statements and information contained in this publication are for advertising purposes only and do not constitute an offer of contract. They shall neither be construed as a guarantee of quality or durability, nor as warranties of merchantability or fitness for a particular purpose. All statements, even those pertaining to future events, are based on information available to us at the date of publication. Only the terms of individual contracts shall be authoritative for type, scope and characteristics of our products and services.