



TECNALIA and VIRLAB join forces to launch seismic and electrical tests for power and high-voltage equipment

- The TECNALIA applied research and technology development centre and the Gipuzkoabased laboratory VIRLAB, a leader in shock and vibration testing, will combine their abilities to provide technological solutions in strategic sectors such as the nuclear, railway and wind energy sectors
- To this end, they will provide a comprehensive offering, including electrical and seismic testing, to enhance and certify the reliability and safety of equipment and structures under extreme conditions, thereby preventing failures and improving the durability and performance of products.

January 14, 2025. The TECNALIA applied research and technology development centre and the Gipuzkoa-based laboratory VIRLAB, a leader in shock and vibration testing, have joined forces to provide the first combined seismic and electrical tests for industry. They will combine their expertise and laboratory resources to provide a comprehensive service for power, medium and high voltage equipment, and technological solutions in sectors such as the nuclear, rail and wind power sectors. These sectors are where the requirements for electrical testing combined with seismic, vibration and shock tests are more restrictive and where there is greater investment in resilient infrastructure.

Electrical testing is used to check that equipment is properly designed to withstand service conditions, including short circuits, lightning, voltage and current surges and other incidents that could cause equipment and, therefore, the power supply to be damaged or disconnected. Vibration tests are used to make sure that equipment can withstand vibration stresses during transportation or operation without affecting its reliability. In the most extreme case, these tests must demonstrate the ability of equipment to perform its safety function in the event of an earthquake. These new combined tests make it possible to enhance and certify the reliability and safety of equipment and structures under extreme conditions, thereby preventing failures and improving the durability and performance of products.

Technological and industrial development

VIRLAB, which is part of the Gipuzkoa-based URBAR group, is a leading dynamic vibration and shock tests laboratory in Europe. It was created in 1976 and develops accredited tests for equipment that may be subjected to earthquakes or other types of vibrations and shocks, for sectors such as the nuclear, railway, wind and automotive industries. More than 3,500 vibration and shock tests have been carried out at its facilities in Asteasu (Gipuzkoa) since it started to operate.





Meanwhile, TECNALIA has an electrical equipment laboratory for smart grids, known as InGRID, facilities that are unique in Europe with their own power, high-voltage and medium-voltage laboratories. These facilities meet the current and future needs of electricity distribution and transmission grids, particularly the development of smart grids, making TECNALIA an international leader in the development and certification of electrical equipment, with more than 35 years of experience.

For Aitor Kortajarena, Director of TECNALIA's Electrical Labs, "this agreement further strengthens our commitment to safety and quality in the electrical industry and in critical sectors such as the nuclear industry, by providing manufacturers with a complete, reliable solution. It is a comprehensive value proposition that provides companies with a complete, high quality specialised testing service through a single entry point, resulting in more efficient management for the customer".

Francisco Martín Morales de Castilla, URBAR's Executive Chairman, pointed out that "the market is demanding more and more seismic and electrical tests to ensure that medium- and high-voltage electrical equipment is safe and reliable, and this agreement with TECNALIA puts us at the forefront to meet this growing need, given the complementary nature of the tests we can carry out in our respective laboratories".

About TECNALIA

TECNALIA is the largest applied research and technological development centre in Spain, a European benchmark and member of the Basque Research and Technology Alliance. TECNALIA works with companies and institutions to improve their competitiveness, people's quality of life and achieve sustainable growth, thanks to a team of more than 1,500 people committed to building a better world through technological research and innovation. This is why TECNALIA's research has a real impact on society and generates benefits in the form of quality of life and progress. Its main areas of action are: smart manufacturing, digital transformation, energy transition, sustainable mobility, health and food, urban ecosystem and circular economy.

In the latest brand awareness and positioning study carried out by the European Research Survey (ERS) in 2022, TECNALIA tops the list regarding R&D and Innovation brand awareness.

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About VIRLAB

VIRLAB is an **ENAC-accredited** shock and vibration testing **laboratory**. It is the only laboratory in Spain approved by the group of owners of Spanish nuclear power plants to carry out seismic qualification tests.

VIRLAB has the capacity to test all types of electrical and mechanical equipment, apparatus and instruments at its **facilities in Asteasu** (Gipuzkoa), where a multitude of **shock and vibration testing** has been carried out. VIRLAB provides its services in various sectors of activity such as the nuclear, railway, wind, transport and automotive industries.

In addition to two biaxial platforms ($2.5 \times 2.5 \text{ m}$ and $1.2 \times 1.2 \text{ m}$), and 1 electrodynamic table, VIRLAB is the only centre in Europe with the capacity to test large, heavy equipment with its two uniaxial tables (horizontal and vertical) that measure $4.0 \times 3.0 \text{ m}$. These platforms make it possible to test equipment up to 16 t and 6 m in length, and in frequency ranges up to 200 Hz.

For further information:

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