ORMAZABAL
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CIT: Research and Technology Center

HPL. High Power Laboratory

Reliable innovation. Personal solutions.

CA-412-EN-1805

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Preface

Since its founding in 1967, **Ormazabal** has been aware of the strategic importance of research applied to our own technological development, and in this way offer quality products and services to our customers and consolidate our leading position in the world's technology sector. The **Research and Technology Center (CIT)** represents an important leap in the company's track record; a project that had long been desired, aspiring to become a technical reference at an international level, in the field of electrical power distribution networks.

The Research and Technology Center has become an essential element in Ormazabal's R&D, with the purpose of acquiring and improving existing technologies and researching new ones.

The CIT's facilities offer their services to the technological & scientific sector for performing research testing and for the development and type testing of products for **Ormazabal**'s own business units and the rest of the electrical sector.

The **CIT** is mainly composed of:

- **HPL**: High power laboratory
- **UDEX**: Real-time network experimentation unit

CIT Laboratories

The **CIT laboratories** are accredited by the Spanish **National Accreditation Entity (ENAC)** in accordance with standard UNE-EN ISO/IEC 17025:

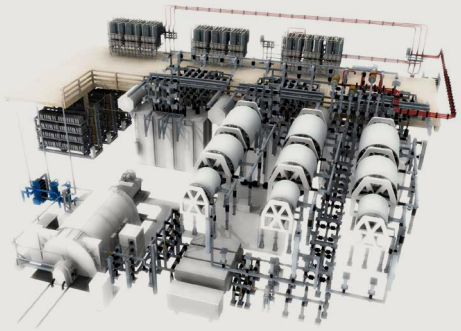
- **High power laboratory (HPL)**
- **High voltage laboratory**
- **Temperature rise laboratory**
- **Mechanical laboratory**

ENAC accreditations are recognized in more than 50 countries since ENAC is a signatory of the Mutual Recognition Agreements established at an international level between accreditation organizations all around the world.

High Power Laboratory (HPL)

The **HPL** has been operational since 2008 for experimentation and performing tests in the development of products that are safer for personnel and assets, contributing to the improvement of the electrical supply and to a sustainable development.

The power required for testing is produced using a **short-circuit power generator** (SCG) rated at 2,500 MVA. The tests can be performed at 50 or 60 Hz.



HPL Capabilities

Laboratory short-circuit power: *2.5 GVA*

TESTS

High Voltage Switches and Circuit breakers	
Short-time and peak withstand current	*40 kA / 3 s*
Short-circuit making and breaking	*16 kA / 40.5 kV | 20 kA / 36 kV | 31.5 kA / 24 kV | 40 kA / 12 kV*
Making and breaking of active loads	*up to 2000 A / 40.5 kV*
Making and breaking of capacitive loads	*up to 100 A / 40.5 kV*
Internal arc	*40 kA / 1 s*
Transformers	
Short-circuit	*up to 20 MVA / 36 kV | up to 25 MVA / 24 kV*
Low Voltage Switchgear	
Short-time and peak withstand current	*80 kA / 1 s*

Qualifications and Accreditations

KEMA certification:

The **High Power Laboratory, which was designed jointly with KEMA**, was certified by this same entity after its commissioning.

ENAC accreditation:

ENAC is a member of **ILAC** (International Laboratory Accreditation Cooperation), which integrates laboratory accreditation organisations worldwide.

Partner of BELA (BELA Boroa):

Founding member, together with Tecnalia and Arteche, of the Basque Electrical Laboratories Alliance, A.I.E..

AELP (Spain) membership:

Member of the Spanish Association of Power Laboratories, recognized as Short Circuit Testing Liaison (STL) applicant.

Other agreements:

Collaboration agreement with the Spanish Foundation for promoting Industrial Innovation (FFII) and the official central electrical technology laboratory (LCOE).


CERTIFICATE

High Power Laboratory of Ormazabal

Designed in cooperation with KEMA Consulting Arnhem.

The installation is built conform our design and we have supervised the construction.
Before and during commissioning of the installation we have trained Ormazabal's staff to perform tests

During commissioning the installation has proven to fulfil all requirements
This installation has proven to be suitable to perform all tests as mentioned above.

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