Moving together
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1. The value of Experience.

More than 70 years of experience in the design and manufacture of products and solutions for the electrical sector and millions of equipment installed around the world, have allowed us to acquire a broad knowledge of the electrical system in all its different aspects.

We have a large team of highly qualified professionals with proven experience in the field, which, together with our well-known customer orientation, makes ARTECHE a natural partner, capable of offering a wide range of comprehensive services covering the areas of:

› Technical Training
› Consulting and Technical Advice
› Full life cycle of the product

Knowledge and experience allow us to understand the particular needs of each electrical installation and each customer and propose action plans adapted in order to achieve the expected result.

Knowledge is key in all processes, from the specification and design of a facility to its exploitation. Improving the training of staff prepares them to be able to take effective decisions in each situation and minimize risks, with the ensuing increase in the availability of their facilities and reduction of operating costs.

ARTECHE makes its knowledge and years of experience available to its clients for training, both theoretical and practical, in different areas of product and application:

**Instrument transformers**
- Fault mode and good practices.
- Predictive/preventive maintenance plans to extend the life of the equipment.

**SAS systems**
- Maintenance of a substation system. Configuration tools.
- IEC 61850 standard in a SAS system.

**Electrical power systems**
- System Stability.
- Safety limits.

From general concepts to specific knowledge of products and applications, the objective is always that participants can use this learning to improve their daily operations, whether in the field of technical specification, network operation and asset management.

ARTECHE offers different types of training to adapt to each need:

- **Programmed Open Courses with a theoretical and practical scope**, taught in our facilities with access to laboratories and real equipment tests, and sharing experiences with the trainers and all registered participants.
- **Closed Courses with Predefined Programs**, both in our own facilities and those of our clients; Modular theoretical and/or practical contents, which can be blended and combined depending on the different profiles of attendees.
- **Closed Courses with Customized Programmes**, in order to deepen and professionalize aspects of greater relevance and interest for personnel, proposing ad-hoc agendas and adapted to be taught in any form, at the client’s home or at the factory.

*Consult our Training Catalogue for more information.*
3. Consulting and Technical Advice: Solutions and Innovation at your service.

Technical advice and Engineering.

Optimizing the investment in a facility while maintaining the performance objective is possible by adapting the specifications of the system and each component not only to the applicable technical regulations and local regulations, but also to the actual demands that they will face during their use.

A correct specification avoids oversizing that increases cost unnecessarily, and at the same time ensures that external factors that can affect the system and its components causing availability problems and reducing their useful life, are taken into account.

Contributing years of experience in manufacture and support for thousands of facilities all over the world to an analysis, ARTECHE offers:

› Technical advice:
  › Specification for new facilities, extensions and retrofits.
  › Analysis of the state of facilities and components and recommendations.
  › Electrical studies: Ferroresonance, Power flows, Harmonics...
  › Energy analysis for adaptation to the network code.

› Engineering services:
  › Electrical Engineering of the substation.
  › Control Logic Engineering.
  › Software Engineering.

Tests

Arteche has several laboratories spread across all geographical areas with the capacity to carry out certified tests for any type of electrical switchgear at all voltage levels.

Located in the Arteche Group facilities in Mungia (Spain), the U.H.V.L. (Ultra High Voltage Laboratory) is the largest high voltage laboratory in Spain, and one of the largest in Europe. Opened in May 2013, this laboratory is designed to test measurement and instrumentation transformers up to 1,200 kV under accredited ENAC certification in accordance with ISO / IEC 17025.

All this, under an efficient management system, which accumulates experience, guarantees the activity’s independence and ensures the confidentiality of its results, using the most innovative technological means of the market.
ARTECHE stays in touch throughout the life of the equipment supplied, from start-up to end-of-life, to guarantee its reliability and availability.

Start-ups:

There is no one better than the manufacturer for checking the correct installation of the equipment in the field, ensuring that there will be no problems during its energization, and that no inappropriate operations are performed on the equipment that may affect the warranty.

› Assembly supervision
› Pre-operational tests
› Start-up assistance
› Transformer gas filling

Maintenance:

Using advanced analysis and simulation tools, ARTECHE offers a wide spectrum of analyses and diagnostics in order to know the situation of the facility and its assets and to be able to provide customized solutions that reduce the economic impact of operation and increase the availability of the facility and identify the weak or risk points on which it is necessary to act.

› A preventive/predictive maintenance plan based on the evaluation and diagnosis of the state of assets in the facility
› Diagnosis of CT transformers and VTs with discharge
› Diagnosis of CTTs with energized lines
› Sampling of oil and DGA analysis
› Ferroresonance Studies
› Remote monitoring of transformers

Warranty Extensions:

ARTECHE can offer extended warranty for its equipment, always subject to a prior analysis of use and conditions.

End of Life:

› Dismantling
› Withdrawal
› Recycling of components
***This catalogue is complemented with the product and service catalogues of each one of the technological areas of Arteche***