FERRAZ

SAINT-BONNET DE MURE-BASED TEST CENTER





A quality-oriented tool







Designing and manufacturing components intended for safety require testing during the entire process from development to production. FERRAZ is an expert in power electronics protection, especially because of our ultra fast-acting fuses which are the company's core business. FERRAZ is also a specialist in high voltage distribution protection, with fuses and distribution arresters as our lead products. All of these components are devoted to safety. The FERRAZ Test Center, based at Saint-Bonnet de Mure, a suburb of Lyon, is an essential asset for customer satisfaction. The expertise of the staff in charge of operating the test center use rigorous test specifications which provides our customers with a guarantee that they have purchased reliable and safe products.

The Center is a quality-oriented tool. The concerned FERRAZ activities are ISO 9001-certified by **AFAQ** (Association Française pour l'Assurance de la Qualité), a world renowned certification organization, and partner in the **EQNet** (European Quality **Net**work).

The **FERRAZ Test Center** is a member of **ASEFA**. ASEFA is a french association of facilities dedicated to testing electric devices. It provides the Original Equipement Manufacturers, the Electrical Contractors and the End Users with all tests results for electrical industrial equipment according to **IEC** (International **E**lectrotechnical **C**ommission) standards, and to any other standard or particular technical specifications. ASEFA is a partner of KEMA, ASTA, ALPHA and ACAE in **LOVAG** (LOw Voltage Agreement Group), recognized by EOTC (**E**uropean **O**rganisation for **T**esting and **C**ertification).

The FERRAZ Test Center has four major assignments :

- ✓ developing new products and associated processes,
- qualifying these products and their processes,
- ✓ inspecting manufactured products,
- ✓ performing tests for exterior contractors.





A reliable tool

Since 1981, the year FERRAZ inaugurate the Saint-Bonnet de Mure Test Center, **over 100,000 fuses** have been tested. Reliability is a key factor for the outstanding achievement of the FERRAZ Test Center. To reach such a goal was accomplished by having an almost negligible failure rate. This highly-skilled staff is fully dedicated to their task of testing products and maintening the quality of the sharp testing equipment. At FERRAZ we are constantly striving to improve our Test Center with the latest state of the art technology which enables our engineers to perform all rigorous testing procedures according to the current existing standards. The other key factors of success are : a high flexibility and an ease to extend to higher power.

Among the various testing means at the disposal of FERRAZ engineers, there is the **400 MVA platform**. FERRAZ is proud of this platform capability, with its 400 MVA short-circuit power. Being able to deliver such short-circuit power from the generator, means being able to master and absorb tremendous mechanical shocks. Thanks to an electro-magnetic coupler that makes the interface between the motor drive and the 18-ton generator the mechanical problems are resolved and the possible failure rate of the platform is brought to a minimum. Rotating speeds lower than 3,000 rpm are possible with this configuration permitting tests at 16 ^{2/3} hertz to be done.

In **low voltage**, via a step-down transformer, the 400 MVA platform can deliver 250 kA of short-circuit current in a 1-phase AC mode. Two other platforms, with 20 MVA and 3 MVA of short-circuit power each, bring a complement to the leading machine. Test cells dedicated to low voltage enable technicians and engineers to prepare forthcoming tests while others are being done.

18 testing cells operating as current supplies, 8 of which are approved by ASEFA, perform as calibrators for the current rating of the fuses.

FERRAZ also have test stations for various electrical, mechanical or environmental situations which our products must endure.









A tool for high voltage



Some test cells are dedicated to **high voltage**. The 400 MVA platform enable 4 types of tests to be performed in the HV field.

15 kV can be reached without using a step-up transformer. If a step-up transformer is used the possible test voltage lies between 15 kV and 45 kV. The interrupting tests for HV fuses and the short-circuit withstanding tests for HV distribution arresters can be achieved.

In a special HV cell, an impulse current generator is used to test the distribution arresters ability to withstand standardized current waveshapes.







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