

PIERRE SIAT ELECTRICAL TEST STATIONS: SKILLS THAT MEET YOUR NEEDS.

Originally intended only for use in the internal qualification of products, the test laboratories have today become indispensable aids for French and export sales. Socomec offers the services of its test laboratory, to its clients so that they can open onto new markets.



Recognised tests

Socomec's test laboratory is accredited by the French accreditation body [COFRAC](#) ⁽¹⁾ (Comité Français d'Accréditation). It is a member of the [ASEFA](#) ⁽²⁾ (Certification body for low voltage equipment) and of the [LOVAG](#) ⁽³⁾ (Low Voltage Agreement Group) and regularly works in partnership with the international certification bodies: KEMA, CEBEC, UL, CSA, ASTA, Lloyd's Register of Shipping, Bureau Veritas, BBJ-SEP, EZU, GOST-R, ...

A service made to measure

Our test laboratory can relieve you of all the administrative steps involved in a large number of certification procedures. It will take care of the contacts with the certification bodies as well as monitoring the procedure through to the obtaining of the certificate.

A set of equipment and services is personally reserved for you to follow your tests in the best possible conditions:

- camera for monitoring tests with supervisory screen
- PC monitor giving results in real time
- fully equipped room: telephone, computer sockets
- video recording of tests
- provision of fuses
- assistance with all your practical organisation: hotel, transport reservations, ...

High-performance resources

3 test stations are available for checking:

- switch making and breaking capacities (overloads)
- conditional short-circuit characteristics (with protection)
- characteristics of short admissible duration short-circuits (1 second and 3 seconds)
- electrical endurances
- operating characteristics of protection systems (fuses, circuit breakers, ...)
- links between different equipment.

Platform 1



This platform is supplied by a HV/LV 1250 KVA transformer with:

- available voltages: 250V, 440V, 550V, 660V, 725V, 1000V and 1100V
- available currents: 2500A/440V, 2000A/550V, 1500A/725V.

Platform 2



Its power source is an alternator with:

- nominal power: 4 MVA
- instantaneous power: 20 MVA

Test characteristics: 30 kA/440V, 24 kA/525V.

Platform 3



Its power source is an alternator with:

- nominal power: 28 MVA
- instantaneous power: 100 MVA

Test characteristics:

100 kA/440V, 80 kA/525V, 50 kA/725V
100 kA 1 second, 50 kA 3 seconds.

Complete tests

Direct current tests:

A 3-phase bridge rectifier supplied by one of the 3 platforms allows the carrying out of tests in direct current.

Temperature rise tests:

- three special temperature-rise rooms allow rises in temperature to be measured on the electrical equipment using 72 thermocouples and two central read-out stations
- the currents available can reach 6000A in direct or alternative current
- the temperature-rise rooms also allow power dissipation to be calculated.



Dielectric tests:

- shockwave 1.2 μ s, peak voltage up to 30 KV
- test at 50 Hz, 1 minute, voltage of 1 to 20 KV.

Environmental tests:

- tests in dry atmosphere (from -20°C to +180°C) or humid
- cyclical temperature or humidity variation tests
- storage tests up to -40°C
- cyclical or resonance sinusoidal vibration tests
- thermal derating tests.



Mechanical tests:

- mechanical durability of electrical equipment tests
- bending and tensile tests on equipment terminals
- tensile or compression tests up to 20 000 N.



Tests on insulation:

- self-extinguishability tests with glowing wire up to 960°C
- determination of the comparative tracking index (C.T.I.).

(1) COFRAC

(Comité Français d'Accréditation) French accreditation body. (Scope of accreditation available on request). Set up in 1994 by the public authorities, the COFRAC provides a means for the laboratories and organisations it accredits to prove their competence and impartiality. Thus it offers companies, consumers and the public authorities, a real guarantee of confidence in the services offered by the accredited organisations.

(2) ASEFA

(Certification body for low voltage equipment) Created in 1973, the ASEFA is an independent certification organisation. It makes available to its clients test platforms that today represent the most powerful means in the world in short -circuit capacity. The ASEFA has an independent structure. Platforms linked to the ASEFA by a charter, are accredited by the COFRAC in order to guarantee ultra high performance know-how, absolute neutrality and the total confidentiality of the results. The ASEFA offers 23 platforms belonging to its 9 members (ABB, FERRAZ, LCIE, SOCOMEC, SCHNEIDER, GE Power Control France, LEGRAND, CEGELEC, ENTRELEC).

(3) LOVAG

In a European framework, the EOTC (European Organisation for Testing and Certification) has recognised an agreement group, the LOVAG (Low Voltage Agreement Group) to deal with the mutual recognition of certifications between the ACAE and CESI (Italy), ALPHA (Germany), ASEFA (France), CEBEC (Belgium), KEMA (Netherlands), SEMKO (Sweden), FIMKO (Finland) and ASTA (Great Britain), which are similar organisations. This mutual recognition offers openings at international level.