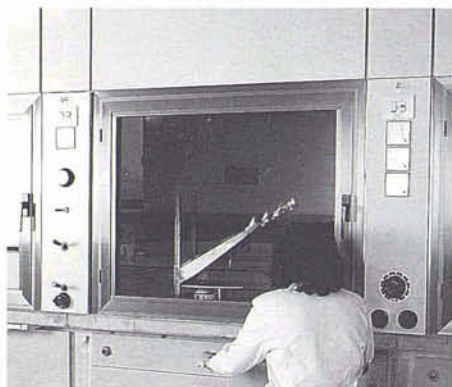


# THE "LABORATORI GENERAL D'ASSAIGS I INVESTIGACIONS"



THE "LABORATORI GENERAL D'ASSAIGS I INVESTIGACIONS" WAS SET UP IN RESPONSE TO THE SHORTAGE OF LABORATORY SERVICES AVAILABLE TO SUPPORT CATALONIA'S INDUSTRIAL DEVELOPMENT. ITS FIRST ACHIEVEMENT WAS THE CONSTRUCTION OF AN INDUSTRIAL LABORATORY CAPABLE OF OFFERING INDUSTRY THE SERVICES IT NEEDED.

PERE MIRÓ DIRECTOR-GENERAL, "LABORATORI GENERAL D'ASSAIGS I INVESTIGACIONS"

**T**he "Laboratori General d'Assaigs i Investigacions" was set up in 1907 on the initiative of the local authority and the Barcelona Deputation, in response to the severe shortage of Laboratory services available to support Catalonia's industrial development in the testing of materials, machinery and equipment. During the period between 1914 and 1923, it belonged to the *Mancomunitat de Catalunya*, and after many difficulties and changes of administration, it was restored to the *Generalitat de Catalunya* in 1984. The *Generalitat* passed the legislation which forms the basis for the laboratory's present-day activities. Restructured and rejuvenated, it immediately took on the task of establishing a modern industrial laboratory capable of offering industry the services it needed, a task which called for new premises and suitable equipment. The aim was to set up a test laboratory along the lines of those to be found in the leading industrialized countries, and to be able

to provide our industry with the services it will need once the Act of European Unity comes into effect.

The laboratory is pluridisciplinary and is housed in extensive premises on the Bellaterra campus, with a total surface area of 18,000 square metres. Its equipment is currently being renewed in keeping with the present state of technology and the needs of industry.

Its activities cover electricity, electronics, gas, acoustics and vibrations, wrapping materials, mechanics and construction, fire, chemistry, rubber and plastics, information processing, metallography and, finally, metrology. These respond to the needs presented by industry or are of significance in technological development.

These needs can be classified according to four types:

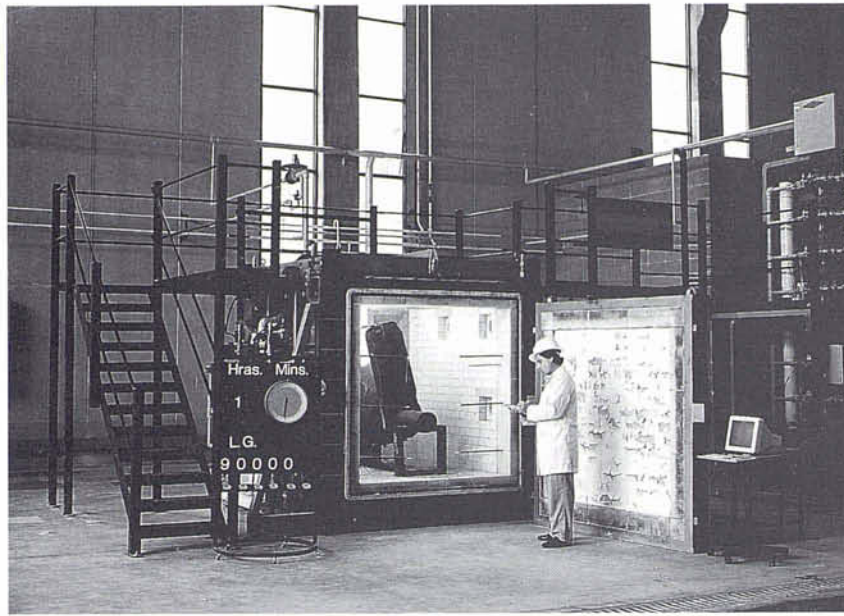
a. Criteria needed for the establishment of standards, regulations and certificates. The laboratory has the power to pass judgement on a wide range of subjects. One very important activity there-

fore consists in checking the observance of rules and regulations for materials, equipment, apparatus, etcetera, for which the industrialist seeks to obtain standardization or a certificate, or wants to show that regulations have been complied with.

b. Approval of national or foreign regulations, and technical advice. This is the laboratory's most important work. Industry makes increasing use of its services in deciding on the behaviour of materials, equipment and apparatus in relation to a wide range of rules and specifications, as regards its composition or suitability for a given purpose, or for quality control. Help is often sought in solving problems of production or quality, on the grounds of the laboratory's independence, the reliability of its equipment, and the experience of its professionals.

c. Applied research and development. As more advanced equipment and work techniques become available, there is an increasing number of requests for





help in solving applied research problems, and participation in research contracts for different Common Market or European programmes.

d. Calibration. The need to calibrate measuring instruments is becoming evident in the world of industry. The policy has been to equip an important metrology centre capable of serving the industry or laboratories that request it. It forms part of the SCI ("Sistema de Calibración Industrial"), which is run by the MINER.

Its comprehensive range of equipment includes the following:

The 36.4 MVA short circuit platform, for testing electrical items such as fuses, magnetotherms, differential switches, etcetera. At the same time, it is available for the development of new products in the electrical materials industry. Furnaces for measuring heat resistance in such items as elevator doors, fire-screens or pillars, or for testing the efficiency of protective coverings.

There is also an extensive range of installations for the study of acoustic problems.

Thanks to the introduction of up to date equipment for testing horizontal

traction, fatigue and flexion, mechanical tests have now been extended to fields which were previously out of reach.

Equipping a modern test centre is a slow process, not only because of the cost of the equipment which has to be installed, but also because of the time needed for delivery and for staff training. It is hoped that between now and 1990 equipment will be installed for high tension testing, three-dimensional metrology, metrology of masses and forces up to 500 kN, metrology and behaviour of robots, testing of new materials such as high melting-point alloys, composites, high technology ceramics, and electromagnetic interference measurement.

The laboratory's most recent activities have been the creation of a laser applications centre, studies in the field of fine chemistry and technical advice to companies wanting to export their products abroad. We are at present undergoing considerable expansion and are able to offer our industry the support it needs to answer the challenge of the Common Market.

We collaborate with a large number of

organizations, both in this country and abroad. The laboratory is a founding member of RELE (Spanish Test Centre Network), of which it occupies the vice-presidency. It works with the AENOR in the standardization of national regulations and certificates, and on an international level it does the same in different work groups of the ISO-CEI and the CEN-CENELEC.

It has contracts with a large number of national institutions: universities, "Consejo Superior de Investigaciones Científicas", "Institut d'Estudis Catalans", employers' associations and businesses; with internationally respected laboratories: the LNE (Laboratoire National d'Essais, in France) and the WFRC (Warrington Fire Research Centre, in England), and has recently signed an agreement with the CNES to collaborate in the European Space Programme (ESA).

With its wide range of innovatory activities, with the intention of becoming a "European" laboratory, it contributes to industrial development, which creates wealth and opens new paths to modernity for our country. ■