



LABORATÓRIO NACIONAL
DE ENGENHARIA CIVIL

**TESTING
and METROLOGY**

UMA

Applied Metrology
Laboratory

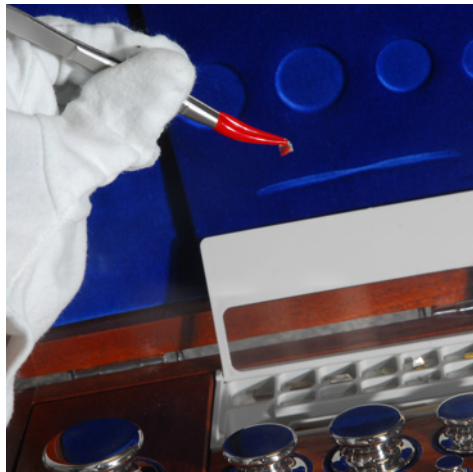
SCIENTIFIC INSTRUMENTATION
AND INFORMATION TECHNOLOGY CENTRE

Av. do Brasil 101 • 1700-066 Lisboa • PORTUGAL
tel. (+351) 21 844 30 00 lnecl@lnecl.pt

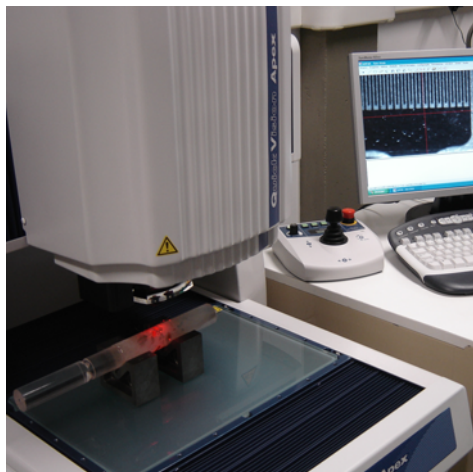
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Scope

The Applied Metrology Laboratory (UMA) is integrated in the Scientific Instrumentation and Information Technology Centre / Metrological Quality Unit of LNEC. Established in 1992, it became the first accredited LNEC laboratory in 1995. Since then, its technical competence has been steadily recognized by IPAC as a calibration and testing laboratory, providing metrological support to the activities carried out by LNEC-EM laboratories.

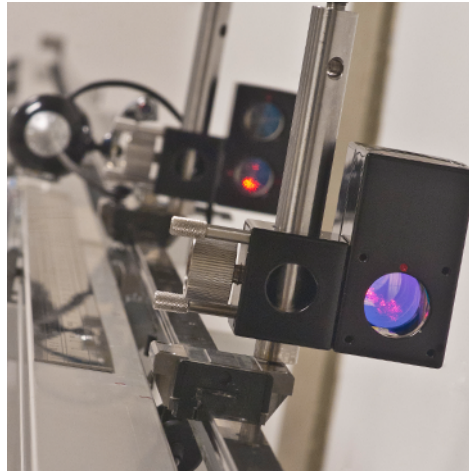


In addition, special reference is made to its experimental support to the R&D&I activities developed by LNEC Departments and its response to the metrological needs of some Society sectors such as the academic and laboratory community, civil construction and public works, as well as the industry and services.

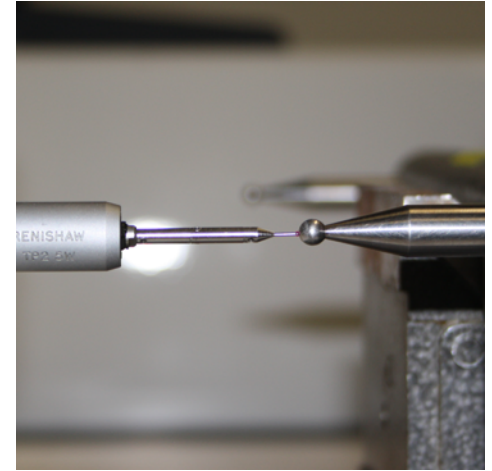


Field of expertise

The laboratory activity of UMA is focused on the characterisation and metrological traceability of measurement instruments and systems, measurement standards and test equipment, hence contributing to the knowledge of their performance and their integration in measurement chains in compliance with national and international standards of the International System of Units (SI).



This activity is essential for the accuracy of the measurements performed in demanding experimental settings, with impact on the security of persons and goods, as well as for the confidence in the accuracy of these measurements and in the quality of systems, products, procedures and services. UMA also performs relevant activity in support to R&D&I activities by carrying out experimental actions of a metrological nature within the framework of Civil Engineering and Metrology.



Highlights

UMA has the qualified human resources, as well as the appropriate laboratory facilities, measurement standards and testing equipment to carry out a wide range of laboratory calibration activities (as refers to dimensions, geometry, angle, mass, pressure, force, temperature, humidity and velocity) and metrological testing (equipment and facilities for environmental or climate control, engineering materials, machinery, structures and products). The knowledge and the experience gained in this infrastructure have also contributed to the execution of several multidisciplinary and complex research studies devoted to the design and development of innovative measurement models, methods, instruments and systems in the field of Civil Engineering.

