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Εργαστηριακές Ασκήσεις Μηχανών Εσωτερικής Καύσης

Abstract

The laboratory guide that has been developed includes a collection of laboratory exercises for the course "Internal Combustion Engines (ICE)", which is taught in Mechanical Engineering departments and related subjects in universities. It includes exercises that fully cover the above semester laboratory course, which is compulsory in the majority of Mechanical Engineering Departments of the Engineering Faculties of Universities and the Faculties of Technological Applications of TEI. The apparatus to which the laboratory exercises refer are available in most of the laboratories of universities, which makes it possible to carry out most of the experiments described. More than 13 laboratory exercises are listed in this guide, corresponding to the course weeks defined by law, on the grounds that if it is not possible to carry out one or more of the laboratory exercises, they can be replaced by other exercise(s) that can probably be carried out on the laboratory's premises. The exercises presented go beyond the scope of the laboratory course, starting from the description and dimensioning of the main components of an ICE, to the measurement of exhaust gases of petrol and diesel engines and the experimental determination of efficiency, characteristic quantities, energy balance of engines, using different types of dynamometer benches. Provide the student with ways of measuring physical quantities characteristic of ICEs, thus enabling a deeper understanding through experiments of the operation of ICEs.