



FLUIDES ET ENERGIE - ETUDES THÉMATIQUES

FLUIDS AND ENERGY - PROJECT LABS

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| Lecturers : 0.0 | TC : 0.0 | PW : 9.0 | Autonomy : 7.0 | Study : 6.0 | Project : 0.0 | Language : FR

Objectives

This module aims at applying all the knowledge and know-how acquired throughout the whole "Fluid Mechanics and Energy" course. From the choice of a topic and the set-up of the relevant practical work sessions, to the presentation of the results, going through performing and interpreting the experiments, the students will have to illustrate a scientific theme (head losses, similarity, heat transfer, hydraulic networks, ...) in order to deliver both an oral presentation to fellow students and a written report.

Keywords : Experiments and numerical simulations. Team work and project mode

Programme

- Defining the project and setting-up of the practical work sessions
- Performing the experiments
- Post-processing and analysing the results
- Oral and written reporting

Learning outcomes

- Be able to identify key flow features and flow regimes
- Be able to perform a dimensional and an order of magnitude analysis
- Be able to apply fundamental tools on flow analysis : flux balance, head loss analysis
- Be able to apply experimental and numerical techniques

Independent study

Objectifs : Performing the measurements, post-processing and analysing the results

Méthodes : 1h during each practical work session.
2h devoted to post-processing and analysis.

Core texts

Assessment

N1 = individual involvement in practical works / N2 = deliverables grade (1/3 oral, 2/3 written report) /
Module (know-how) grade = $0,3 \times N1 + 0,7 \times N2$