

Digital Disphasic



Component
École Nationale
Supérieure
d'Électrotechnique
d'Électronique

In brief

- **Code:** N9EM17B
- **Open to exchange students:** No

Presentation

Objectives

The aim of this course is to put into practice the theories of thermohydraulics and two-phase hydraulics seen previously. One of the following two software packages will be used: Ledaflow or Cathare: Ledaflow or Cathare.

Description

Ledaflow: this software is mainly used in petroleum applications. The severe slugging phenomenon will be studied. Based on an experimental article, the aim is to reproduce the results using numerical simulation. The intervention of a person from Total will give a better understanding of the industrial stakes of this software.

At the end of this course, students should be able to :

- Cite Ledaflow's fields of application- Illustrate Ledaflow's basic functions with an example- Simulate severe slugging from experimental data- Classify experimental results in an article- Compare experimental and numerical results- Summarize work in a report.

Cathare: this software is mainly used in nuclear applications. We will study the phenomenon of siphon-breaking. Based on an experimental article, the aim is to find the results using numerical simulation. The contribution of a member of EDF's staff will provide a better understanding of the industrial implications of this software. At the end of this course, students should be able to :

- Cite Cathare's fields of application
- Illustrate Cathare's basic functions with an example
- Simulate a siphon-breaker using experimental data
- Classify experimental results in an article- Compare experimental and numerical results-
- Summarize the work in a report A report of at least 10 pages, related to these objectives, should be written.