

**Job Title:** Nuclear System Thermal-Hydraulics Analyst  
**Department:** Engineering – Plant Thermal-Hydraulics (PTH) Unit  
**Location:** Torino  
**Reports to (Job Title):** PTH, Head of Unit

## Job Purpose

In the framework of our LFR projects in France and UK, we are looking for nuclear system thermal-hydraulics analysts to perform studies in support of **reactor design** and **safety assessment**.

You will be part of the Engineering Department, particularly of the **Plant Thermal Hydraulics Unit**. You will closely collaborate with the other Engineering units as well as with the other scientific departments.

As a thermal-hydraulics analyst, you will be responsible for execution of technical studies, the follow-up of externalized activities, the drafting of project deliverables, the reporting of costs and schedules.

## Main Activities

You will support *newcleo* projects by:

- Conceptualizing, modelling, and analysing thermal hydraulic systems, with particular emphasis on steady-state and transient modelling of nuclear reactor primary and secondary cooling systems, both in normal and off-normal conditions, mainly by using 1D / lumped-parameter computer codes and possibly other thermal-hydraulic analysis tools such as CFD codes, both for design purposes and for safety assessment.
- Performing code validation and benchmarking activities, and helping identifying validation gaps and R&D needs.
- Performing engineering analysis, which can include thermal, fluid, safety, manufacturability, and costs.
- Collaborating cross-functionally to define design requirements, and providing technical feedback to quick-iterating design teams.
- Drafting and reviewing project deliverables, such as calculation notes, design specifications, technical reports, etc.

To perform such tasks, you will be working in close collaboration with the other engineering units (such as R&D Thermal-Hydraulics, Mechanical Design, Power Generation, Safety and Licensing, etc.) as well as with the Codes & Methods team.

## Ideal Background

**Education:** MSc degree, or an equivalent level of experience in relevant domains (nuclear engineering, mechanical engineering, etc.)  
**Languages:** Fluent written and spoken English

(Adequate to work comfortably in a professional environment, draft good quality documentation and actively participate in technical meetings in an international context)

**Experience / Professional requirements:**

- Strong interest in nuclear engineering, in particular in the development of the fourth generation of reactor technologies
- Strong background in fluid mechanics and heat transfer in general, and in nuclear reactor thermal hydraulics in particular
- Sound knowledge of nuclear reactor safety principles
- **Past proven experience in TH design and/or safety analysis of nuclear reactors; this implies strong skills in the use of system TH computer codes such as RELAP, TRACE, CATHARE, ATHLET, etc.**

Well appreciated plusses:

- Background in technology of liquid metals
  - Knowledge of other simulation tools such as neutron kinetics codes, CFD codes, severe accident codes, etc.
  - Knowledge of written and spoken French
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