

The 7th January 2019

**Location of the mission :** CETHIL, Villeurbanne

**Contact CETHIL :** Romuald Rullière [romuald.rulliere@insa-lyon.fr](mailto:romuald.rulliere@insa-lyon.fr)

## **R&D engineer or postdoctoral fellow**

### **Thermal science-Energy-Refrigeration**

#### **CDD 12 mois**

The Centre for Energy and Thermal Sciences of Lyon (CETHIL) is a joint centre between the National Institute for Applied Sciences (INSA Lyon), the French National Scientific Research Centre (CNRS) and the University Claude-Bernard Lyon 1.. EHTIS (Energy and Heat Transfer in Industrial Systems) is one of the five research teams of CETHIL. The main objectives of this team is to describe, study, analyze, characterize, model and optimize the energy systems of conversion and transport of heat and cold (ORC, PAC, refrigerating machines, ...) involving fluid flow with phase change, to optimize the design and management of complex energy systems (energy network), to understand and control the phenomena governing the two-phase passive systems (heat pipes, thermal interposers, ...) and to develop knowledge on phenomena governing phase change heat transfer (boiling, condensation, evaporation, frosting, ...).

The candidate will be involved in this research team. the work will focus on the development of a prototype absorption refrigeration machine for a large brewery established in France for more than 25 years. The idea is to lead to the development of a demonstrator that can serve as a proof of concept justifying a future industrialization. This work will be supervised by CETHIL and LABECAM.

The work will be organized around (i) a bibliographic study, the recovery of previously obtained results, reports already written, as well as the existing experimental device (ii) a review of the various technological choices already made during the development of the device and validation or invalidation of certain component choices; (iii) assembly and development of the absorption micro-refrigeration demonstrator.

The candidate must have a solid knowledge of thermal energy and in particular in thermodynamics, thermal science and fluid mechanics. Knowledge about absorption machines would be a real plus. The experimental skills will be very important and know-how in this area is essential. Training engineer or doctor, the person recruited must be autonomous and know how to work in a team.

**Remuneration:** between 2740 and 3723 € gross monthly according to experience and skills

**To apply:** send CV and cover letter to [romuald.rulliere@insa-lyon.fr](mailto:romuald.rulliere@insa-lyon.fr)