



Universität Stuttgart
Institut für Kernenergetik
und Energiesysteme

Prof. Dr.-Ing. Jörg Starflinger
Executive Director Institute of Nuclear
Technology and Energy Systems (IKE)

**Research
Student
Assistant
(HiWi)**

**Study of pseudo-
condensation in
supercritical CO₂
power generation
cooling systems**

Job advertisement – Research Student Assistant (HiWi)

Collaboration in the construction of test benches for experimental investigations on supercritical CO₂

The aim of the “ISOP” EU project is to finance research and advance investigation of **supercritical CO₂** (sCO₂) as the working medium in innovative power generation systems. In particular, the experimental work will focus on the use of sCO₂ in cooling applications and the investigation of the so-called “**pseudo-condensation**” phenomenon. For this reason, a simplified test setup will be implemented in order to identify the correlations and model approaches that allow flow and heat transfer processes to be modelled using CO₂ as the working medium in the area above the critical point. After completion of the **test sections** and determination of the parameters to be investigated (pressure loss, heat transfer), the empiric studies and research will take place.

Requirements:

- ❖ Bachelor's or Master's student in either **Energy, Mechanical, Chemical or Process Engineering**
- ❖ **Fluency in English** language
- ❖ Basic understanding of measurement technology
- ❖ **Programming** experience in VEE (possibly **LabVIEW**) will be considered a plus
- ❖ Knowledge of SolidWorks, Excel and Matlab
- ❖ Previous practical experience will be considered a plus
- ❖ Creativity and self-motivation

Start: as soon as possible, 40 hours/month

Duration of the position: 1.5 years

Supervisor: M.Sc. Davide Dioguardi
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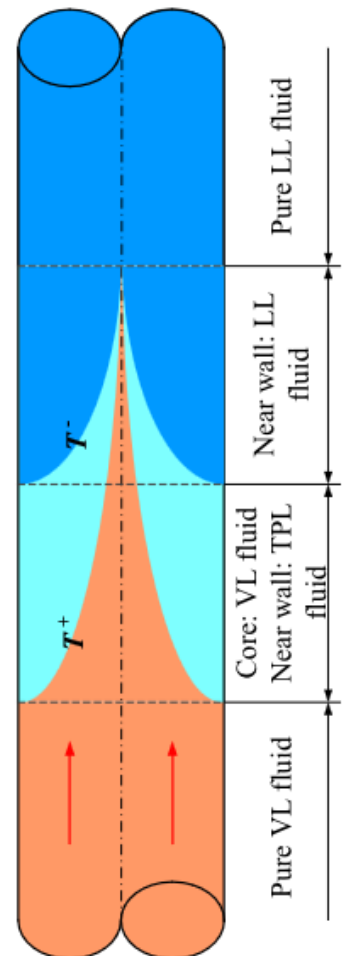


Fig: Supercritical cooling process



Die Universität Stuttgart möchte den Anteil der Frauen im wissenschaftlichen Bereich erhöhen und ist daher an Bewerbungen von Frauen besonders interessiert. Schwerbehinderte werden bei gleicher Eignung vorrangig eingestellt.



Stand 21.01.2025