Composite Recycling
Ch. des champs courbes 5. Halle 26
1024 Ecublens, CH

JOB DESCRIPTION

Job title	- Chemical Engineer Intern – Recycled thermolysis oil
Division	- Sciences
Reporting line	- Stanislav Begounov | Head of Industrialisation
Starting date	- As soon as possible
Contract type	- Internship 6 months
Languages	- FR | EN

RESPONSIBILITIES

Objective : Optimise the quality of thermolysis oil from recycled fibres reinforced plastics

List of responsibilities

1. Technical Research and Development

- Assist in the analysis and characterization of thermolysis oil, including properties like viscosity, thermal stability, and composition.
- Support the development of processes to improve the quality, yield and stability of thermolysis oil through lab-scale experimentation.
- Participate in the optimization of thermolysis processes to enhance efficiency and product purity.

2. Process Monitoring and Data Analysis

- Monitor thermolysis reactions and collect data on temperature, pressure, reaction time, and other parameters.
- Analyze experimental data and interpret results to suggest process improvements.
- Prepare technical reports and presentations based on research findings for internal and customer meetings.

3. Customer Interaction and Support

- Collaborate directly with customers to understand their specific needs and requirements related to thermolysis oil.
- Assist in providing technical support to customers, answering queries about the product's properties and applications.
- Participate in joint technical meetings or teleconferences with customers to ensure alignment on project goals and progress.

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REQUIRED QUALITIES	
Technical skills	**1. Chemical Process Knowledge** • Strong understanding of chemical reactions and processes, particularly those related to thermolysis, pyrolysis, and thermal degradation. • Familiarity with reaction kinetics, heat transfer, and mass balance calculations, which are crucial for optimizing the thermolysis process. **2. Laboratory and Analytical Techniques** • Proficiency in laboratory techniques, including using analytical instruments like Gas Chromatography (GC), Mass Spectrometry (MS), and Fourier Transform Infrared Spectroscopy (FTIR) to analyze oil samples. • Experience with maintaining a safe and organized lab environment, following safety protocols and Standard Operating Procedures (SOPs). **3. Data Analysis and Process Optimization** • Ability to analyze experimental data, using software like Excel, MATLAB, or Python, to identify trends and optimize process parameters. • Familiarity with statistical methods and tools for experimental design (e.g., Design of Experiments (DOE)) to ensure accurate and reproducible results. **4. Technical Documentation and Reporting** • Strong skills in technical writing to document experimental procedures, results, and conclusions clearly and concisely. • Ability to prepare presentations and reports for communicating findings to internal teams and customers, making complex data understandable for various audiences.
Social skills	- Hands-on, proactive team player. - Solution driven, pragmatic & flexible. - Stress management & ability to work under pressure. - Strong organisational skills. - Autonomous & sense of initiative.

We look forward to receiving your application at contact@composite-recycling.ch. Together with your CV and Cover Letter.

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