

Master's Thesis Opportunity

Advanced Sizing Systems for Metal-Coated Glass Fibres (AluCoat Technology)

Location: Aachen, Germany

Department: Research & Development

Supervisor: Dr. Ing. Davide Pico, Product Development Engineer

About the position: FibreCoat is seeking a motivated and hands-on Master's student to support the optimisation and development of novel sizing systems for metal-coated glass fibres used in thermoplastic composites. This thesis offers the opportunity to work at the intersection of chemistry, materials science, and process engineering while contributing directly to industrial product development.

Thesis Topic: Optimisation and further development of a novel sizing for metal-coated glass fibres for thermoplastic composites.

Your Tasks

- Review the state of the art in sizing systems for glass and metal-coated fibres
- Plan and execute experimental campaigns for sizing formulation development using a structured DoE approach
- Design, formulate, apply, and characterise novel sizing systems for metal-coated glass fibres
- Produce and evaluate composite samples to assess processability, fibre-matrix adhesion, and mechanical performance
- Analyse experimental data and correlate formulation parameters with fibre and composite properties
- Benchmark performance against reference systems and refine formulations based on experimental findings
- Iterate and refine formulations based on experimental feedback
- Document results and present conclusions and recommendations to the R&D team

Your Profile:

- Enrolled Master's student in Chemistry or related field
- Solid foundation in organic, polymer or surface chemistry
- Ability to work independently in a structured and organised manner
- High motivation for hands-on laboratory activities
- Analytical thinking and interest in data-driven experimentation
- Genuine interest in composite materials and fibre-based technologies
- Practical mindset and willingness to perform laboratory work.
- Experience with materials characterisation (e.g., SEM, FTIR, TGA, DSC)
- Familiarity with Design of Experiments (DoE) or statistical data analysis
- Prior exposure to textile processing or fibre-reinforced composites
- Proficiency in English (written and spoken)

What We Offer

- Direct mentorship from supervisors with extensive, hands-on experience in sizing formulation and textile/fibre development
- Work on a cutting-edge coating technology with real industrial impact
- Access to specialised equipment and pilot-scale process systems



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- Close support and integration into an experienced interdisciplinary R&D international team
- A thesis topic with strong relevance for industrial R&D
- A modern and welcoming office space
- Snack bar and team activities

Interested?

Send your CV, short motivation, and preferred start date to:
marcela.munoz-baez@fibrecoat.de

We look forward to shaping the future of composite materials together!

