

Resource recovery from industrial waste water by cutting edge membrane technologies (membrane distillation)

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- Grundlagen- und anwendungsorientierte Forschung
- Nationale und internationale F&E-Projekte
- Kooperationen mit Universitäten, FHs, anderen Forschungseinrichtungen und der Industrie

AEE INTEC arbeitet in den Bereichen „thermische Solarenergienutzung“, „Nachhaltige Gebäude“, sowie „Industrielle Prozesse und Energiesysteme“.

Forschungsprojekt

AEE INTEC – Institute for Sustainable Technologies

H2020- project

Type of action: Innovation action

Topic: SPIRE-01-2016

Call: H2020-IND-CE-2016-17

(Industry 2020 in the Circular Economy)

Die Master-Arbeit

Production of metal products brings along the generation of a multitude of different waste water streams such as waste water from cooling circuits and gas cleaning, rinsing water and diluted pickling acids from electro plating as well as washing water from casting of tools and automotive components. Additionally to the intensive demand for rinsing water, metal processing consumes a large amount of different process fluids like acids, bases and salts leading to contaminated waste water streams, which need disposal causing high costs and significant environmental impact in general. The environmental impact and costs of their disposal can be minimized by the recovery and recycling of valuable substances and high quality water from those streams.

Therefore a membrane distillation pilot demonstrator is built at site (AT&S) for the recovery of valuable substances. The aim of this thesis work is the design and conduction of experiments as well as the analysis of results and optimization cycles.

1. Design of experiments
2. Conduction of preliminary experiment in lab scale
3. Conduction of Test series
4. Analysis of results
5. Optimization of Test Series
6. Results presentation

Wir erwarten...

Thesis should be written in English

solution-oriented, creative, independent and reliable operation-mode

Knowledge of mass and energy balances desirable: knowledge of thermal separation technologies

Wir bieten...

- Paid thesis, integration into ongoing EU project
- Start: February 2017
- Duration: 7 month
- Location: AEE INTEC (Gleisdorf) / AT&S (Fehring)

Contact:

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