Technische Universität München – Fakultät Maschinenwesen – Bioseparation Engineering Group

Bachelor-/master-/semester thesis:

Optimization of a magnetic separator in pilot scale

Keywords: Experimental work, optimization, automation, Downstream Processing, Process Development

Project description

- From a prototype to market-ready process -

Pilot-scale magnetic separation is a novel protein purification technique used in the pharmaceutical and food industries. In the future, this novel process is expected to provide a cheaper and more effective alternative to chromatography. As prerequisite, the identification of the optimal process parameters is required.

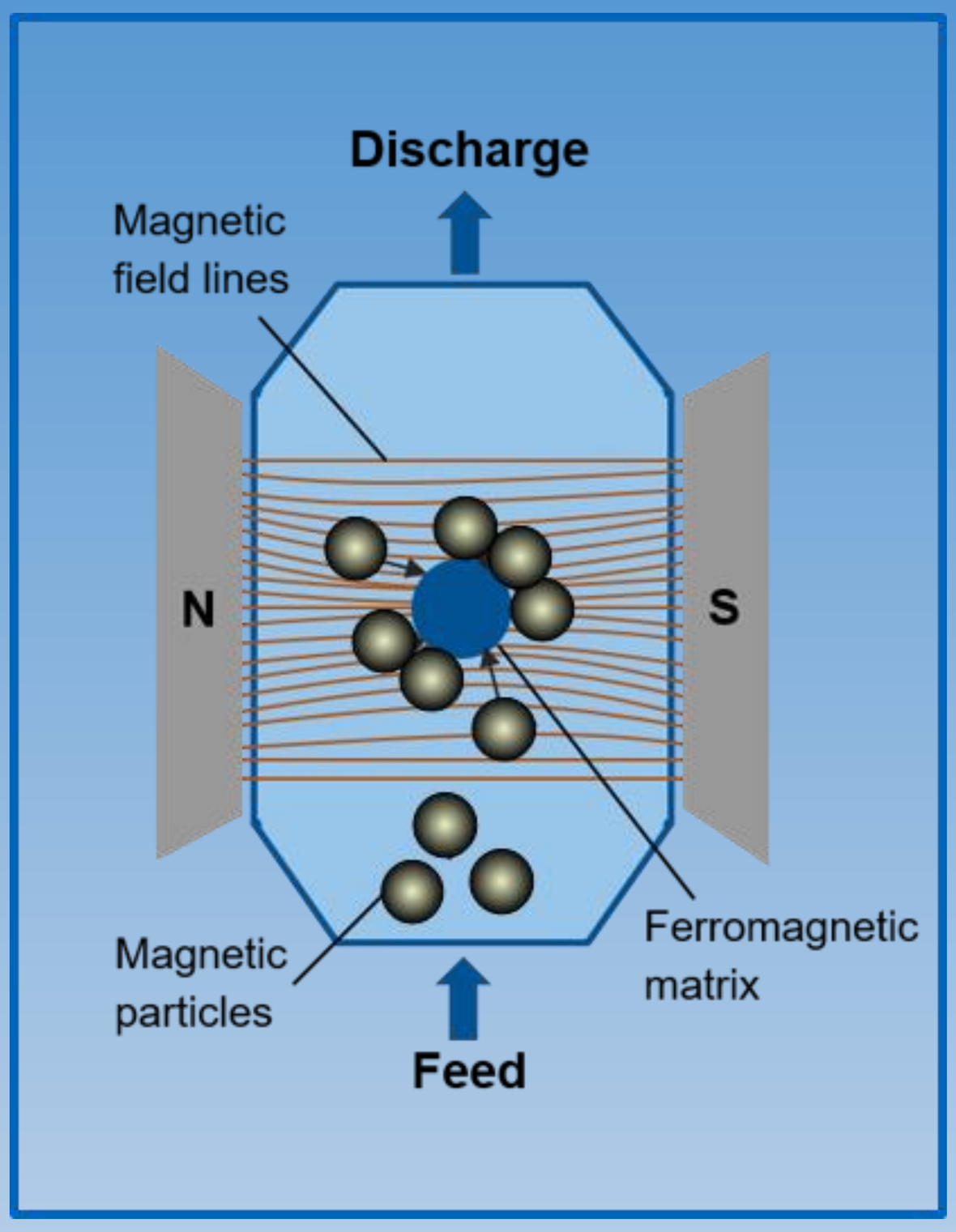
In the first step, systematic experiments for process characterization need to be conceptualized and implemented. The relevant process parameters for optimal purification will then be identified using the parameter space generated. The work contributes to the development and implementation of a real, industrial process.

Tasks

- Statistical, systematic design of experiments
- Identification of degrees of freedom for process optimization
- Experimental tests on the magnetic separator
- Clear presentation and evaluation of results

Requirements

- Structured working style
- Interest in new technologies
- Chemical engineering, mechanical engineering, biotechnology, or similar



Kontakt

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