

BACHELOR THESIS OR PROJECT WORK

Evaluation of SO₂ Absorption with Seawater: experimental investigation and reliability confirmation

Due to the contribution of sulphur dioxide (SO₂) to air pollution, it is necessary to remove it from exhaust gases before they can be released to the atmosphere. This is known as Flue Gas Desulfurization (FGD): SO₂ is absorbed in a liquid phase in an absorption column. There are currently different liquids that can be used, being seawater an attractive option for plants located on board of ships and by the sea.

With that in mind, this project aims at performing SO₂-Seawater experiments under different operating conditions as well as comparing them with former studies in order to confirm the model reliability. This investigation will be conducted in a mini-packed absorption column at the Chair of Process Technology and Industrial Environmental Protection. The specific targets are summarized as follows:

- Literature review and state of the art
- Hydraulic measurements
- Mass transfer experiments for SO₂-Seawater, SO₂-NaOH and SO₂-HCl
- Results evaluation and comparison

Requirements:

- Bachelor student (industrielle Umweltschutz- und Verfahrenstechnik, industrielle Energietechnik)

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