Lowering absorption process uncertainty, risks and costs by predicting and controlling amine degrada

Publieke samenvatting / Public summary

Doelstelling

Solvent degradation is one of the main obstacles hindering the implementation of CO2 capture in various industries, as recognized by Mission Innovation and by countless practical examples. LAUNCH aims at establishing a fast-track, cost-effective de-risking mechanism to predict and control degradation of capture solvents, thus accelerating industrial uptake of CO2 capture and the development and qualification of novel solvents.

Korte omschrijving

This objective will be achieved by: 1) Developing strategies to control degradation, minimizing solvent loss and therefore the environmental impacts of CO2 capture; 2) Developing the ability to predict degradation of (novel) CO2 capture solvents; 3) Developing and demonstrating the LAUNCH solvent qualification program. The LAUNCH project is undertaken by an international consortium of experts in the field and supported by an Advisory Board consisting of the main industrial stakeholders. At the end of LAUNCH, CO2 capture plant owners will have access to the necessary tools and knowledge to operate their plants in a controlled and cost efficient way and solvent developers will have tools to assist the design and validation of novel solvents. By avoiding uncontrolled build-up of degradation products, LAUNCH will ensure satisfactory long-term solvent properties and performance, within 10% deviation compared to fresh solvent, therefore minimizing solvent loss

Projectinformatie / Project information

Projectnummer / Project number
ACT18007
Subsidiebedrag / Grant amount
€ 980.939,00

Algemene informatie / General information

Penvoerder / Secretariat
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Publicaties en materialen / Publications and attachments

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  Eindrapport ACT18007

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Resultaat

The LAUNCH solvent development protocol will be made public. This protocol includes: - guidelines for using the LAUNCH-developed solvent degradation database and the degradation network model for pre-evaluating solvents and management strategies; - guidelines for solvent testing and the drawings of a generic LAUNCH test rig. Within LAUNCH, we will develop, validate and demonstrate the LAUNCH solvent qualification program, making use of multiple scales test facilities: lab experiments, LAUNCH rigs (up to 1 kgCO2/h), 3 pilot facilities (up to 0,4 tonCO2/h) and a commercial plant (0,4 tonCO2/h). Solvents of 1st, 2nd and 3rd generation are included in the test program, representing multiple chemistries.

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.
Voor meer informatie over de Topsector Energie, ga naar **www.topsectorenergie.nl**.

Voor meer informatie over de TSE / Energie-Innovatie regelingen die RVO aanbiedt, ga naar **www.rvo.nl/tse**.