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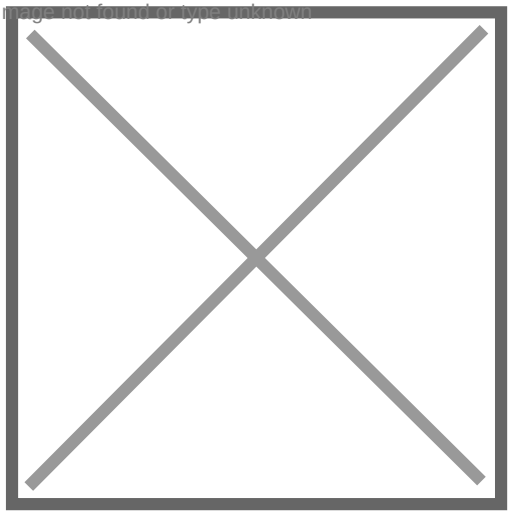

CIRC-01-2017

ZERO BRINE

Full Title: Re-designing the value and supply chain of water and minerals: a circular economy approach for the recovery of resources from saline impaired effluent (brine) generated by process industries

Aim:

The objective of ZERO BRINE is to prove that minerals, such as magnesium, and clean water can be recuperated from industrial wastewater for reuse in other industries. The project aims to develop technological solutions and business models for wastewater/brine resource recovery, thus facilitating the implementation of the Circular Economy package and the SPIRE Roadmap.

Concept:
Coordinated by TU Delft, ZERO BRINE advances circular economy business model solutions by re-designing the value chains of industrial wastewater. The ZERO BRINE concept reduces industrial saline wastewater streams by recovering and reusing the minerals and water from the brine (saline impaired effluents) in other industries, thus ‘closing the loop’ and improving the environmental impacts of production. The project integrates innovative technologies to recover water and minerals of sufficient purity and quality for good market value. ZERO BRINE includes 22 partners from research institutes, SMEs, process industries, and end-users from 10 countries. Over 4 years, ZERO BRINE is developing pilot plants in 4 process industries such as a demonstration water plant in the Netherlands, a coal mine in Poland, a silica factory in Spain, and a textile factory in Turkey. These provide massive potential to replicate and deploy circular economy solutions in the field of industrial wastewater treatment.

Start date:
01/06/2017

End date: