



# Membrane Distillation to concentrate Salt Streams

**Project:** CS-01-14  
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**Budget:** 50 k€  
**Duration:** 2010 - 2011

## Incentive:

Originally Membrane Distillation (MD) was designed to produce drinking water from sea water. This MD technology however, can also be used to concentrate salt streams (in other words: dewater salt streams). In a joint effort via NL Guts, this MD technology have been tested at 4 companies, each company tested 2 process saltwater streams.

## Objective:

Industry loses product streams that contain large amounts of water. Dewatering these streams, using an MD system that utilizes waste heat, can turn a product loss into a valuable product that can be recovered, resold or reused.

## Approach:

The Aquastill screening unit was used to test the dewater-ability of the selected process streams. Based on project results, Capex and Opex calculations were also performed.



## Results:

- MD can be used to dewater valuable process streams and even recover product losses from drainage streams
- MD requires less energy than other technologies to dewater process streams
- MD produces a very high quality distilled water during dewatering
- Hydrophobic MB membranes don't foul as fast as other types of membranes
- When fouling does occur, it is easy to clean the MB membranes
- Various types of MB membranes can be used
- Capex/Opex calculations show that this technology is economically very interesting for dewatering process streams