



EVALED

**Photovoltaic &
microelectronics**

Thin film for solar panels | Germany

Thin film for solar panels

Customer

The Client is a Canadian company leading producer of specialty metals and chemical products, such as tellurium, cadmium and selenium and related compounds.

The German subsidiary fabricates high purity metals dedicated to the thin film for the solar panel industry.

Customer's needs

The Client aims to find a solution to concentrate about 4m³/day of brine waste water coming from the metals purification (cadmium sulphide and telluride) and recover this costly products. Also the Client wants to dispose the waste in a solid form (salt) and to achieve a ZLD solution.

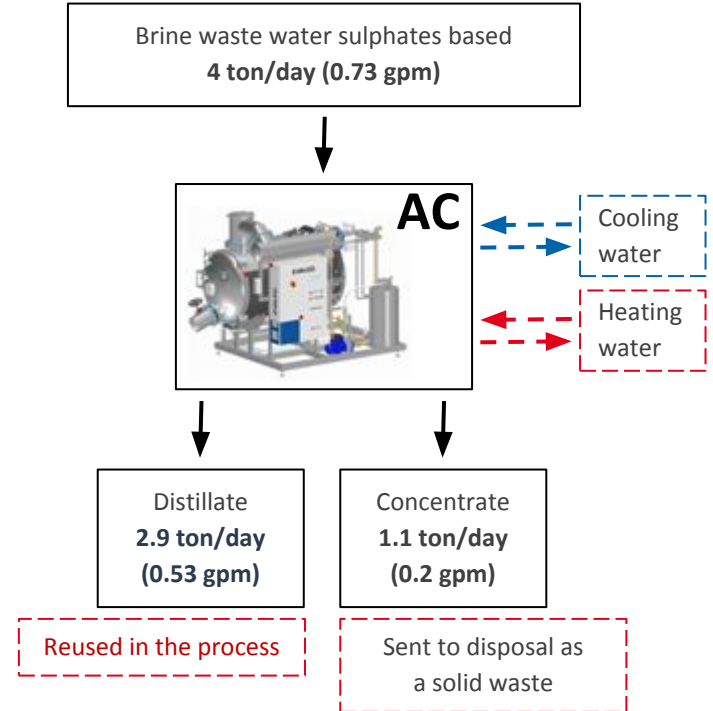


The plant

Analysis and Plant Process Diagram

Parameters	u.m.	Waste in	Distill. out	Concent. out
pH		8.1	-	-
Conductivity	μS/cm	<310,000	<100	-
TS at 105°C	%	20-22	-	<80
Metals	ppm	35	<0.5	-
Sulphates	ppm	>147,000	<5	-

Technology Type	Material	Footprint (m ²)
AC R 3 FF	UNS S32750	14



Results



Water separated: ~75%
Concentration factor: ~4 times

The solution achieved:

- distillate recovered and reused in the production process (water reuse);
- Cd-Te recovery;
- important disposal cost reduction.

ZLD project

