

# CHLOR-ALKALI PROCESSING



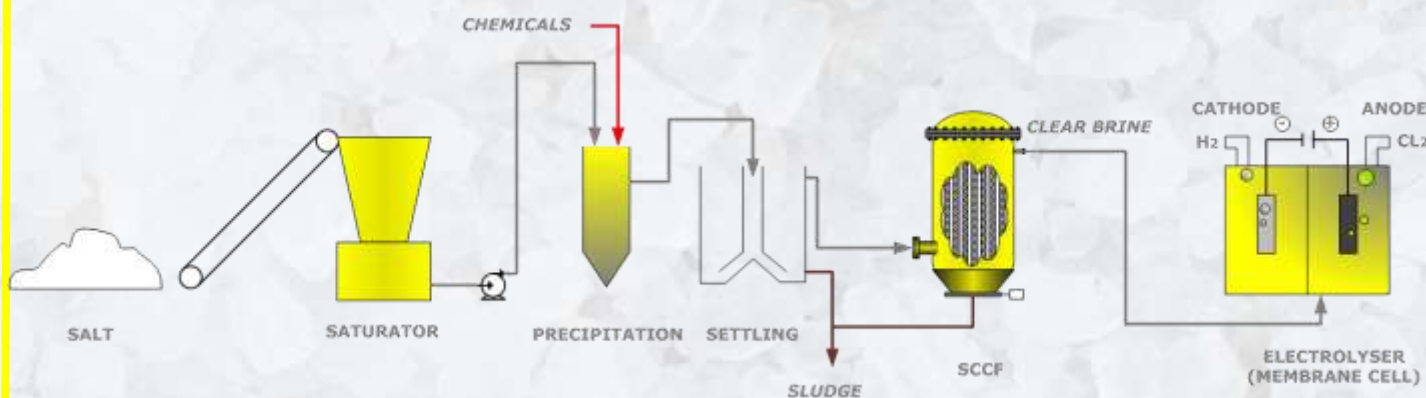
## FILTRATION OF BRINE SOLUTIONS: LONG FILTRATION CYCLES AND LESS CLEANING

Sulphurnet offers various filtration solutions to produce **sparkling clean saturated brine solution**. All of our filtration systems are manufactured from carbon steel with a rubber lining. All internals are manufactured from corrosion resistance materials as Titanium, PVC, PP or PVDF, everything according to your needs.



## WE OFFER FOLLOWING SOLUTIONS FOR CHLOR-ALKALI INDUSTRY:

- ◆ Filtration systems:
  - ◆ Non precoat: Thickening in combination with the settling tank
  - ◆ Precoat filters
- ◆ Start-Up
- ◆ Audits
- ◆ Consultancy
- ◆ Economic Studies & Cost Controls
- ◆ Plant Lay-Out & Operation Plant Audits
- ◆ Support Candles
- ◆ Filter aid: Brine Aid



## FILTRATION SOLUTIONS

When you know your objectives we can work out the best solution for you. We can complete the filtration solution with true **turnkey** service. Sulphurnet can offer the entire full-automated modular systems, which are completed with valves, piping and process instrumentation.

### SELF-CLEANING CANDLE FILTER

Consists of a vertical cylindrical shell with a number of outlet manifolds . During filtration, the suspended particles are retained on the surface of the filter media which are covering the support candle. Cellulose Pre-coat material is used to obtain the required clarity. The cake is discharged as a semi-dry filter cake which is removed through a large size butterfly valve.



## CONCENTRATION/THICKENING

Membrane technology is widely applied for brine filtration. However the required plot-space is huge and operational expenses are relatively high. Sulphurnet has developed a filtration process based on **concentration technology**. In the brine solution the solid content is increased . Then the concentrated liquid is returned to the settling tank where the solids will be removed. The sparkling bright brine solution is then transferred to the ion-exchange/membrane cell. No flocculants or other reagents are required in this process. The filter media has a very open area. This achieves high flow rates and an effective retention to hold very fine micron size particles.

The Benefits of Concentration Filtration:

- ◆ Units have small footprints
- ◆ Suitable for all type of flowrates
- ◆ Micron-size particle retention
- ◆ Minimal product losses and brilliant filtrate clarity
- ◆ Excellent chemical resistance
- ◆ Suitable for aggressive media (acids, chlorides)



Let's introduce Sulphurnet. We at Sulphurnet, provide custom solutions for various chemical processes. We're especially good at process engineering and filtration solutions, the entire design package; everything under one roof. Everything from Basic Process Design up to full scale production units including after services. If thinking outside the box is what you need, we are happy to help you. With bright thinking Sulphurnet imagines things others don't, design things others can't and delivers bright results!

## GAS FILTERS

Sulphurnet also designs Gas Filter systems for Hydrogen and Chlorine that are generated in the membrane cell. The gas products wet chlorine and hydrogen flows out from the membrane cell for processing. The wet chlorine filter removes the majority of the water before it enters the drying tower. The dry chlorine filter removes the sulphuric acid remains before liquefying the chlorine. In the hydrogen stream the remaining liquid is removed prior to compression. Sulphurnet can design and supply the combination of the Wet- as well as dry Chlorine filter and Hydrogen filter. For this application Sulphurnet recommends high efficient mist eliminators. Filters are manufactured from GRP, steel or nickel alloys.

### OTHER SYSTEMS FOR THE CHLORO-ALKALI INDUSTRY

- ◆ Sodium Hypo-chloride Filters
- ◆ Resin Traps
- ◆ Brine Filters and Polishing filters
- ◆ Hydrogen Filters
- ◆ Wet Chlorine Filters
- ◆ Dry Chlorine Filters

06-2015

