GENSAVE

GenSave is a partnership process, our objective is to work with plant operators and use Genesys products and services to demonstrate and apply “provable” technical solutions ultimately aimed at reducing OPEX.

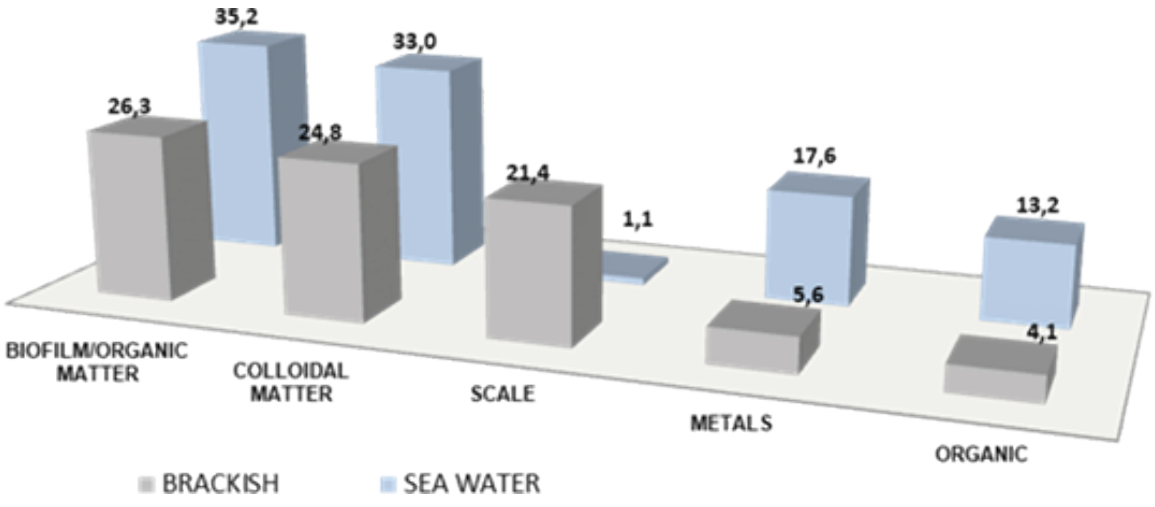
This step by step process is designed to improve 3 issues which have a significant detrimental effect on operation; the GenSAVE solution is based on detailed technical evaluation of your individual process.

Biofouling – autopsy shows that biofouling is the cause of failure in over 30% of membranes tested and can significantly increase opex.

Pre-treatment – often over looked pre-treatment is the most significant issue causing fouling in lead elements, organics and aluminosilicates are persistent and can have long lasting effects on membrane condition if not removed correctly.

Membrane Cleaning – our objective is to reduce your CIP frequency and associated costs by selecting the correct product, procedure and application including onsite support.

Characteristical fouling on sea/brackish membranes (%)



GENSAVE

Step 1 : Information

Experience shows that accurate information gathering is key to successful technical recommendations, starting with remote gathering of operating data to better understand your process.

- Standard operational data
- CIP procedures & associated costs
- Power, water & labor costs
- Pre-treatment survey

Step 2 : Technical Evaluation

- **GenAlytics Software** historical trend analysis, efficacy of past cleaning procedures, cleaning frequency and membrane condition
- **Membrane autopsy** at our dedicated facilities in the UK or Spain to identify foulants, identification and impact of foulants on membrane performance

- **Pre-treatment evaluation**, including particle counting and flocculant assay
- **Ultrafiltration** – autopsy, evaluation and enhanced cleaning products
- **Cleaning tests** – we test for optimum product removal restoring flux and salt rejection (SR)

Technical Evaluation (continued)

- **Biofouling studies** – analysis of the RO feed and biofouling.
- **Antiscalant** – feed analysis, software dose projection

Step 3 : Trial

Based on the findings in stages 1 & 2 we design and agree on site trials we believe will offer measurable costs savings.

- On site supported RO & UF cleaning with analysis of data pre & post clean
- Biofouling -trial of biofouling disrupter chemical – Genesol 80
- Antiscalant performance evaluation

Data from trials will be collected and analysed using our Genalytics software, results shared and discussed with site and cost savings presented.

Step 4 : Implementation & long term support

On conclusion of a successful trial meeting pre-agreed parameters Genesys will submit a proposal to implement the long-term solution on the entire plant. Our support is key to ongoing operational improvements and we design and agree a support programme to include:

- Site visits
- Water testing
- Data gathering and analysis
- Supervised cleans
- Operator training and business review meetings.