

SILICON CARBIDE ULTRAFILTRATION

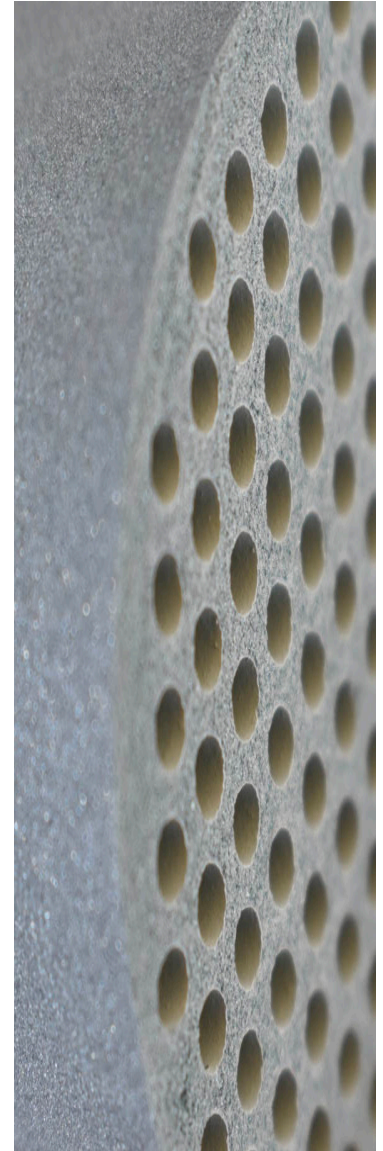
A NEW BENCHMARK FOR CERAMIC FILTRATION

SIC PERFORMANCE TEST AGAINST AN INDUSTRY STANDARD CERAMIC MEMBRANE

Comparison between H2O SiC large diameter membrane and a competing industry standard Alumina ceramic membrane

Products tested:

	H2O SiC	Competing Alumina ceramic membrane
Pore size	0.60 μm	0.20 μm
Geometry (outside diameter - channels - channel hydraulic diameter - length)	51 - 121 - 3 - 1200	52 - 85 - 3.3 - 1200
Filtration area	1.34m ² 14.4ft ²	1.06 m ² 11.4ft ²



Oily water composition:

- Oil content: 300 ppm
- Clay & silt (<1 μm): 100 ppm
- NaCl: 4,000 ppm

Operating conditions

- Crossflow velocity: 2.25 m/sec
- Transmembrane pressure: 6 psi
- Backwash: every 30-60mins at
 - 14 psi (H2O SiC)
 - 25 psi (alumina)

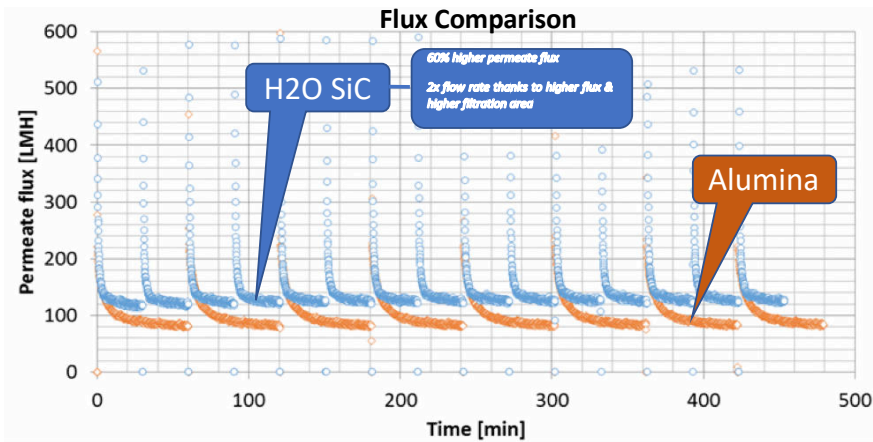
RECYCLE, REMEDIATE, RECOVER

DELIVERING NON-CHEMICAL, ENVIRONMENTALLY SUSTAINABLE SOLUTIONS FOR HARD TO TREAT WATER APPLICATIONS

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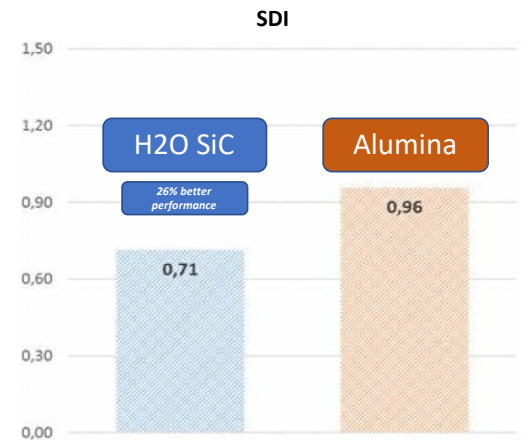
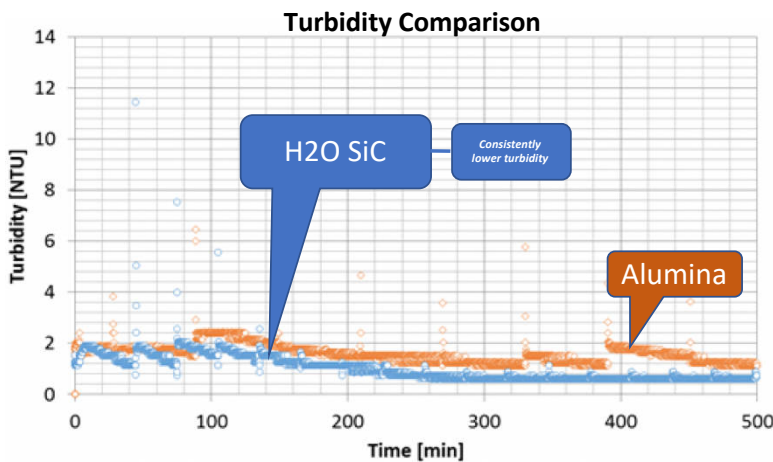
H2O SiC - UNMATCHED PERMEATE FLUX RATE



BENEFITS OF H2O SiC HIGH FLUX

- REDUCED FOOTPRINT OF H2O SiC SYSTEM
- REDUCED NUMBER OF MEMBRANES & HOUSINGS
- REDUCED NUMBER OF VALVES, PLUMBING, PUMPS, SENSORS & AUTOMATION CONTROLS
- REDUCED CAPITAL COST
- REDUCED MAINTENANCE & OPERATING COST.

H2O SiC - UNRIVALED TURBIDITY & SDI REDUCTION



Lower permeate turbidity for H2O SiC 0.60 μm despite higher pore size than alumina 0.20 μm

Lower SDI for H2O SiC 0.60 μm despite higher pore size than alumina 0.20 μm .