Hyflux® membranes

InoCep®

Ceramic Hollow Fibre Membrane

Long-lasting superior ceramic hollow fibre membrane for extreme conditions

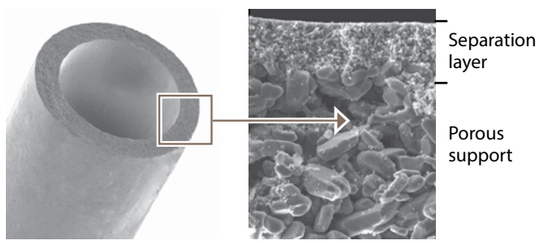
Exploiting the superior chemical, thermal and mechanical stability of α-Al_2O_3 material, InoCep® enjoys long service life and high filtration rate even for highly demanding applications.

Product Features & Benefits

- Acid and base resistant
- Excellent thermal stability
- High flux

Operation Features & Benefits

- Easy cleaning
- Proven long service life
- High packing density

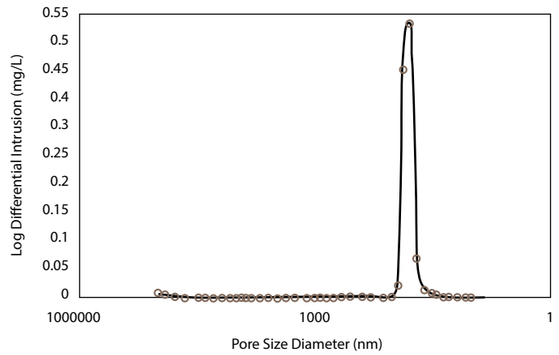


Cross-section of InoCep® fibre with magnified view of its asymmetric structure

Membrane Comparison		
Membrane Type	InoCep®	Multichannel Ceramic Monoliths
Solvent, Acid and Base, Thermal Stability	Excellent	Excellent
Lifespan	Long	Long
Operating Pressure	High	High
Water Pathway in Substrate	Short	Long
Mechanical Strength	Strong	Strong

Module Comparison		
Module Type	InoCep®	Multichannel Ceramic Monoliths
Packing Density	High	Low
Sealing Gasket	Less	Many
Rate of Fouling	Less	More
Footprint	Small	Large
Cost of Maintenance	Low	High

Sharp pore size distribution for InoCep®



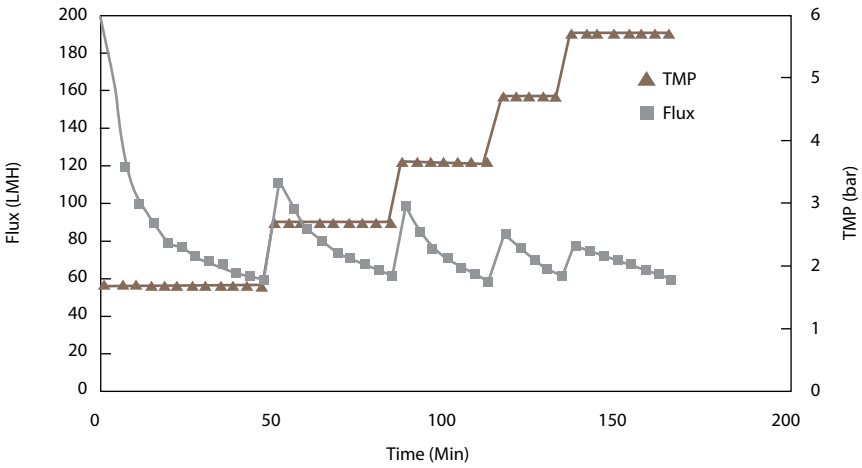
Membrane Specifications							
InoCep® Membrane	M1400	M800	M500	M200	M100	M40	M20
Pore Size (nm)	1400	800	500	200	100	40	20
Clean Water Flux (LMH @ 1 bar)	4500	2500	2800	1500	750	300	250
Structure	Symmetric		Asymmetric				
Membrane Material	α-Al_2O_3						
Coating Material	Uncoated		α-Al_2O_3				
Operating Temperature (°C)	-5 – 120						
pH Resistance	0 - 14						
Max Operating Pressure (bar)	6						

Module Specifications		
InoCep® Module	MM004	MM080
Membrane Area (m^2)	0.04	0.8
Flow Type	Inside - Out	
Housing Material	SS316	
O-ring Material	Silicone	EPDM
Feed Connection (in)	1″	4″
Permeate Connection (in)	1/4″	1/2″
Max Operating Pressure (bar)	6	
Operating Temperature (°C)	-5 – 120	
Warranty (Factory Standard)	1 year	

Case Study

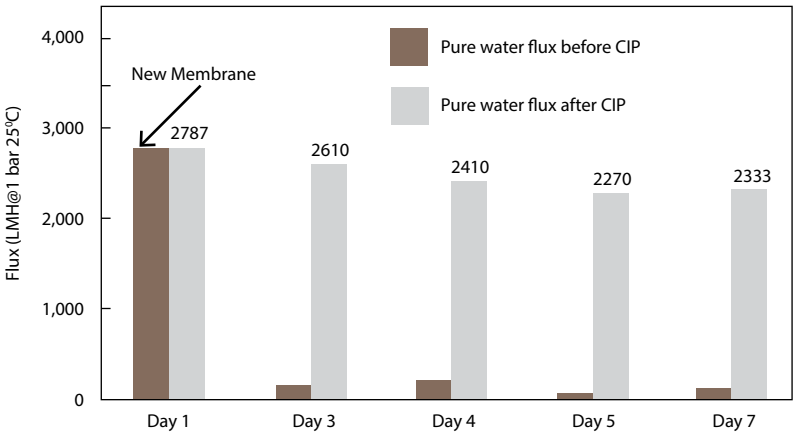
Beer Clarification

Replaces Conventional Treatment Method – Kieselguhr



- InoCep® has the ability to withstand high TMP as compared to polymeric membranes which have a maximum tolerance level of 2 bars.

Pure water flux recovery after CIP



- There is close to complete flux recovery after every CIP.

Key Applications

- Laundry wastewater recycling
- Acid and caustic purification
- Emulsified oily water separation
- Beer clarification
- Cold sterilisation of skim milk

About Hyflux

Hyflux is a leading fully-integrated provider of water and power management and innovative environmental solutions. Hyflux offers sustainable solutions in the areas of membrane-based desalination, water recycling, wastewater treatment including membrane bioreactor technology, and potable water treatment. Its projects and operations span across the globe and include landmark projects such as some of the world's largest seawater reverse osmosis (SWRO) desalination plants in Singapore, Algeria and China.

Hyflux is distinctive in its ability to address the challenges at every point of the entire value chain of the water industry - from R&D in membrane technology, component manufacturing, process engineering, engineering, procurement and construction (EPC), to operations and maintenance (O&M), in addition to arranging for project financing of large-scale municipal water projects.

At the core of Hyflux's business is its membrane innovation that is focused on the development of membranes, membrane applications, and the design and development of membrane-based plants to deliver solutions for a wide range of applications in water treatment and industrial manufacturing processes. Today, Hyflux's membrane systems have been installed in more than 1,300 plants in over 400 locations worldwide.

Through its projects across the world, Hyflux has left an indelible imprint on the communities that it serves, driven by its commitment to deliver water that is clean, safe and affordable.

For more information on Hyflux, please visit http://www.hyflux.com.

For more information on Hyflux membranes, please visit http://www.hyfluxmembranes.com.

Other Products

KRISTAL®

The preferred polymeric membrane with unparalleled performance in operational consistency and stability

FerroCep®

World's toughest stainless steel membrane that provides superior separation performance

PoroCep®

The high density polyethylene membrane with compact design for Membrane Bioreactor system

Hyflux Ltd
Hyflux Innovation Centre, 80 Bendemeer Road, Singapore 339949
Tel: +65 6214 0777 | Fax: +65 6214 1211

sales@hyfluxmembranes.com
www.hyfluxmembranes.com

V 1.3 - 04/2015