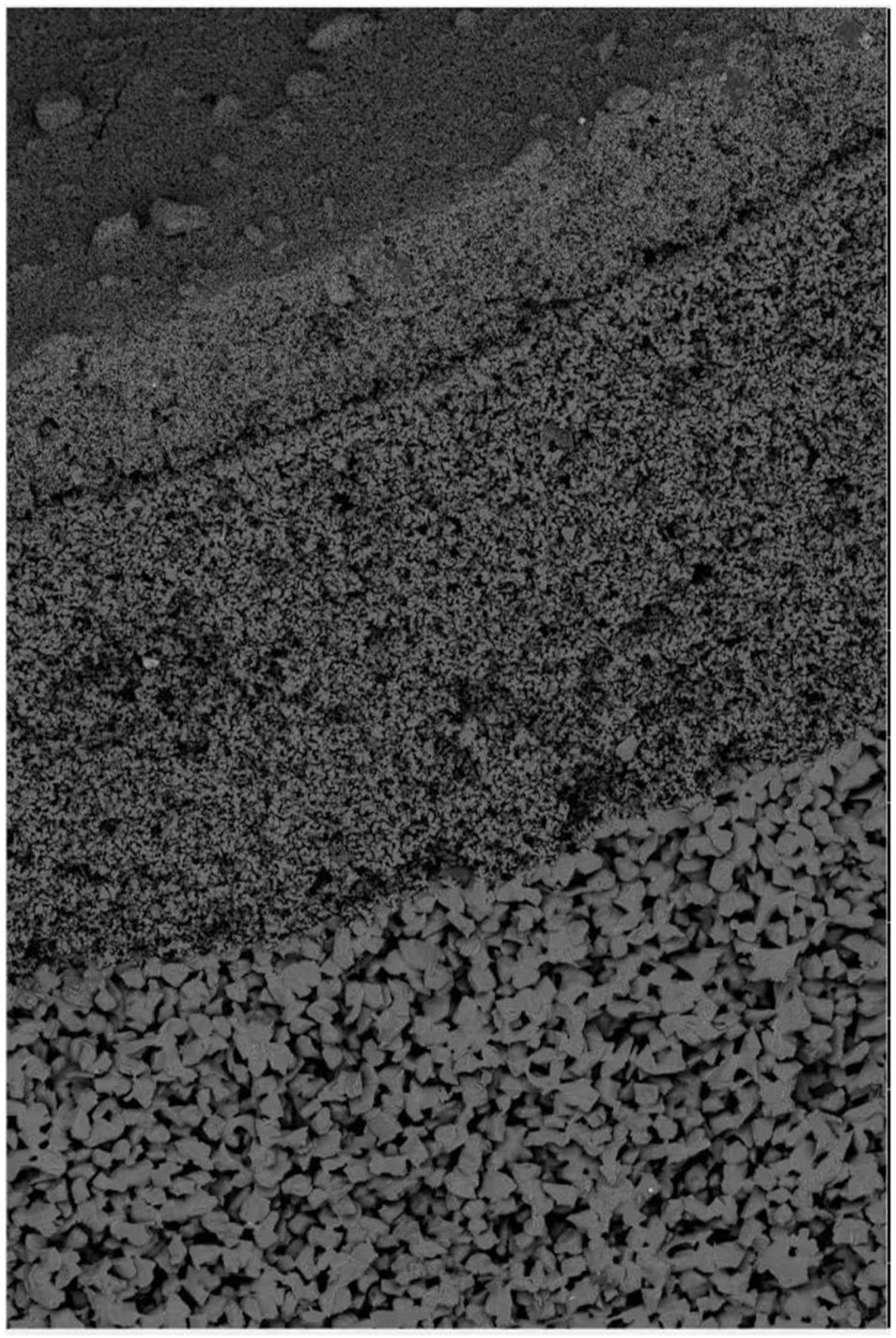
JMFILTEC 坚膜科技

SILICON CARBIDE COLUMN MEMBRANE

This product is an innovative product that breaks the boundary between the application scenarios of inorganic and organic membranes. It combines the advantages of ceramic membrane products being sturdy and durable, as well as high filling density of organic membrane products. The usage method is highly similar to that of organic column membranes, which compensates for the high requirements for inlet water quality, high backwash water consumption, and the risk of wire breakage in ultrafiltration membrane technology. It can improve the water yield of ultrafiltration systems and reduce chemical cleaning costs.

The silicon carbide column ceramic membrane is composed of multiple built-in silicon carbide ceramic filter cartridges spliced together. The unique structural design makes the hydraulic distribution of the water production and backwash channels of each tubular membrane more uniform, and the backwash recovery effect is outstanding.



Product Features and Advantages

★The core material silicon carbide is a more advanced and ideal ceramic membrane material compared to alumina, with better hydrophilicity, higher porosity, excellent cleaning and recovery ability, and no fear of oil pollution;

★High mechanical strength with no risk of wire breakage, excellent wear resistance and impact resistance, stable water quality during long-term operation;

★Good anti-pollution performance, resistant to water fluctuations, and stable long-term operating flux;

★Good chemical stability, acid and alkali resistance, strong oxidant resistance, high temperature resistance, organic solvent resistance, cleaning durability, and easy recovery of flux after cleaning;

★High filtration accuracy (up to 20nm) , can effectively remove pollutants such as particles, colloids, microorganisms, and organic matter from water;

★The system has low preprocessing requirements, which reduces the total investment and operating costs of the system;

★Vertical installation, standardized and modular design, simplifying system pipelines;

★Competitive investment costs and excellent lifecycle;

★Compatible with traditional organic membrane ultrafiltration systems.

Application Area

- High Standard Purification of Drinking Water
- NF&RO Preprocessing
- Thermal Power Plant
- Mine Water Treatment
- Semiconductor Industry
- Photovoltaic Wastewater
- New Energy

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Zhejiang Jianmo Technology Co.,ltd

SiC Column Membrane Main Parameters

Type	JMfiltec-SICZ-H1200A	JMfiltec-SICZ-H1200B	JMfiltec-SICZ-N200	JMfiltec-SICZ-H1600A	JMfiltec-SICZ-H1600B
Effective Filtration Area	11㎡	13.5 ㎡	25 ㎡	14.5 ㎡	17.5 ㎡
Total Length	1620 mm	1620mm	1885 mm	2020 mm	2020 mm
Diameter	250 mm	250 mm	265 mm	250 mm	250 mm
Channel Diameter	4 mm	3 mm	2.75 mm	4 mm	3 mm
Inlet Water Connector	DN50	DN50	DN80	DN50	DN50
Outlet Water Connector	DN50	DN50	DN80	DN50	DN50
Housing Material	UPVC	UPVC	fiberglass	UPVC	UPVC
Filter Core Material	SiC	SiC	SiC	SiC	SiC
Filtration Accuracy	20/40 nm	20/40 nm	20/40 nm	20/40 nm	20/40 nm
Installation Direction	vertical	vertical	vertical	vertical	vertical
PH Range	1-14	1-14	1-14	1-14	1-14
Chemical Cleaning PH Range	1-14	1-14	1-14	1-14	1-14
Max Operation Pressure	4 bar	4 bar	4 bar	4 bar	4 bar
Max Trans-membrane Pressure Difference	3 bar	3 bar	3 bar	3 bar	3 bar
Operation Temperature	1-45 ℃	1-45 ℃	1-45℃	1-45 ℃	1-45 ℃
Flux(Pure Water)	150-400 LMH	150-400 LMH	150-400 LMH	150-400 LMH	150-400 LMH
Filtration Method	dead-end / cross-flow filtration, internal pressure operation				
Backwashing Flux	200-600 LMH	200-600 LMH	200-600 LMH	200-600 LMH	200-600 LMH
Positive Charge	1-2 times water filtering ability				
Operation Power Consumption	0.15 kWh/t	0.15 kWh/t	0.15 kWh/t	0.15 kWh/t	0.15 kWh/t
Max NTU Tolerance	≤100	≤100	≤100	≤100	≤100