

MBR System

Our membrane bioreactors include state-of-the-art hollow-fiber technology based on a PPTA/PTFE composite.

Description

- PTFE separation layer: resistant to strong acids, alkalis, oxidants and polar solvents.
- pH spectrum between 0 and 14.
- PPTA support layer: high performance, monofilament breaking strength exceeding 1000N.
- Environmentally-friendly manufacturing with no wastewater or solvent emissions.
- Low carbon footprint, recycling of 90% of waste membranes.

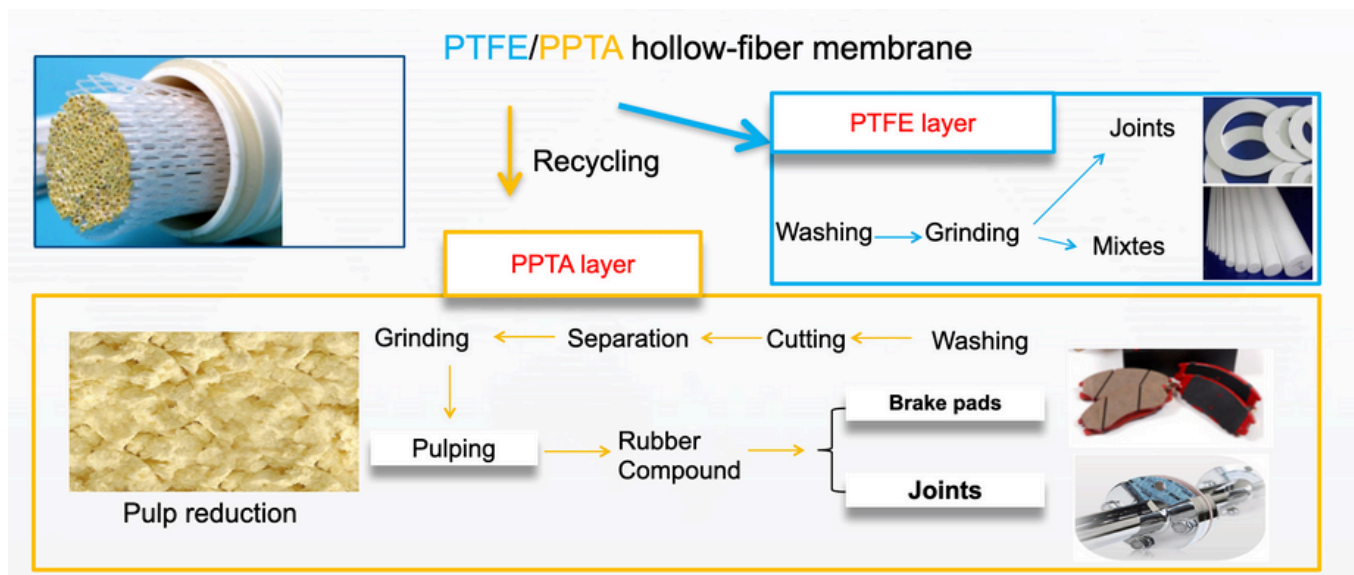
Advantages

- High filament strength
- Anti-stripping treatment
- Single filament resistance 1000 N
- Component root stripping resistance 600 N
- Non-sticky, easy-to-clean membrane surface
- Low energy and chemical consumption

Scope of application

- Municipal drinking water
- Wastewater treatment
- Reuse of reclaimed water
- Landfill leachate and all kinds of industrial wastewater (including chemical and pharmaceutical water)
- Industrial Applications: Steel production, electroplating, printing and dyeing, food, aquaculture, microchips, boiler water, zero discharge, solvent recovery, oil-water separation, etc.

Recycling of hollow-fiber PTFE-PPTA membranes



They trust us



Contact us

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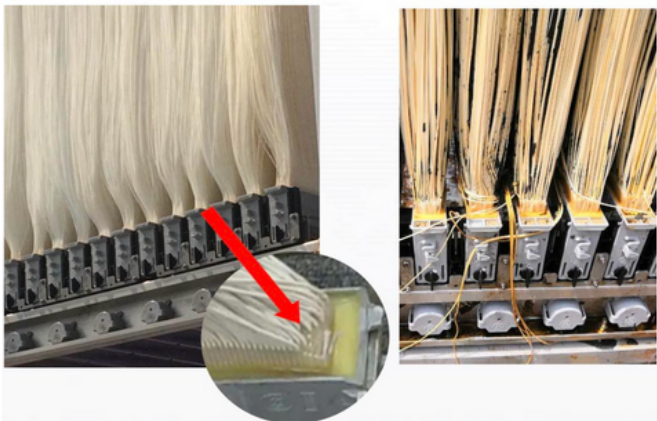
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Main differences from PVDF membranes

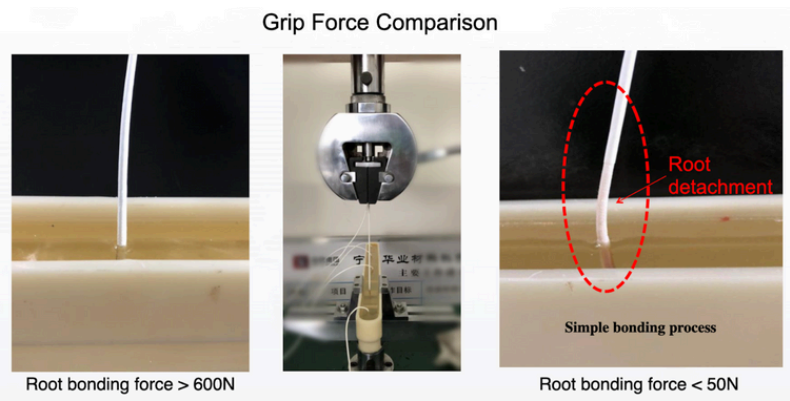
Root detachment

- Support tube reinforcing PVDF hollow-fiber membrane (see figure below).
- Risk of root flaking and filamenting during transport, even with a new membrane.
- Membranes subject to flaking and peeling of the filament after oxidative cleaning, leading to a reduction in the physical properties of the polyester fiber.



Anchoring the fibers in the metal substrate

- During the manufacturing process, the fibers are anchored differently, which explains the difference in detachment.



Comparison with PVDF membranes:

- Higher flow with less intrinsic resistance
- Greater system reliability and shock resistance
- 2 to 4 times longer service life
- More environmentally-friendly manufacturing
- No solvents or wastewater required
- Recycling of used filaments.

	Stage 1	Stage 2	Stage 3	Last Stage
Material	PVC, PP, PE	PS, PES	PVDF	PTFE
Resistance to strong acids	Regular	Regular	High	High
Resistance to strong bases	Normal	Normal	Low (pH: 2 - 11)	High (pH: 0 - 14)
Flow	Low	Medium	High	Very high
Resistance	High	High	High	Very high
Hydrophilicity	Normal	Normal	Normal	High
Oxidation resistance	Low	Medium	High	Very high
Heat resistance	Normal	Normal	Normal	High
UV resistance	Normal	Low	Normal	High