

Case Study

**Pharmaceutical Wastewater Treatment
(Zhejiang Zhebang Pharmaceutical Project)**

Zhejiang Zhebang Pharmaceutical Co., Ltd. is mainly engaged in the production and sales of cephalosporin APIs and pharmaceutical intermediates. At present, the company produces 700 tons of production wastewater every day, including high ammonia nitrogen wastewater, high salt wastewater, high COD wastewater, antibiotic wastewater and other pharmaceutical wastewater.

The project originally adopted traditional process, but later it was transformed into MBR process because it could not meet the productivity and effluent quality. Hollow fiber membrane was first used with problems such as frequent pollution, blockage and high maintenance difficulty etc. Finally, our company confirmed the membrane flux through experiments, and replaced it with all of our company's MBR flat membranes in 2018, which solved the problem of frequent pollution and blockage.



Hollow membrane hardening and wire breakage



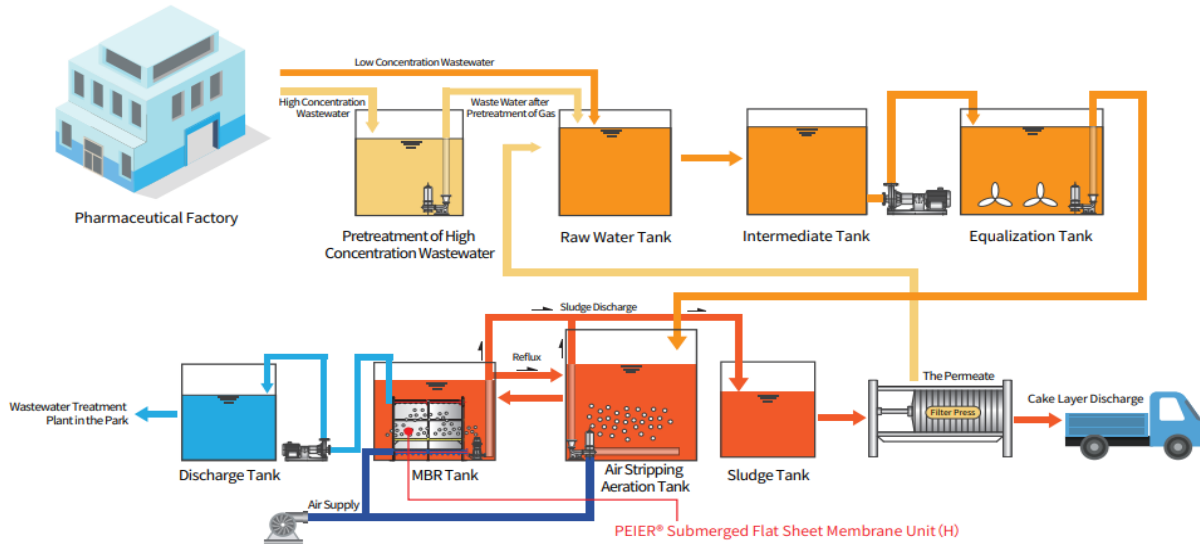
Flat membrane operation after transformation

1. Outline of the Facility

Location	Shaoxing City, Zhejiang Province
Type of Wastewater	Pharmaceutical wastewater
Flow	700m ³ /d
Commissioned	Since 2018(Peier MBR)

2. MBR Process Flow Sheet

Process Flow Chart of Wastewater Treatment (Zhebang Pharmaceutical Co., Ltd Project)



Feeding biochemical water sample



MBR permeate water sample

3. Design Parameter and Actual Data

Type	Parameter	Influent	Design	Actual	Capacity m ³ /D
Pharmaceutical Wastewater	COD _{Cr} (mg/L)	8000-10000	≤500	300-400	≤700
	NH ₃ -N (mg/L)	200-300	≤35	15-20	
	pH	6~9	6-9	7-8	

"Design" values of effluent are regulatory limits. "Actual" values are average values.

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