

TUF管式膜 TUF TUBULAR MEMBRANES



CONSEPTEC TUF管式膜是一种最先进的工业污水膜，其应用PES膜材料，可以耐受PH为2-13的污水，截留分子量一般为100KDa，在RO浓水及冷却循环水等高盐水软化工艺中广泛应用。

CONSEPTEC TUF membrane is one of the advanced industrial wastewater membranes. It is made of PES membrane material, which can withstand the wastewater with pH range 2-13, and the molar weight cut-off(MWCO) is generally 100kda. It is widely used in RO concentrated water, cooling circulating water and other high salt water softening processes.

工艺介绍

CST TUF管式膜，结合软化工艺可以有效降低钙、镁、硅等结垢离子，保证后续RO系统的良好运行，回收率高达98%：

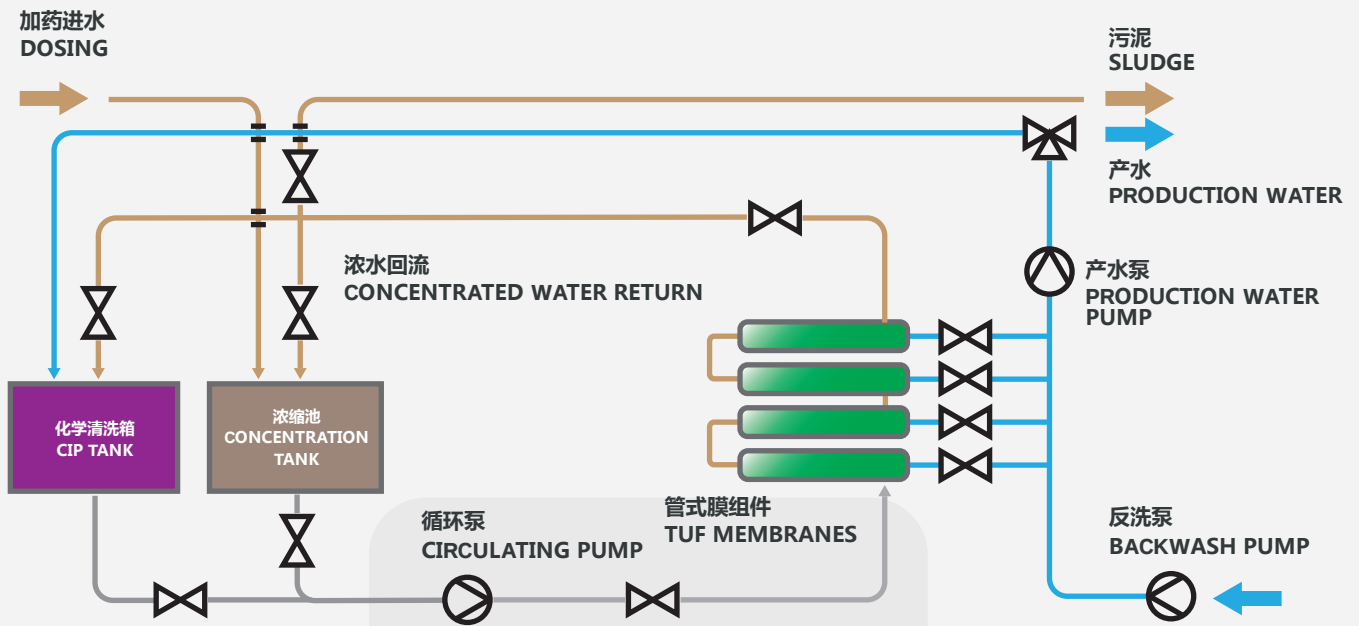
- 投加生石灰或NaOH等化学药剂去除浓水中的钙、镁及重金属离子，消除各种结垢及污染，保护后续的反渗透系统；
- 通过管式膜对加药反应生成的沉淀进行分离，利用错流和在线反洗方式，保证膜通量，延长膜系统的清洗周期；
- STRO/DTRO高压反渗透对高盐水再浓缩，实现减量；
- 通过蒸发结晶器，将水蒸发，实现高盐水的零排放。



Process Introduction

CST TUF membrane combined with the softening process, it can effectively reduce calcium, magnesium, silicon and other scaling ions, ensure the good operation of RO system, the recovery rate is up to 98%：

- By adding chemicals such as quicklime or NaOH to remove calcium, magnesium and heavy metal ions in concentrated water, eliminating various scaling and pollution, and protecting the RO system；
- Using tubular membrane to separate the precipitation caused by the dosing reaction. Cross-flow and online backwashing could ensure the membrane flux and extend the cleaning cycle of the membrane system；
- STRO/DTRO high-pressure membrane system can reconcentration of high-salt water to achieve waste water reduction；
- Using an evaporating crystallizer, the water is evaporated and the salt is crystallized to achieve zero discharge.



技术优势

- 预处理简单，进水SS可高达15000ppm；
- 使用PES膜材料，耐碱（pH=2~13）出水质量高，分离性能稳定；
- 抗污染能力强，强度高，可反洗，易清洗，膜使用寿命长；
- 回收率高，运行能耗低，运行能耗可达0.5-1kwh/m³；
- 膜组件易于维护，可单支膜组件更换，不影响整套系统运行；
- 外置放置，自动化运行，维护简单；
- 系统设计灵活，标准模块化配置，占地面积小。

Technical Advantage

- The pretreatment is simple, the feed water SS can be up to 15000 ppm；
- PES membrane material with high alkali-resistant（pH=2~13），stable effluent quality；
- Strong anti-pollution, high strength, backwashable, easy to clean and long service life of membrane;
- High recovery rate and the low energy consumption, the operation energy consumption is about 0.5-1kwh/m³；
- Easy maintenance of the membrane components, the replacement of single membrane module does not affect the operation of the whole system；
- Automatic operation and easy maintenance；
- Flexible system design with standard modular configuration, saving space.

CST TUF 膜组件参数表
CST TUF Technical Data Sheet

截留分子量 MWCO (Da)	产水通量 Clean Water Flux (LMH)	建议操作压力 operation pressure (Bar)	最大操作压力 Max. Operating pressure (Bar)	最高温度 Max. temperature (°C)	连续运行 pH范围 Operation PH range	短时清洗 pH范围 CIP PH range (50°C)	耐受余氯 Chlorine-resistant (ppm.h)
100,000	80-120	1.0-5.0	8.0	65	2-13	1.5-13.5	5000

CST TUF 膜管直径8mm系列
CST TUF Tubular Diameter 8mm

	D8-83F	D8-84F	D8-103F	D8-104F
膜组件直径 (inch) Housing diameter	8"	8"	10"	10"
膜长度 (mm) Length of membrane	3000	4000	3000	4000
膜面积 (m ²) Membrane area	27.2	36.7	40.0	53.4
外壳材质 Housing material	FRP	FRP	FRP	FRP

应用领域
Applications

- | | |
|--------------|---|
| -脱硫废水零排放 | -Desulfurization wastewater ZLD system |
| -工业废水零排放 | -Industrial wastewater ZLD system |
| -碱液回收处理 | -Alkali reclaims system |
| -高盐废水/RO浓水处理 | -Salinity wastewater/ RO concentration water treatment system |
| -冷却循环水回用 | -Reuse of cooling circulating water system |