

Evaporator

Multi-effect evaporation system

Multi-effect evaporation refers to a system that connects multiple evaporators, make use of the secondary steam from the previous effect evaporator into the next effect evaporator as heating steam, and condensing into distilled water in the next effect evaporator.

Effective No.	I	II	III	IV	V	VI	VII	VIII
Water-vapor ratio	~1.04	~0.53	~0.36	~0.28	~0.23	~0.19	~0.17	~0.15
Steam saving	-	0.5	0.18	0.08	0.05	0.035	0.025	0.018

The amount of steam consumed by multi-effect evaporation, t steam /t evaporation water

The more the effects, the lower the steam consumption. But it is important to note that:

- 1、 With each additional effect, the cost of investment goes up proportionally.
- 2、 As the number of effects increases, the energy saving effect (absolute value) decreases with each new addition of an effect.

Therefore, with the increase of effect, the longer the investment recovery cycle of each additional effect, therefore, it is necessary to calculate the comprehensive cost of energy consumption and investment of different effect evaporators, and choose the most cost-effective solution.



MVR evaporation system

MVR is short for Steam Mechanical Recompression Technology. MVR is an energy-saving technology that reuses the energy of its own secondary steam, thereby reducing the need for external energy. The working process of the evaporator is to compress the steam at low temperature by the compressor, increase the temperature and pressure, increase the enthalpy, and then enter the heat exchanger to condense, in order to make full use of the latent heat of the steam. In addition to the starting, no fresh steam is requested during the entire evaporation process.



Plate falling film evaporation system

The falling film evaporator is mainly composed of a shell, a heating plate, a distributor, a demister, a feed liquid circulating pump, etc. The main difference from the traditional tubular falling film type is:

- ① Hot plate heat transfer element
- ② Plate falling film, steam passes out of the plate cavity. It is suitable for the concentration of materials.



Tube/plate heat exchanger

Tubular heat exchanger/hot plate heat exchanger



Tubular heat exchanger

For the tube head of the tube heat exchanger, our company adopts automatic welding, which ensures the welding quality while taking into account the beauty.

A hot plate heat exchanger is a compact heat exchanger in which the material is normally run between plates and the heat source or cold source flows upstream in the plate cavity.

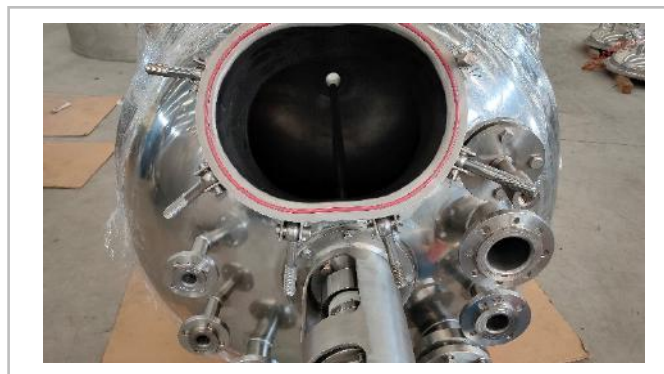
- Low maintenance costs due to self-cleaning surfaces and non-sealing construction
- More than 3 times smaller than the tube heat exchanger
- Due to the large contact surface, the heat transfer efficiency is high
- The tendency to scale is greatly reduced due to optimal turbulence
- Low maintenance cost
- Can withstand higher pressures than hermetically sealed heat exchangers



Hot plate heat exchanger

Non-standard container equipment

📄 Non-standard pressure vessel/tower/reactor/special material equipment



Vertical filter press



It is a kind of high efficiency, energy saving, environmental protection and high degree of automation solid-liquid separation equipment independently developed by our company.

The equipment uses the pressure of the feed pump, the gravity of the material and the extrusion of the rubber diaphragm to rapidly filter the liquid in the slurry through the filter cloth, thus achieving efficient solid-liquid separation. The design adopts the recognized structure in the industry, which solves the shortcomings of traditional equipment easy to "stuck", easy to leak, and large power consumption. Widely used in pharmaceutical, metallurgy, mining, chemical, coal chemical, titanium dioxide, paper, food, pharmaceutical and environmental protection and many other industries.

Plate falling film evaporator case

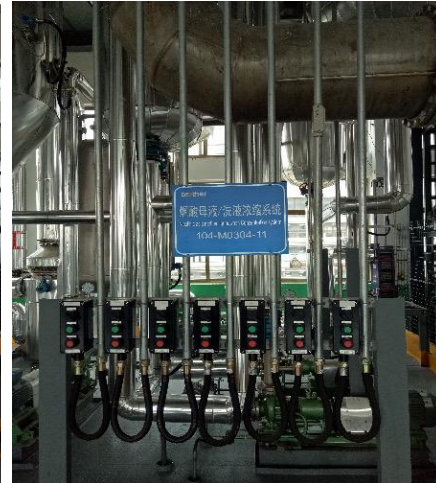


Paper industry -- 300T/H plate falling film multi-effect evaporation and concentration system of a paper enterprise in Guangxi



MVR/ Multi-effect evaporator case

- Pharmaceutical industry ----
A pharmaceutical enterprise in Zibo, Shandong 12T/H sodium chloride MVR evaporation crystallization (pharmaceutical wastewater)



- Pharmaceutical Industry ----
A pharmaceutical enterprise in Jiujiang, Jiangxi 6.5T/H niacin mother liquor three-way concentrate (vitamin products)

MVR/ Multi-effect evaporator case

🏷️ Dye Industry ----
28T/H Ammonium sulfate MVR
evaporation crystallization
project of a dye enterprise in
Shangyu, Zhejiang (Dye
wastewater)



🏷️ Dye industry ----
28T/H Ammonium sulfate MVR
evaporation crystallization project
of a dye enterprise in Jiujiang,
Jiangxi (Dye wastewater)

MVR/ Multi-effect evaporator case

- 🏷️ Lithium power industry ----
5T/H sodium chloride + lithium chloride
evaporation crystallization project of a
lithium power enterprise in Changsha,
Hunan (lithium power industry wastewater)



- 🏷️ Lithium power industry ----
5T/H Sodium chloride MVR
evaporation crystallization project of
a lithium power company in Taixing,
Jiangsu (lithium power industry
wastewater)

MVR/ Multi-effect evaporator case

- 📄 Pesticide Industry --
90T/H Sodium chloride MVR+ Triple-effect evaporation crystallization project of a pesticide enterprise in Yichang, Hubei Province (Pesticide wastewater)



MVR/ Multi-effect evaporator case

Petrochemical Industry ----

- 680m³/D Sodium chloride MVR evaporation crystallization system of a petrochemical enterprise in Fuling, Chongqing (Petrochemical Industry)



MVR/ Multi-effect evaporator case

- Chemical Industry ----
A chemical enterprise in Shangyu,
Zhejiang 6.3T/H sodium chloride
+ sodium acetate MVR
evaporation crystallization
(chemical wastewater)



- Chemical industry ----
Exported to an overseas enterprise 26T/H
sodium hydroxide three-effect evaporation
concentration (chemical products)

Nutsche Filter case

 Pharmaceutical industry -- 190637.210132 project Nutsche filter field case



Vertical filter press case

📌 Pharmaceutical industry ---- vertical filter press customer field

