

ZLD Evaporation Solution in Waste Management Center

1. Waste Management Center

The hazardous waste management center is generally composed of:

Physical & Chemical Treatment Plant

Incineration Plant

Sewage/Effluent Treatment Plant

Landfill Plant

Solidification Plant

And, Landfill Leachate Treatment Plant

2. Effluent From Waste Management Center

2.1 Incineration Plant

The wastewater in the incineration plant mainly comes from the desulfurization wastewater produced by wet desulfurization.

2.2 Physical & Chemical Treatment Plant

The main source of wastewater in the physical and chemical treatment plant is the wastewater generated by the park or local waste production units. There are many types of wastewater with complex components.

2.3 Effluent Treatment Plant

Effluent treatment plant mainly deals with washing wastewater, domestic sewage, initial rainwater, physical and chemical treatment plant effluent.

As the last step of wastewater treatment in the waste management center, the main purpose is to reduce the COD and ammonia nitrogen, including but not limited to deamination process, biochemical process, membrane process, etc.

2.4 Landfill Leachate Treatment Plant

After a period of operation of the landfill plant, will produce landfill leachate.

3. ZLD Evaporation System to Treat Effluent in Waste Management Center

3.1 Incineration Plant Effluent

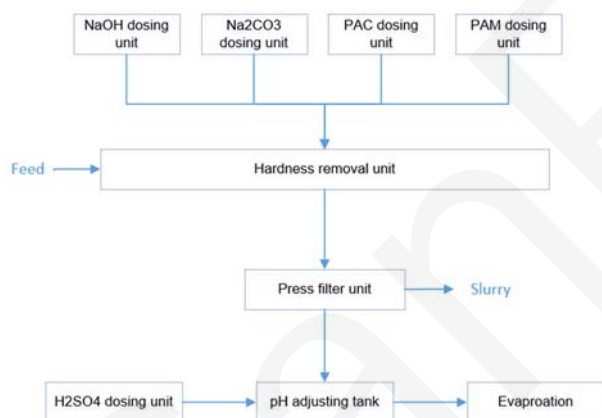
According to our experience, the desulfurization wastewater from the incineration plant generally contains fluoride and has high hardness.

The high fluoride content is more corrosive to the material, and the high hardness can easily cause scaling and blockage of the subsequent evaporation system, affecting the stable operation cycle of the equipment.

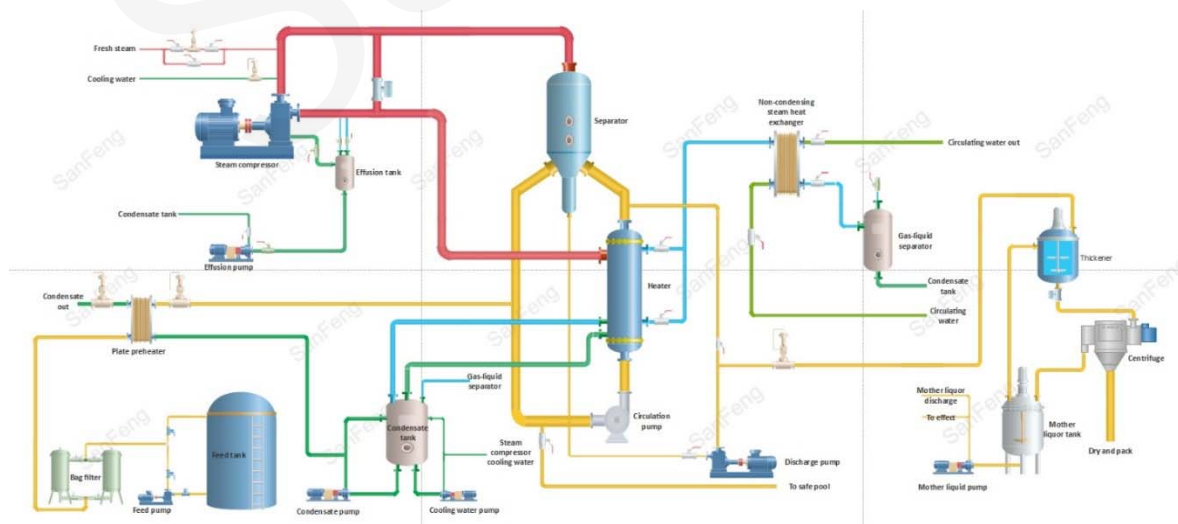
Therefore, the incineration desulfurization wastewater needs to be pretreated prior to the evaporation system.

The pretreatment process generally adopts comprehensive reaction precipitation + pressure filtration + PH adjustment system.

The typical pretreatment process as below :



Significant ZLD MVR Evaporation and Crystallization Process as follows:

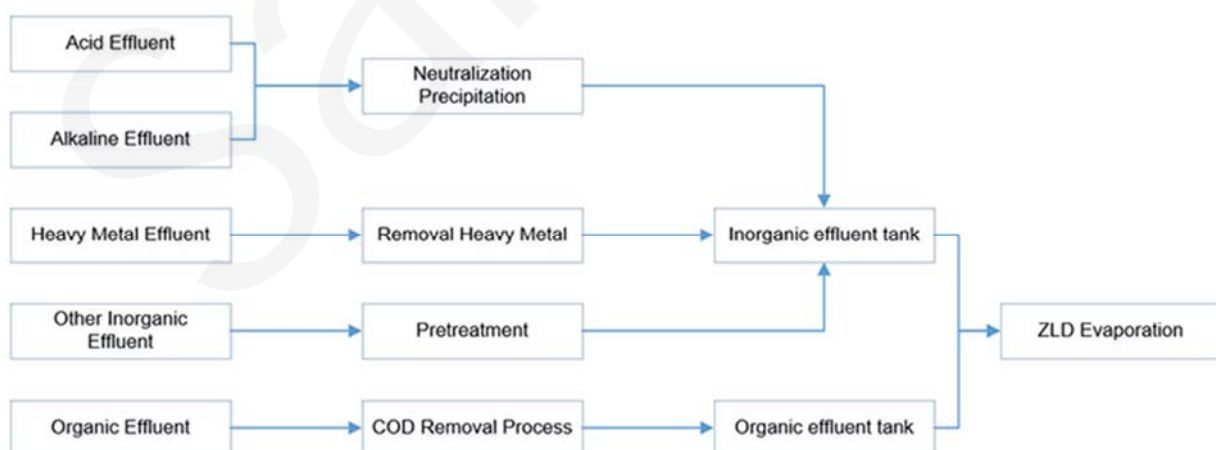


3.2 Physical and Chemical Treatment Plant Effluent

Main effluent type that treated by physical and chemical treatment plant

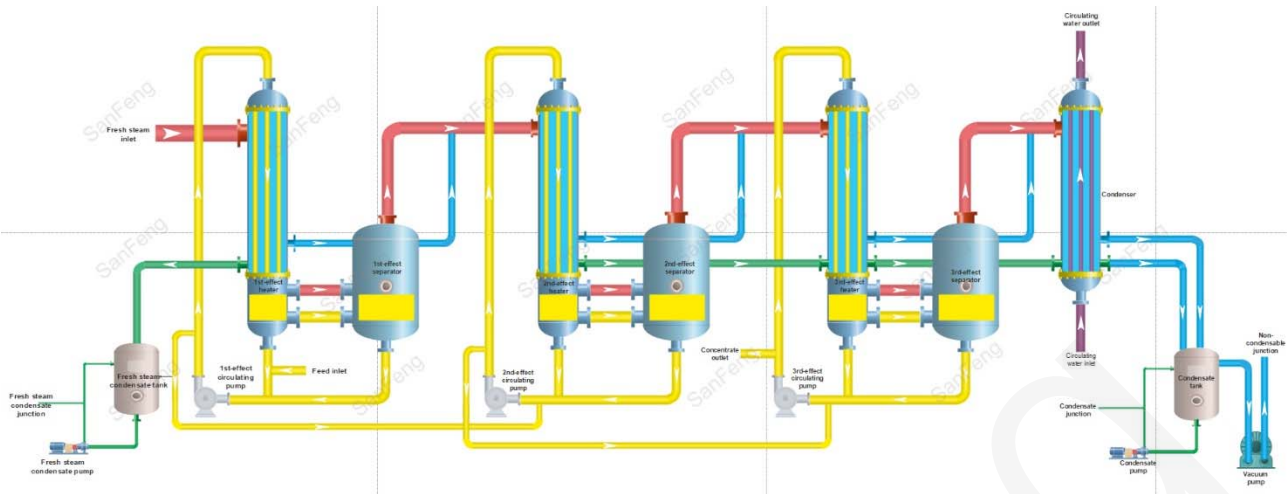
Item	Type
1	Clinical waste
2	Waste organic solvent and waste containing organic solvent
3	Waste mineral oil and waste containing mineral oil
4	Oil/water, hydrocarbon/water mixtures or emulsions
5	surface treatment waste
6	Chromium-containing effluent
7	Copper-containing effluent
8	Nickel-containing effluent
9	Inorganic fluoride waste
10	Acid effluent
11	Alkaline effluent

The different waste water collected is mainly divided into organic waste water and inorganic waste water. The wastewater after different treatment methods in the physicochemical workshop is collected into the inorganic wastewater storage tank and the organic wastewater storage tank.



The wastewater from the inorganic wastewater storage tank and the organic wastewater storage tank is then treated by a multi-effect evaporation system.

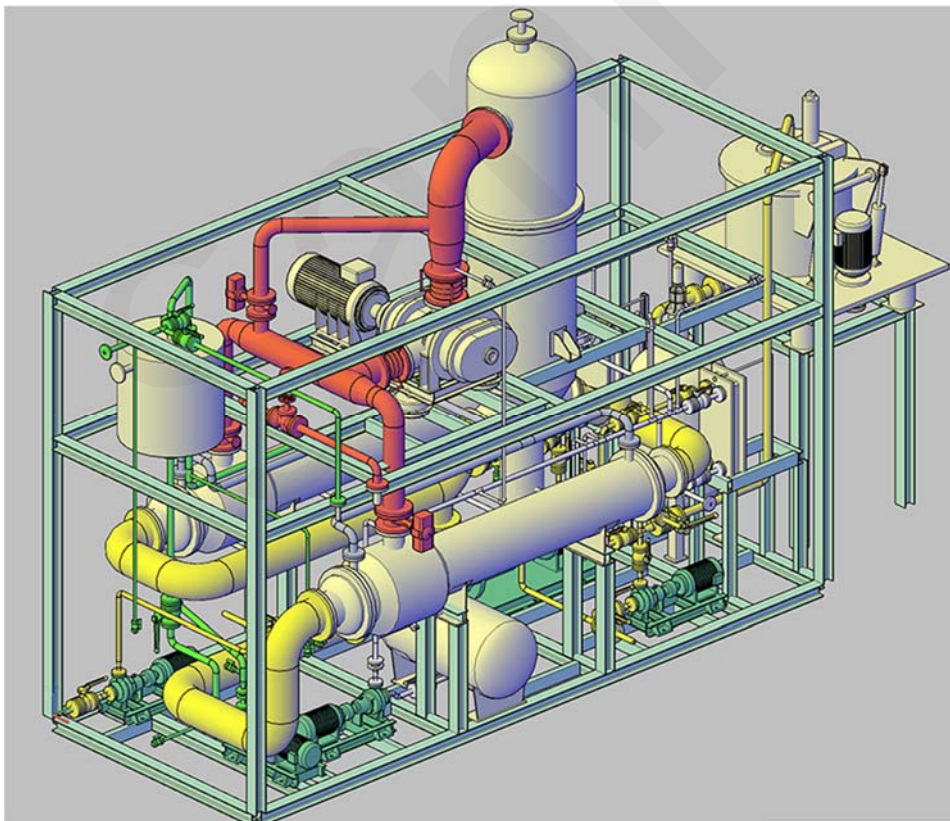
A typical multi-effect evaporative concentration system is as follows:



3.3 Landfill Leachate

Landfill leachate, after treated by membrane system, normally use MVR Evaporation and Crystallization System to treat RO reject water. Incineration or Solidification for the discharged solid from the MVR system.

Small capacity landfill leachate RO concentrate project, can be treated with Container Type MVR Evaporation System.



4. Project Cases

Incineration plant effluent treatment

Solution: Pretreatment + MEE multi-effect evaporation System



5. About Sanfeng

Sanfeng started in 1958, covers an area of 114,600 square meters, with a plant area of 58,000 square meters, more than 500 employees on staff, and more than 200 sets of high-end processing and testing equipment.

Sanfeng Environmental Tech Co., Ltd. specialize in evaporation solutions integrated with MVR evaporation system, multi-effect evaporation system, freezing crystallization system, pretreatment process, and drying system.



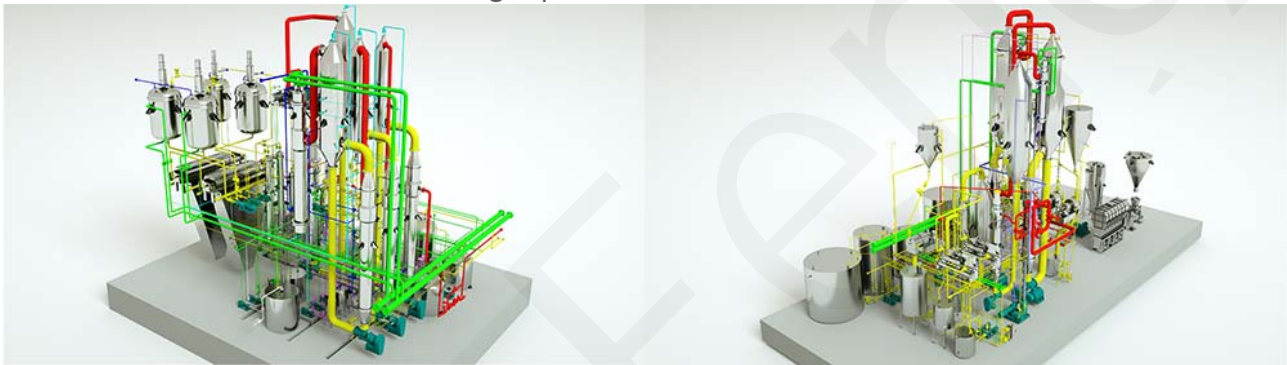


The Special Engineering Design in Sanfeng Tech

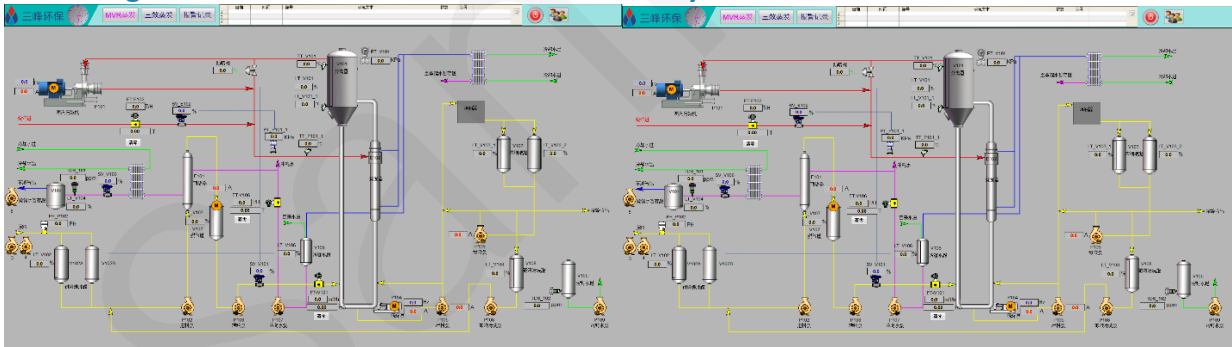
a. Clearly 3D drawings

For corrective and effective design

For the installation and commissioning supervision...



b. Redesigned and Customized Automatic Control System



6. Getting the Optimum Evaporation Solutions

If you'd like to receive a optimum evaporation solution for your waste management effluent project, reach out to us freely to request a proposal.

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