

## 薄膜濃縮前處理技術試驗

Membrane concentration pre-treatment technology

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### 摘要

This project currently uses thin films to concentrate existing wastewater, thereby reducing the cost of subsequent evaporation treatment. Generally, chemical coagulation is the main removal method in pre-treatment technology. Therefore, this project will first focus on chemical coagulation jar tests, with Test the types of chemicals on site and adjust the hardness of the raw wastewater to match the on-site water quality conditions, simulate the on-site dosing situation, and process the hardness part of the water by adjusting the pH value, sodium carbonate and polymer to aid coagulation Dosage of each agent, etc., confirm the dosage and reaction conditions of each agent to find the optimal operating conditions and achieve the best parameters for removing hardness from water.

Further observation of the impact of different dosages of polymer coagulant aids on the removal rate shows that as more dosage is added, there will not necessarily be better removal effects, and as too much is added, the sludge generated in the later stage will On the contrary, due to the large amount of residual coagulant, the viscosity of the sludge is greatly increased, which affects the effect of sludge dehydration in the later stage, causing the moisture content of the sludge to increase, and additionally increasing the cost of sludge removal. Therefore, in order to achieve the best hardness removal rate and maximum coagulation conditions in the later stage, it is recommended to control the amount of polymer coagulant additive to about 1 ppm of the overall water volume.

Keyword : Chemical coagulation 、 Wastewater ◦



圖 1、現場測試設備



圖 2、試驗情形