

Investigation and application of integrated water purification system

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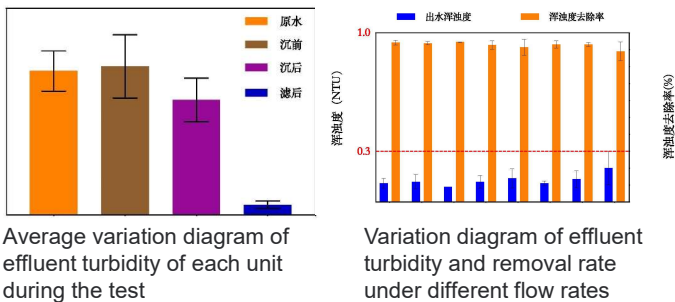
Objectives

Due to the lack of national norms and industry norms in this system, the quality of products on the market is uneven. In order to ensure the quality of the integrated water purification system, the author visited a number of production and operation units, summarized the common problems of the integrated water purification system in water purification technology, manufacturing process, operation management and other aspects, and put forward solutions to promote the benign development of products.

Methods

By means of inductively coupled plasma mass spectrometer and fluid cell meter, the conventional water quality index, microbial water quality index and the reuse of production wastewater were studied. The results are as follows:

1. Conventional water quality index

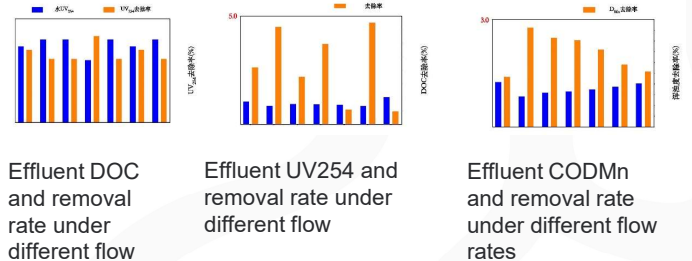


It can be seen that the lowest turbidity in actual operation can reach 0.07NTU. It usually stabilizes below 0.12NTU.

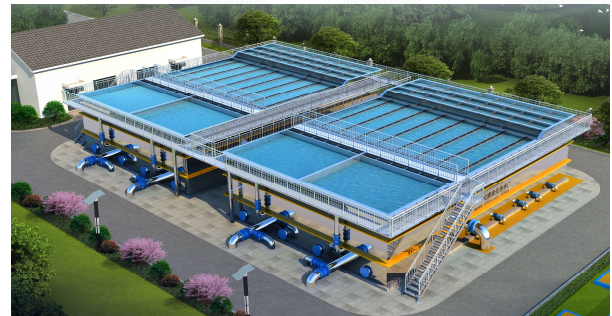
Results

- 1. Module combination: modular and standardized design of process and supporting system; It can be customized according to customer needs to meet the requirements of different water quantity and water quality .
- 2. Saving investment: the investment cost is only 60% of the civil water plant of the same scale; Make extensive use of energy-saving and consumption-reducing technologies; Only a small number of operational managers are required.
- 3. Delivery time: standardized, mechanized, automated manufacturing, modular splicing installation; Shorten the construction period by more than 60% compared with the same scale civil water plant.
- 4. Stable performance: set a number of patented technologies, nearly a thousand successful project application cases, more than 20 years of R & D and manufacturing experience; Intelligent monitoring system operation, adaptive intelligent operation, to ensure the optimal system working conditions.

2. Organic index



According to the experimental results, the removal effect of organic matter: the removal rate of UV254, DOC and CODMn reached more than 50%.



Conclusions

- 1. When the treatment scale is 0 ~ 500m³/d, circular integrated water purification plant can be selected;
- 2. When the treatment scale is 500 ~ 3000m³/d, the square gravity valveless filter can be used as an integrated water purification plant;
- 3. When the treatment scale is 3000 ~ 5000m³/d, the soda water recoil V-type filter integrated water purification plant can be selected;
- 4. When the treatment scale is above 5000m³/d, the water plant type integrated water treatment plant or the structure type integrated water treatment plant can be selected.