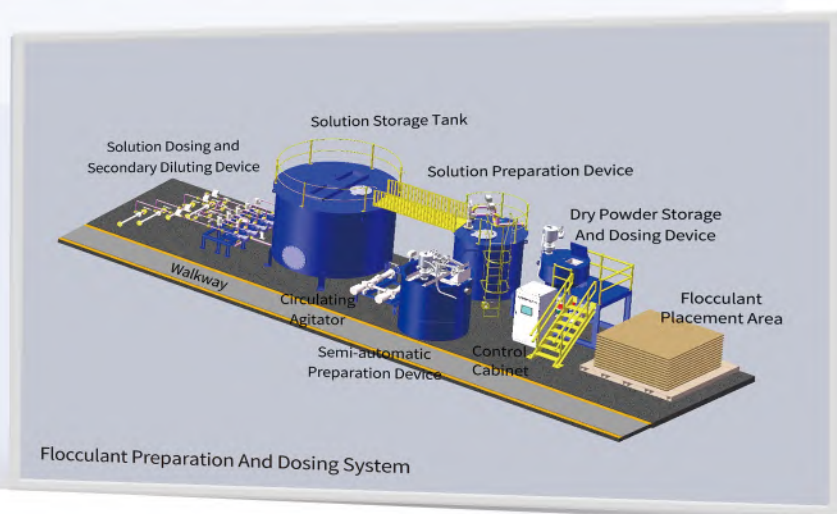
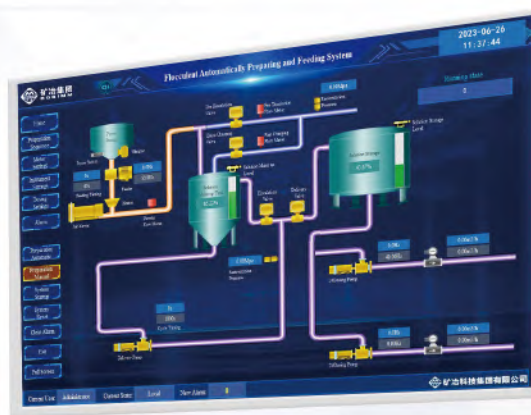


BFMDS Flocculant Solution Preparation and Dosing System

BFMDS flocculant preparation and dosing system is a set of automatic device integrating flocculant solution preparation and dosing, which realizes automatic operation and real-time monitoring of the whole process of preparation and dosing. It can be applied to the production process of using flocculant in wastewater treatment, concentrate and tailings treatment, etc. It is the key equipment to ensure that the dry powder flocculant is fully dissolved to form a uniform solution, prepare the flocculant solution with the concentration required by the process, and accurately dosing it.



Powder storage and conveying equipment

The appropriate amount of flocculant powder is stored according to the amount of process, and the powder is added to the preparation process smoothly.

Communication with DCS

BFMDS provides an Ethernet interface with the standard TCP/IP protocol or PROFIBUS-DP interface for communication with DCS.

Solution preparation plant

The water and the flocculant powder are fully mixed, and the appropriate amount of water is filled to meet the requirements of the preparation solution concentration, and the solution of each batch is stored.

Solution transport and circulation device

Uniform stirring of the prepared solution is achieved, and the completed prepared solution is transported to the storage device.

Solution storage unit

The prepared flocculant solution is stored with a certain spare capacity, and the flocculant solution is static in the storage tank to maintain the curing process for a certain time.

Control system unit

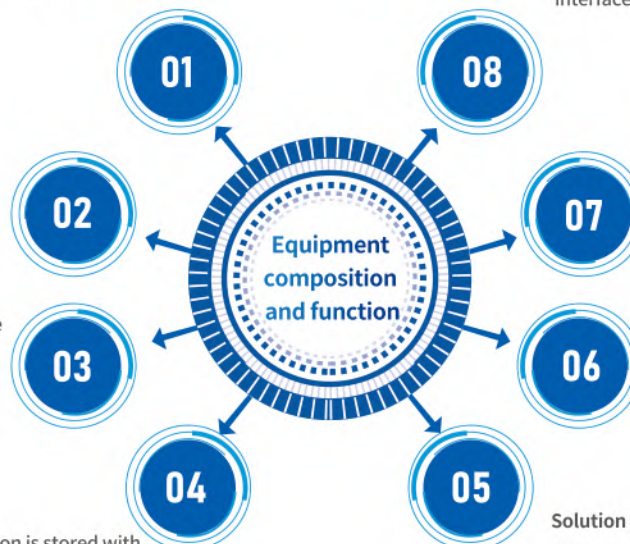
The entire production process information of the flocculant preparation and dosing system is integrated, and the entire process can be monitored through the touch screen.

Secondary dilution unit

After secondary dilution, the flocculant solution reached the dosage concentration required by the process, and the diluted solution was uniform.

Solution dosing device

The prepared flocculant solution is added to the process production according to the process requirements.

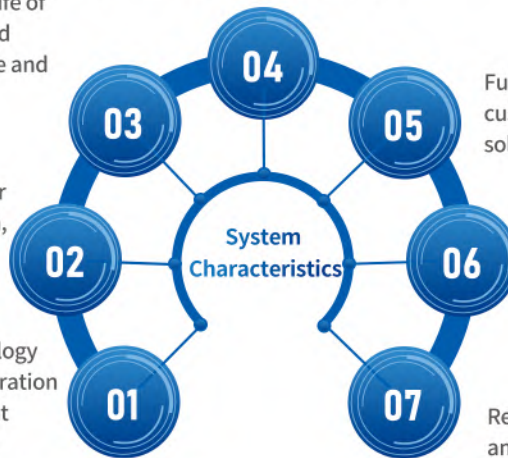


Perfect standby design to ensure on-site equipment maintenance or repair.

High reliability, safety and long service life of the equipment; Improve closed-loop and safety interlock design to ensure reliable and safe operation of equipment.

The equipment is fully automated, unattended operation; From the powder conveying, adding, solution preparation, solution dosing automatic control, no manual participation.

The most advanced preparation technology and device are used to ensure the preparation effect and use efficiency of the flocculant solution, maximize the efficiency of the flocculant and save the cost of the reagent. (High precision of solution concentration preparation and dosing, good dissolution effect, solution curing design).



Fully customized design, according to the customer needs, to provide complete solutions.

Well fault detection and alarm information, easy maintenance, reduce the failure rate.

Reduce the labor intensity of operators and reduce dust hazards.

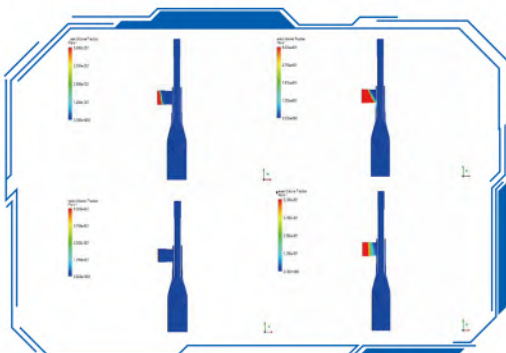
Core technology

Flocculant solution stirring technology

The flocculation mechanism of the polymer flocculant is that the polymer structure agglomerates with the suspended turbidity particles, resulting in flocculation precipitation and accelerating the sedimentation process. However, the polymer structure is easily damaged, especially the shear force during the transportation process and the stirring process, which is very easy to destroy this polymer structure. BFMDS equipment design special aspects to solve the problem: 1) the use of screw pump instead of the traditional magnetic pump transmission, the traditional magnetic pump impeller high-speed rotation of the polymer structure damage is great, screw pump stator, rotor structure of positive displacement pump; 2) The pump cycle is used to replace the traditional mixing paddle.

Flocculant dissolution technique

The dissolution process of polymer flocculants is generally slow and needs to go through two stages: swelling and dissolution (swelling and dissolution in the solvent first); Polymer flocculant swelling immediately when water, easy to cause clumping, fisheye phenomenon, once formed will be difficult to fully dissolve. BFMDS device design special pre-dissolution device, avoid clumps, fisheye phenomenon, to ensure the full dissolution of flocculant.

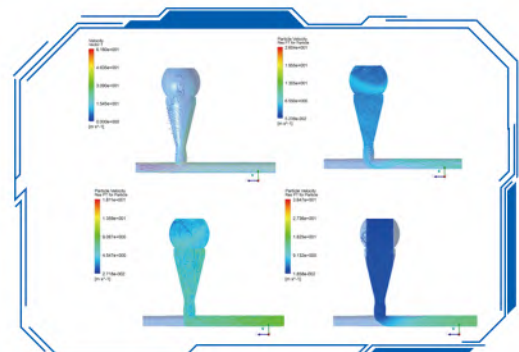


Flocculant curing technology

After the flocculant solution is dissolved, it needs to stand for a period of time before it can play a greater role. BFMDS equipment realizes static curing through preparation and storage tank volume design to meet the curing time of the flocculant.

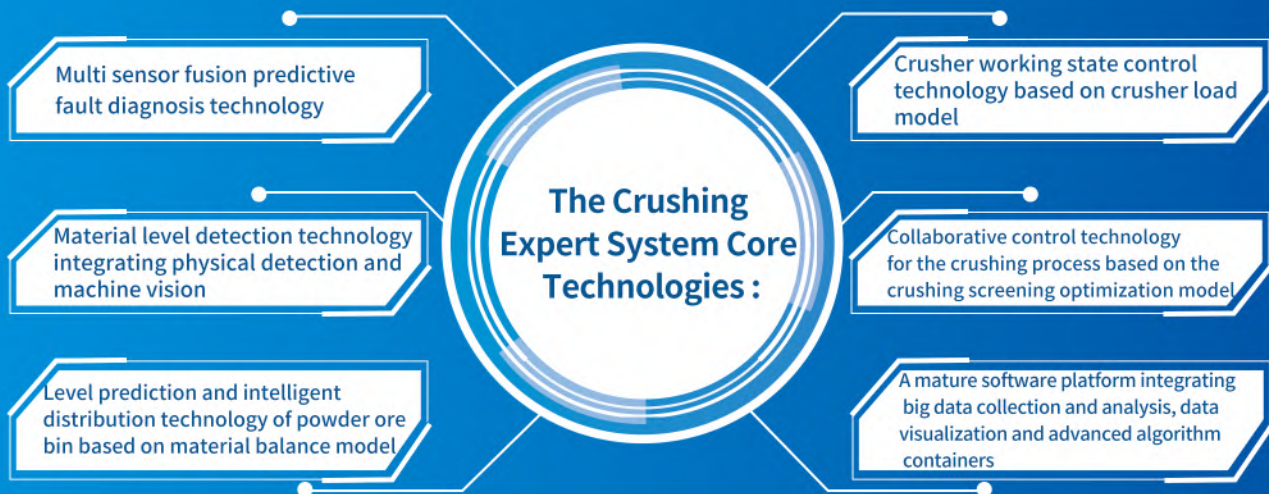
Flocculant quantitative feeding technology

The dry powder of flocculant is easy to be wet and clumped, which affects the feeding and feeding precision. BFMDS equipment design special feeding device to ensure feeding accuracy.



Crushing Expert System (BPM-C)

Crushing process is a typical process industry process, and there are problems such as correlation and constraint between upstream and downstream production equipment. In view of the multi-mode, high-throughput and strong correlation characteristics of the crushing process data, the crushing expert system intelligently upgrades the crushing system based on the deep integration of informatization and industrialization. The crushing expert system adopts an innovative crushing process control mode, specifically including raw ore bin, crusher, screening and feeding control, whole process interlocking control, process integration and process analysis and calculation optimization. It mainly realizes the full automatic control and intelligent optimal control of the crushing system, reduces human interference factors, improves production efficiency, reduces equipment failures and losses, reduces the labor intensity of post personnel, and makes the industry more efficient Greener and more intelligent.



The industrial application effects of several concentrators are as follows:

