



FLOTATION MACHINE FOR ALL YOUR NEEDS

Contents

I .Forty years of Production Experiences	03
II .Applications	04
III .Structure and Working Principle	04
IV .Lubrication.....	06
V .Installation and Debugging.....	06
VI .Supply of The Whole-Set of Parts of The Flotation Separator.....	06
VII .Pre-running and Testing Load Operation.....	06
VIII .Usage and Maintenance.....	07

FORTY YEARS OF PRODUCTION EXPERIENCES



Henan Fote Mining Machinery Co., Ltd. is a joint-stock mining machinery enterprise integrated in scientific research, production and marketing, which mainly produces heavy-duty mining machines. The advanced technologies have been introduced from America, Germany, Japan and Australia.

It has established four internationally-advanced modern research centers and bases of four kinds of machines, i.e., sand making, powder grinding, ore beneficiation and building material.

The enterprise has

- Scientific management
- Excellent manufacturing technologies
- Creative manufacturing ideas
- Rapidly developed into high-end production and export base.

The enterprise covers an area of over 350,000 m²

Standardized heavy-duty industrial plants of 260,000 m²

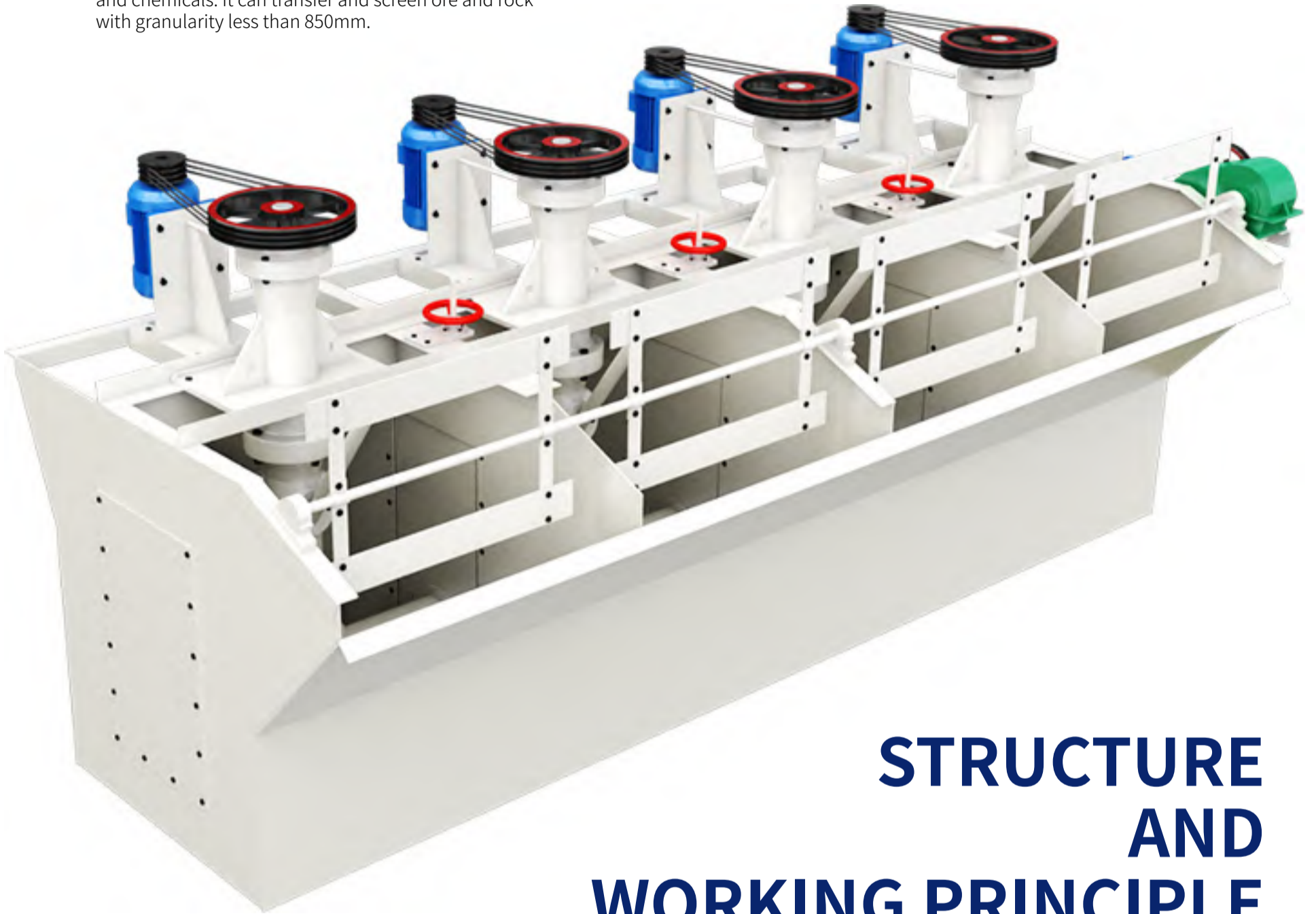
More than 600 large and medium-sized machines

More than 2,300 employees, including more than 360 high-tech talents



APPLICATIONS

The machine is used for feeding by vibrating. It is suitable for mine selection, building materials, silicate and chemicals. It can transfer and screen ore and rock with granularity less than 850mm.



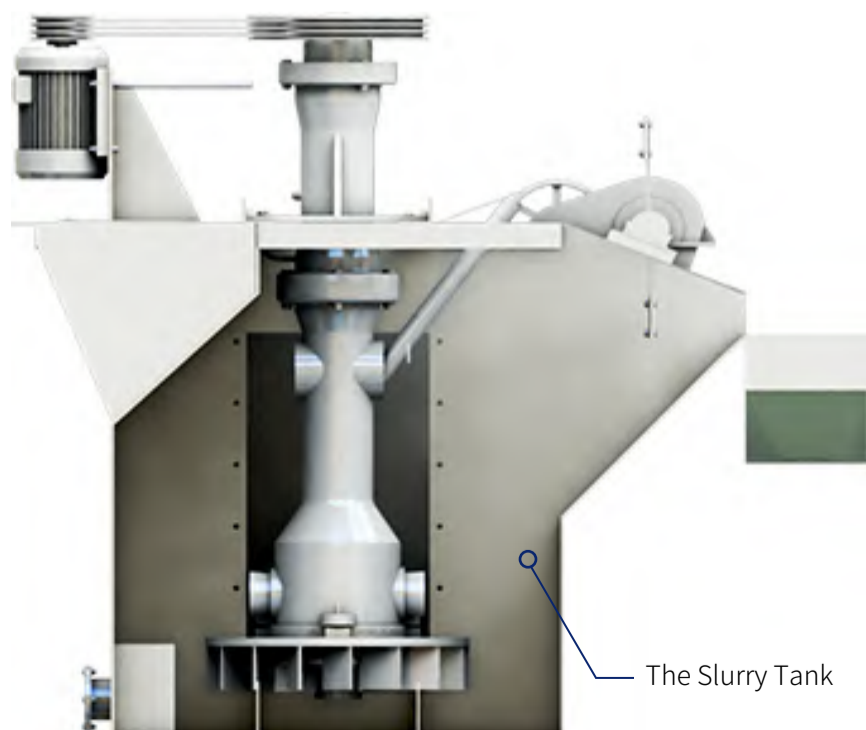
STRUCTURE AND WORKING PRINCIPLE

I .It is called mechanically agitated flotation machines.

II .This machine is mainly composed of a slurry tank, a mixing device, an aeration device, a device for discharging mineralized bubbles, the motor, etc.

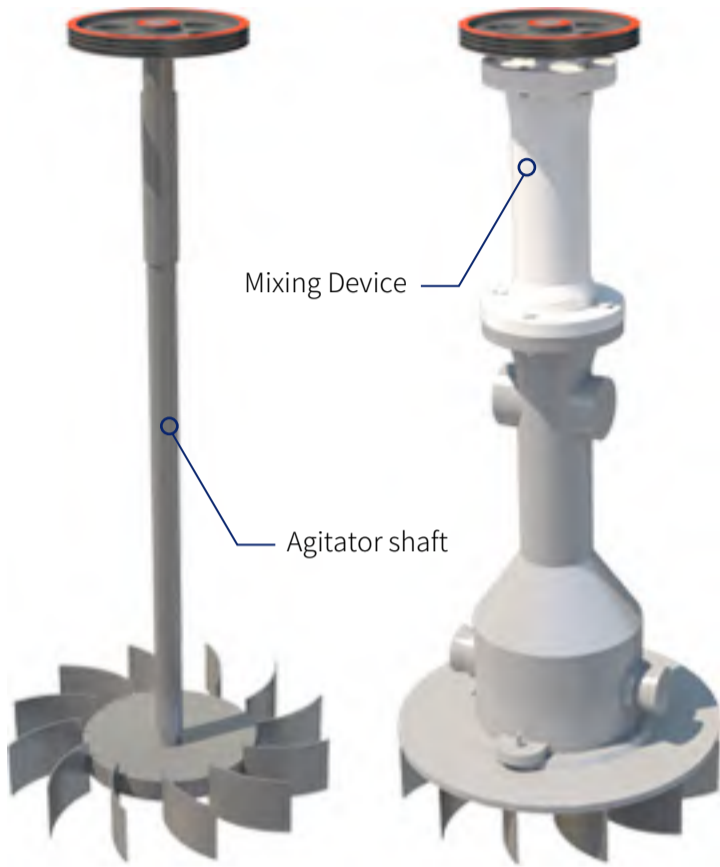
1.The Slurry Tank:

It has the feeding mouth and strobe device for adjusting the slurry surface. It is mainly composed of a tank welded with steel plates and a gate with steel plates and round steel.



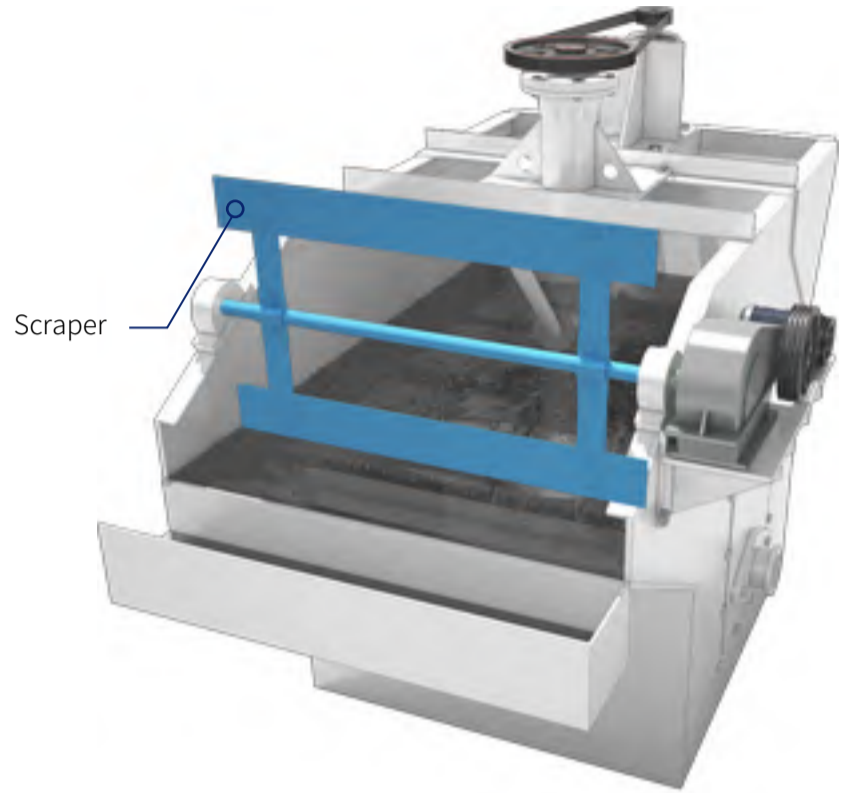
2.The Mixing Device:

It is used to stir ore slurry to prevent ore sand from settling in the tank. It is mainly made up by the pulley, vertical shaft and impeller that is made of wear-resistant rubber.



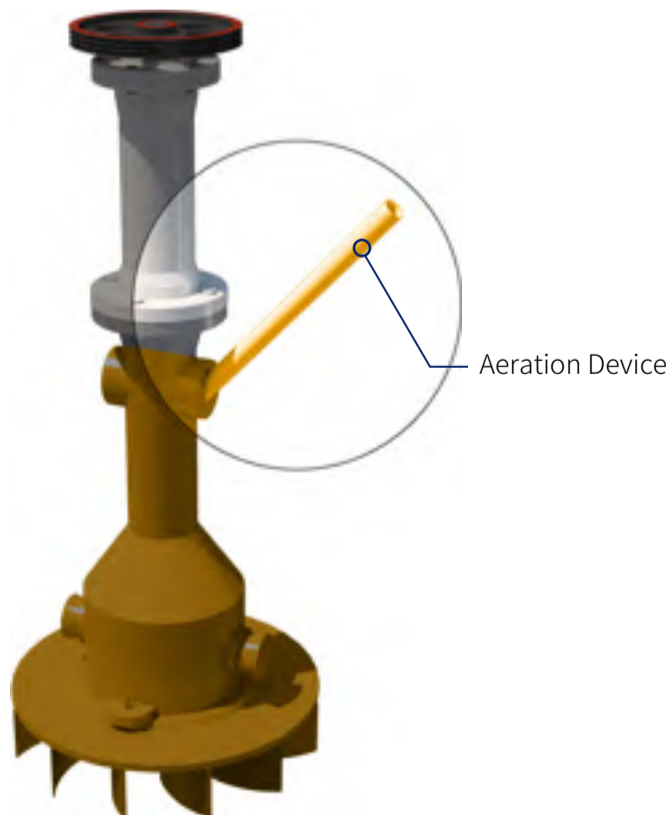
4.The Device for Discharging Mineralized Foam:

Consist of a motor driving the speed and a speed reducer driving the scraper, it is to scrape out the foam floating on the surface of the tank.



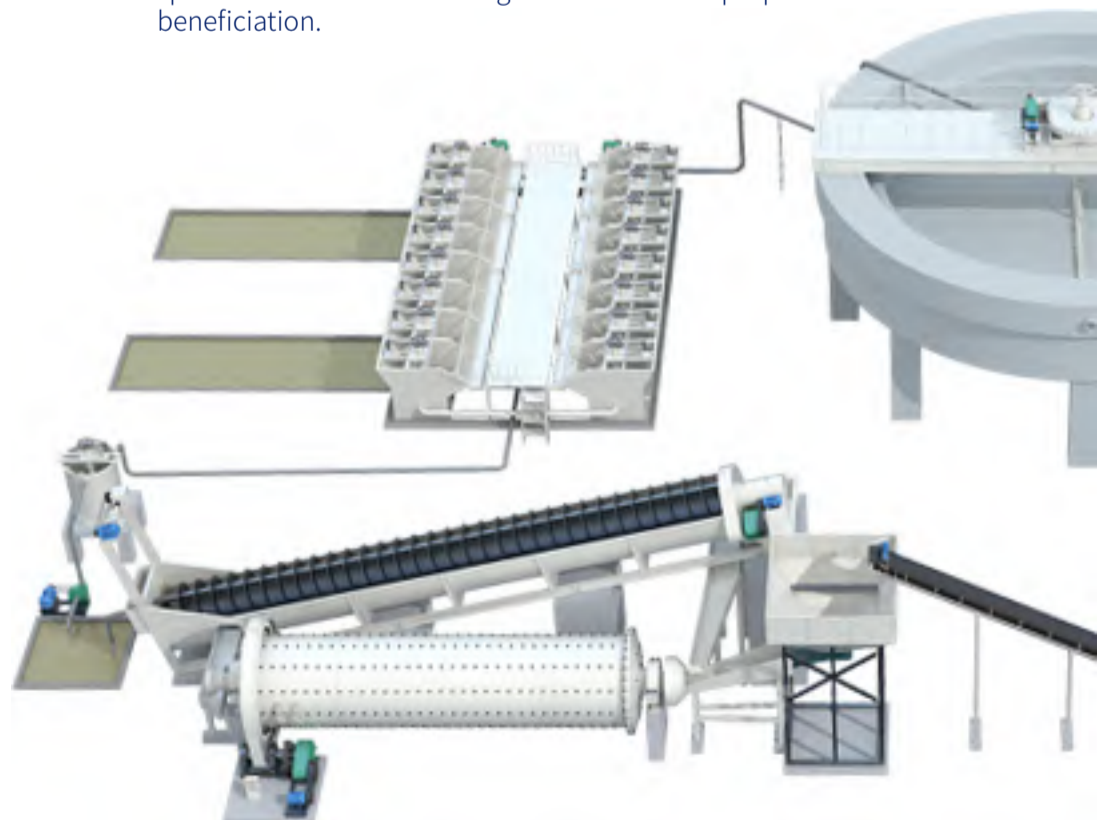
3.The Aeration Device:

It is made up by duct intake pipes. When the impeller is running, impeller cavity brings negative pressure, which makes the air suck into by the empty pump and distributes in mine slurry to form the bladder. The mine slurry with bladder is thrown to stator by the turn force of impeller and makes bladder that in the mine slurry fine further and avoids the turn movement of mine slurry stream that in the chute, producing lots of raising upright micro bladder and providing the necessity condition for flotation.



III.Working Principle

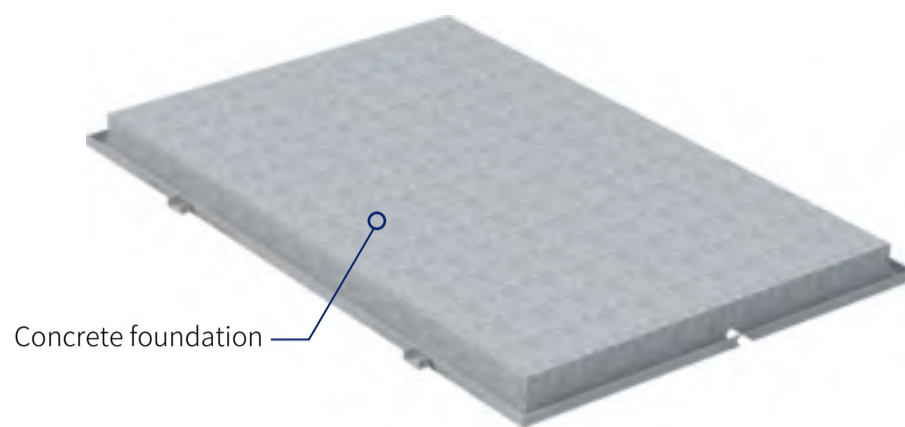
After grinding the ore, add water and necessary chemicals to the slurry during or after the grinding, and then pour it into the tank to start stirring. Introduce air into the slurry to form a large number of bubbles, some of which are not easily affected by water Wet, that is, the mineral particles that are generally called hydrophobic attach to the bubbles. They float together with the bubbles to the surface of the ore slurry to form a layer of mineralized bubbles. Those that are easily wetted by water are generally called hydrophilic mineral particles, which does not adhere to the bubbles but remain in the pulp. The mineralized bubbles containing specific minerals are discharged to achieve the purpose of beneficiation.



Lubrication

I .The main bearing is lubricated by calcium base grease with the oil cup twice.

II .The reducer is lubricated by oil bath with the 45 # engine oil, and it is changed every six months.



Installation and Debugging

I .The flotation machine should be installed on the steady concrete foundation which needs level proofing with allowed error 1/1000. (feeding side that is higher than the discharging side is required)

II .The channel for concrete foundation can be self-designed according to the process line.



Supply of The Whole-Set of Parts of The Flotation Separator

- ① A whole set of mechanical parts
- ② Motor

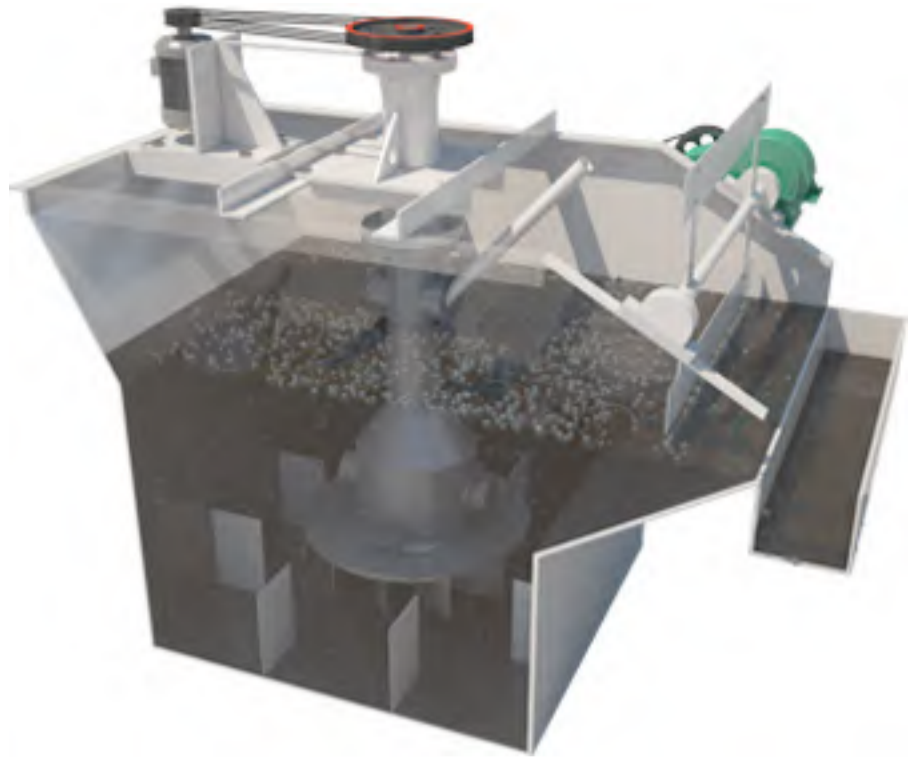
Pre-running and Testing Load Operation

I .Equipment inspection

- ① Check the bolts and impellers of every parts to make sure that they are not loosens at all.
- ② Ensure that the triangle wheel and impeller run flexibly.
- ③ Check the lubrication in case of oil leak.
- ④ Examine if oil pulp is blocked or leak.
- ⑤ Test whether the adjustment device is flexible and firm.
- ⑥ Guarantee the motor parts are complete, adjustable and stable.
- ⑦ Make sure the outer rotary device could be a solid cover.

II. Experimental running

- ① Make sure at least 2 hours running test when finishing the installation.
- ② During the running process, the machine must perform flexibly without any noise, friction or vibration. Besides, lubricating parts must be well-sealed, no water leaking, and the bearing temperature should be in the range of 30-60 °C.



III. Load Operation

- ① The load test should be done after the normal hollow experiment running.
- ② Requirements:
The foam scrape board works normally and turns steadily, same to the impeller.
The channel, gate and slot show no mine slurry leaking.
The bearing temperature in the range of 35-65 °C.

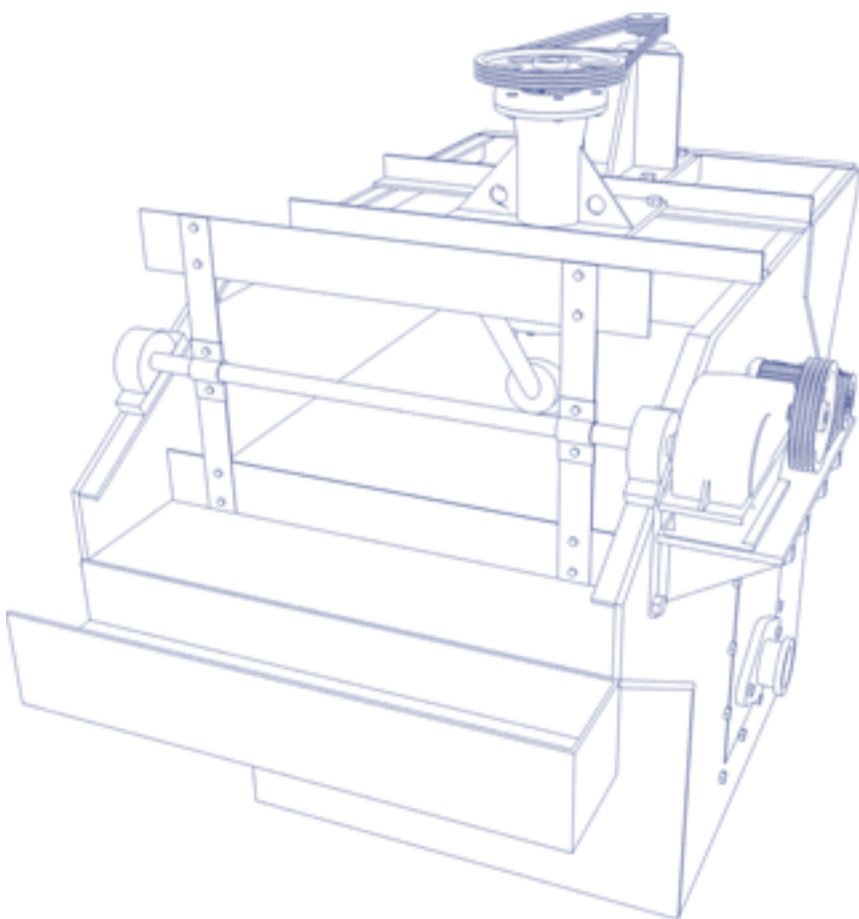
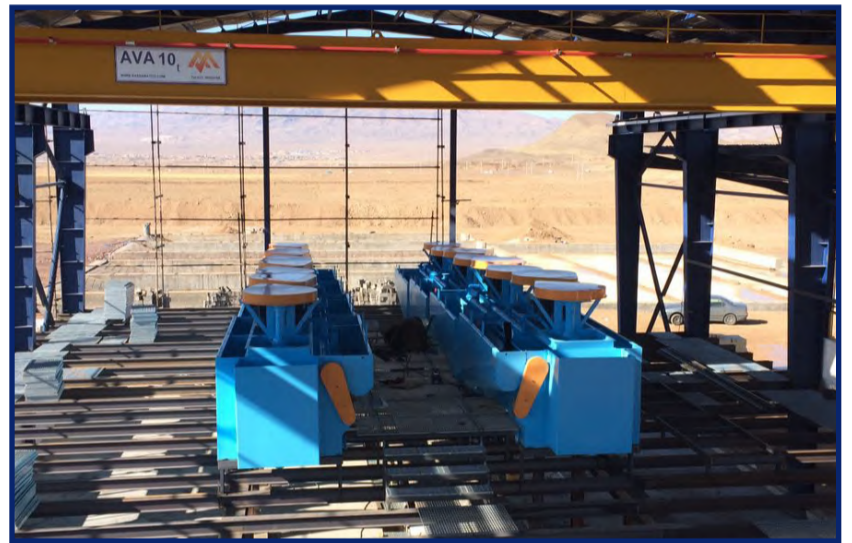


IV. Stop for inspection

The following sectors must be noticed and resolved in every time that machine stops.

- ① Whether blot is loose.
- ② The wear situation of the impeller stator.
- ③ Lubrication of bearing of every part.
- ④ Whether all pipes are unobstructed.
- ⑤ Whether the electrical circuits and facilities are safe, reliable and no leakage.





Usage and Maintenance

I. Just as other mining machines, flotation separators need protection on every parts and regular maintenance to work normally and even longer. Therefore, the working parts should be checked frequently at the beginning and at least 1 time for 3-4 months later.

II. Only skillful people can do the inspection.

III. The whole-set machine parts must be stocked for timely replacement and downtime reduction. Settle the reserve according to real using times of the parts and the wear situation.

IV. The operator must be trained well on professional skills and the whole structure.

V. Use filter to prevent the dirt and useless materials from mixing with the oil and seal perfectly the cover when the machine runs.

VI. The machine can be started after checking and consisting the upper and lower processes.

VII. Press the upper gate switch before starting it.

VIII. Do not touch the rotating part with your hands after its starting.

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