XCF KYF Flotation Machine

Description:

When flotation machine works, slurry is inhaled from the bottom of the cell to the space

between impellers. Meanwhile, the low-pressure air send by fan is sent to this area through the air distributor in the hollow shaft. After sufficient mixing, the slurry is pushed out by the impeller, and then goes to the whole cell. When the froth rises to the stable level, after the enrichment processing, froth overflows to the froth trough from the overflow weir. Another part of ore slurry flows to lower part of impeller for the re-mix with air. The remained slurry flows to the next cell until becomes tailing.

XCF and KYF are enforced aeration flotation machine. It has a smaller diameter of impeller, thus lower peripheral speed, saving 30%-50% of power. Because and air distributor is equipped in the tank, air is evenly dispersed. The impeller acts as a centrifugal pump, so as to make the solid particles suspending. The tank is made as U type, reducing sand settlement to the least. Due to reasonable design of the impeller structure and the impeller space,impeller wearing is even, so, the service life of the impeller and stator are extended. Model KYF is unable to spontaneously suck slurry, while has low power consumption. In contrast, model XCF has the ability to automatically suck slurry, and may be allocated horizontally without need for foam pump, but consumes more power than model KYF. Therefore, model XCF and model KYF are combined into a set, i.e., XCF as the sucking tank, and KYF as the direct tank. The combined set can be arranged horizontally without foam pump either.

XCF Cell's Features：

It has the similar structure and performance with KYF cells and only the difference is the stator on the impeller to be a negative pressure zone. Pulp is sucked automatically but higher power consumption.

Note:

- Mechanical agitation, no air inhalation but pulp sucked automatically.
- It is combined with KYF Cells to be group as a suction cell.

KYF Cells' Feature：

- Impeller is a cone shape with the backward inclined blades, strong agitation and simple structure.
- Many air distributors are equipped on the impeller cavity, air disperse very well and well mixing of the air and pulp.
- U type tank is made and lower sand settlement.
- The diameter of the impeller is smaller thus lower peripheral speed.

Performance features:

- Lower power consumption and saving 30-50% energy.
- Well floated particles and higher recovery.
- Light wearing of the spare parts so the service life of them are extended.

Note:

- Mechanical agitation, no air inhalation and no pulp sucked automatically.
- It is combined with XCF Cells as the direct cells.

Main Technical Parameters of XCF Flotation Machine

Model	Effective volume (m^3)	Capacity (m^3/min)	Diameter of impeller (mm)	Rotation of impeller (r.p.m)	Pressure of the blower (Kpa)	Maximum air inhalation (m^3/m^2.min)	Power of impeller (Kw)	Weight (Kg)
XCF-1	1	0.2-1	400	358	≥12.6	2	5.5	1154
XCF-2	2	0.4-2	470	331	≥14.7		7.5	1659
XCF-3	3	0.6-3	540	266	≥19.8		11	2259
XCF-4	4	1.2-4	620	215	≥19.8		15	2669
XCF-8	8	3.0-8	720	185	≥21.6		22	3968
XCF-16	16	4-16	860	160	≥25.5		37	6520
XCF-24	24	4-24	950	153	≥30.4		37	8000
XCF-38	38	10-38	1050	136	≥34.3		55	11000

Main Technical Parameters of KYF Flotation Machine

型号 Model	Effective volume (m^3)	Capacity (m^3/min)	Diameter of impeller (mm)	Rotation of impeller (r.p.m)	Pressure of the blower (Kpa)	Maximum air inhalation (m^3/m^2.min)	Power of impeller (Kw)	Weight (Kg)
KYF-1	1	0.2-1	340	281	≥12.6	2	7	826
KYF-2	2	0.4-2	410	247	≥14.7		5.5	1419
KYF-3	3	0.6-3	480	219	≥19.8		7.5	1885
KYF-4	4	1.2-4	550	200	≥19.8		11	2206
KYF-8	8	3.0-8	630	175	≥21.6		15	3600
KYF-16	16	4-16	740	160	≥25.5		30	5900
KYF-24	24	4-24	800	150	≥30.4			7500
KYF-38	38	10-38	880	139	≥34.3		45	10300

Application:

It is widely used in enrichment for non-ferrous metals, black metals and non-metals in medium and big flotation factories for the roughing and scavenging concentration.

Rougher flotation cells

flotation cells mineral processing