SF Mechanical Agitation Flotation Cell

Principle

When the impeller rotates, the centrifugal force with the action of upper and lower vanes is produced, and drives the slurry in upper and lower wheel chambers thrown around, by which the negative pressure area is formed in upper and lower wheel chamber. At the same time, the slurry on top of cover plate is absorbed into upper wheel chamber to form upper circulation via the circular hole on the cover plate. When the slurry is thrown around by the lower vane, the lower slurry flows to the center to complement, by which the lower circulation is formed. And the air is sucked into the upper impeller chamber via suction pipe and center cylinder, mixing with absorbed slurry, and forming a large number of tiny air bubbles. After steady flow through the cover board, these bubbles are evenly dispersed in tank, forming mineral laden bubbles. Then mineral laden bubbles will rise to the foam layer, and become foam products by the scraper.

Features

The impeller with backward-style two-sided vanes ensures double circulation of ore slurry in tank.

Large clearance between impeller and cover plate ensures large amount of air suction.

Low circular velocity of impeller ensures long service life of wear parts.

Forward-style tank body with small dead angle ensures high speed of bubble motion.

Large amount of air suction and low energy consumption.

Long service life of wear parts.

Better for the flotation of coarse-grained minerals.

Special Tips

Mechanical stirring, automatic air and slurry suction.
It can be combined with JJF flotation cell to be a set of flotation cells as suction tanks of each operation.

Application

SF mechanical agitation flotation cell can be widely used in the mineral classifications of non-ferrous metals, black metals, and non-metals. It is suitable for roughing and scavenging in large and medium flotation plant.

Technical Parameters

Model	Effective Volume (m³)	Capacity (m³/min)	Impeller Diameter (mm)	Impeller Revolution (r/min)	Motor Power for Stir (kW)	Motor Power for Scraper (kW)	Single Tank Weight (kg)
SF-0.37	0.37	0.2~0.4	300	352~442	1.5	0.55	468
SF-0.7	0.7	0.3~1.0	350	336~384	3	1.1	629
SF-1.2	1.2	0.6~1.6	450	312	5.5	1.1	1373
SF-2	2	1.5~3	550	280	11	1.5	1879
SF-2.8	2.8	1.5~3.5	550	280	11	1.5	1902
SF-4	4	2.0~4	650	235	15	1.5	2582
SF-6	6	3~6	760	191	30	2.2	3540
SF-8	8	4.0~8	760	191	30	2.2	4129
SF-16	16	5.0~16	850	169~193	45	1.5	7415
SF-20	20	10~12	850	169~193	45	1.5	9828

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