

Operating Instruction

SPIRAL SEPARATOR

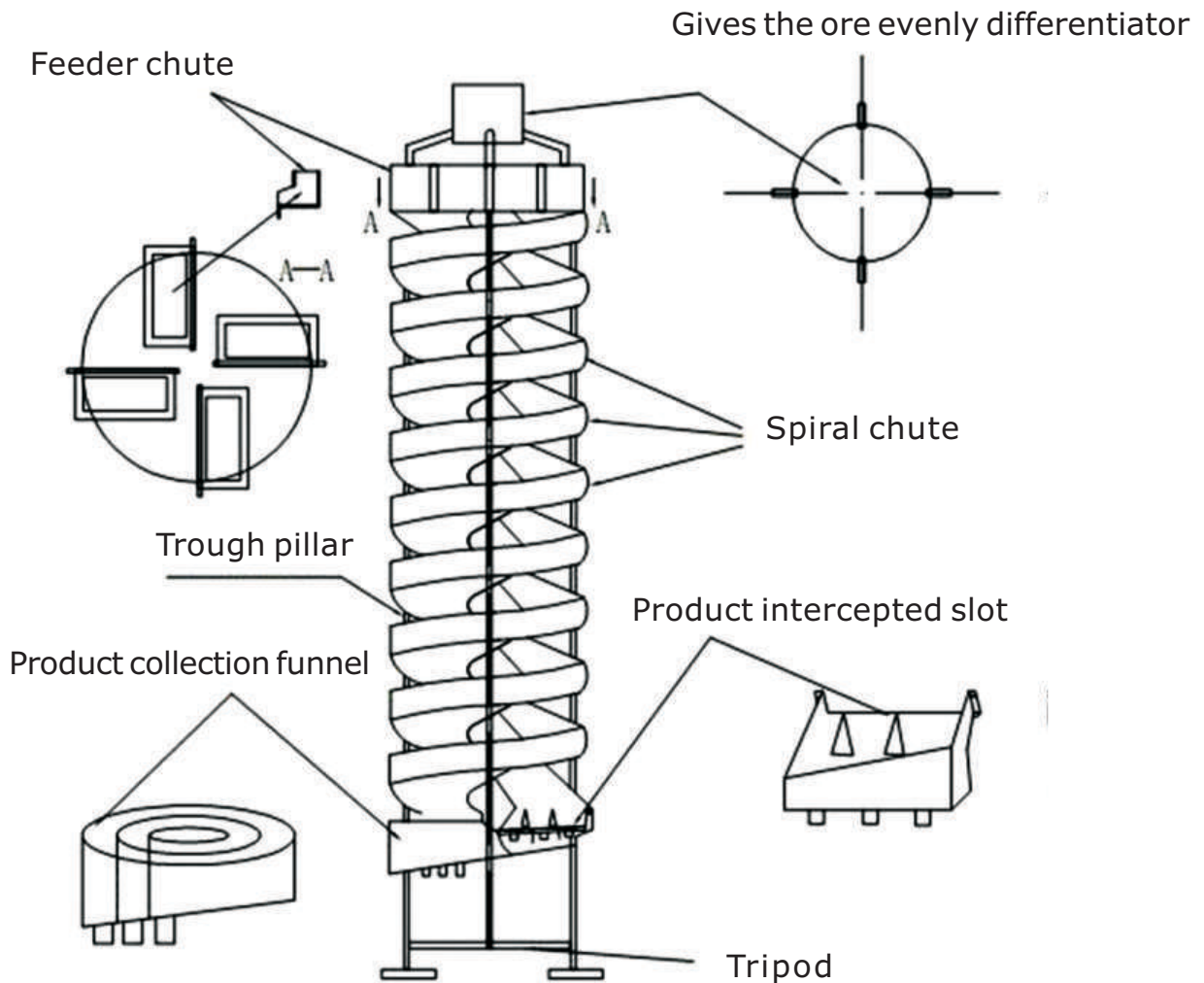


Henan Hongxing Heavy Machinery Co., Ltd.

Overview

Steel spiral chute combines the characteristics of spiral separator, spiral chute, shaking table and centrifugal separator. It is the best equipment of mining and beneficiation machines, especially, used in the placer mining of waterfront, river, sand beach and creek road. Its structure is reasonable. Its installation is simple. It occupies less areas, it is

easy to operate it. Its handling capacity is big. It is high efficient, concentration ratio and recovery rate. Steel spiral chute is reliable. Besides, it has the following advantages: light weight, moisture, rust, corrosion, no noisy, strong adaptation to fluctuations in the amount, concentration, grain size of the ore.



The Advantages and Beneficiation of Spiral Separator:

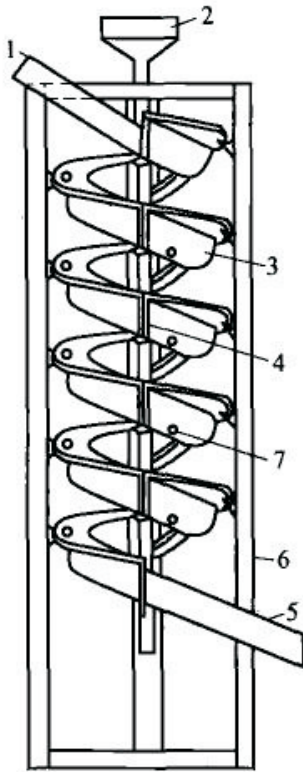
This product has the features of reasonable structure, simple installation, small floor space, simple and easy operation, stable separation, clear classification, big

processing capacity, high efficiency, high dressing and concentration ratio, high recovery and reliable operation.

The Handling Materials and Function of Spiral Separator:

It's applied to iron, tin, tungsten, tantalum, niobium, gold, coal, monazite, rutile, zircon and other metal, nonmetal minerals with enough

specific gravity dispersion of granularity ranged from 0.02 to 0.3mm.



Spiral separator

- 1.Mineral-feeding chute 2.Water-guiding channel 3.Spiral chute
4.Flange plate 5.Tailing trough 6.Machine frame
7.Pipe for the concentrate

Features

This product has the features of reasonable structure, simple installation, small floor space, simple and easy operation, stable separation, clear classification, big processing capacity, high efficiency, high dressing and concentration ratio, high recovery and reliable operation, and in addition, it has light weight and low noise, and is damp-proof, rust-proof and corrosion resisting and well-adapted to the ore feeding amount, and the fluctuation of the density, granularity and taste of the minerals.



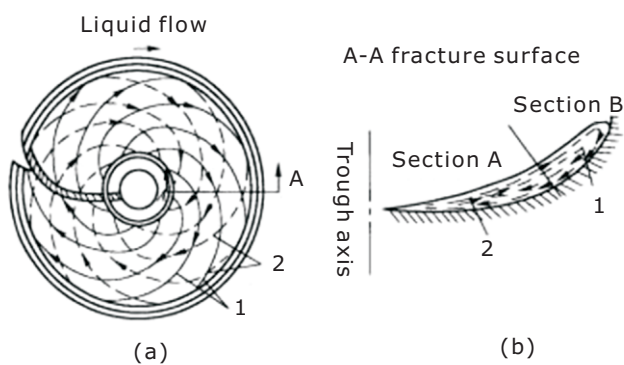
Characteristics:

Processing ability: 0.15-6 t/h

Spiral diameter: 300-3000 mm

Spiral rotation speed: 3.2-30 r/min

Applied material: iron ore, ilmenite, chromite, pyrite, zircon, rutile, monazite, tungsten, tin, tantalum, niobium, etc



The flowing characteristics of liquid flow in the spiral
 (a) overlook (b) A-A view

- 1-the trajectories of the upper flow(full line)
- 2-the trajectories of the lower flow(broken line)

Working principle

Erect the Spiral Separator, calibrate the perpendicular line and fix it in a proper position with iron structure or wood. Send the mineral sand with the sand pump to the two feeding mouth on the top of the spiral chute, add make-up water to adjust the density of the ore pulp, and the ore pulp will naturally rotationally flow down and produce an inertial centrifugal force in the rotary slant flow. The gravity and the centrifugal force will separate the ores and sand according to the proportion, granularity and shape of the ore sand, and the ore concentrate will flow into the concentrate funnel and be discharged with the pipe and the tailings will flow to the tailing funnel and be discharged to the sand tank with the pipe and drained by the sand pump to complete the whole separation process.

Technical data :

| Model | DI2000 | DI1500 | LI1200 | LI900 |
|----------------------------------|--------|---------|----------|----------|
| External diameter (mm) | 2000 | 1500 | 1200 | 900 |
| Inner diameter (mm) | 360 | 250 | 220 | 180 |
| Screw distance (mm) | 1200 | 900-675 | 720/540 | 540/360 |
| Ratio (scroll distance/diameter) | 0.6 | 0.6 | 0.6/0.45 | 0.6/0.4 |
| Transverse obliquity (°) | 9 | 9 | 9 | 9 |
| Star | 2-4 | 2-4 | 2-4 | 2-4 |
| Turn | 3.5 | 4 | 4/5 | 4/5 |
| Feeding size (mm) | 0.4-1 | 0.03-1 | 0.03-0.3 | 0.03-0.3 |
| Feeding thickness (%) | 20-45 | 30-45 | 30-50 | 30-50 |
| Processing capacity (t/h) | 15-40 | 8-16 | 4-6 | 2-3 |
| Area (m ²) | 5.7 | 3.3 | 2 | 1.2 |
| Height (mm) | 6.6-8 | 5.5 | 5.23 | 3.2 |



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