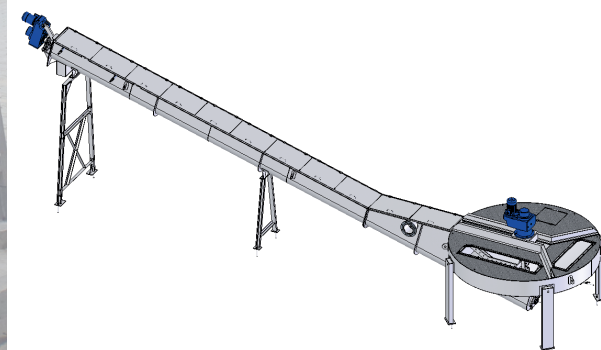


SCREW TYPE GRIT SEPARATOR





Application

The screw type grit separator is part of the milk of lime purification system. It is used to separate small solids (fractions 0.5÷5 mm) from mixtures of liquid and solids. In the separator's tank also final slaking of quicklime, which have not reacted in the MICK, takes place. The use of the screw type grit separator significantly improves efficiency of the process as it reduces losses resulting from excessive amount of unreacted quicklime. In milk of lime purification systems, the screw type grit separator is usually installed behind the preliminary grit separators. One screw separator can work with two preliminary separators.

Design and principles of operation

The screw type grit separator works in a continuous mode. It consists of two basic elements. It is a tank with a mixer and a conical bottom and a screw conveyor for transporting solid fractions.

The mixture, fed from the preliminary separators, fills the tank up to the top level where the overflow flange is installed. The sedimentation process takes place. Heavier solid contaminants (grit, sand, fine coke fractions, unburned stone, etc.) sinks down and settles at the bottom of the tank.

This solids are removed from the tank by screw conveyor. The conveyor moves impurities towards the outlet of the separator. Its length can be adjusted depending on the location of the device and the collection point of the solid fraction.

The agitator in the hopper ensures a constant movement of the mixture and does not allow particles to settle on the hopper's bottom. The second product of reaction which is a Low-density milk of lime, also known as lime water, is poured to the lime water tank by an overflow flange. Then from this tank it is transported to the slaking drum, to be reused in the slaking process. Depending on the flow rate, four basic sizes of the grit separator auger are offered.

Technical specification

EFFICIENCY	m ³ /h	1,5	2	3	6
TANK CAPACITY	m ³	3,6	4,9	6,2	8,2
FILLING WEIGHT	kg	4 000	5 500	6 900	9 100
DRIVE POWER OF THE CONVEYOR	kW	2,2 – 4,0			
DRIVE POWER OF THE MIXER	kW	2,2 – 4,0			