

IDF-D



IDF-D - SLUDGE DEWATERING PLANT WITH DECANTER (CENTRIFUGAL EXTRACTOR)

The plants for sludge treatment have the function to further dehydrate the sludge collected through the clarifier in order to reduce the percentage of moisture from about 70% to about 35%.

The principle of operation consists in a decanter exploiting the centrifugal force to separate the two phases solid liquid; the process is speeded by using a polyelectrolyte (flocculant) injected in the sludge before entering the machines.

The clean recovered water is conveyed in the clarifier, while the dehydrated sludge is stock-piled by means of belts conveyors.

DECANTER OPERATION

The decanter separates the sludge components (phases) operating by centrifugation and exploiting their dif-

ferent densities.

The sludge is fed into the drum (pipe with conical end) rotating at high speed and is drawn into rotation.

By centrifugal effect, the liquid mass is pushed against the inside wall of the drum and the phases are stratified: the phase with the greater density forms the outermost layer and vice versa.

In the case of two-phase solid/liquid separation, the heavy solid concentrates on the outer circular crown and is evacuated by the screw contained in the drum, while the lighter liquid spontaneously flows from the opposite side through a series of outlets.

In the case of three-phase separation, the third liquid phase is expelled through suitable draft tubes with which the machine can be equipped.

APPLICATIONS



Aggregates



Recycling



Industrial sands



Water treatment