

DISSOLVED AIR FLOATATION (DAF) UNITS

Application

Dissolved air floatation process is firmly established as a reliable method of thickening of activated and aerobically digested sludges to approximately one-eighth of their original volume thereby

- Improving general plant performance
- Reducing power consumption
- Increasing effective capacity of equipment employed in subsequent processes

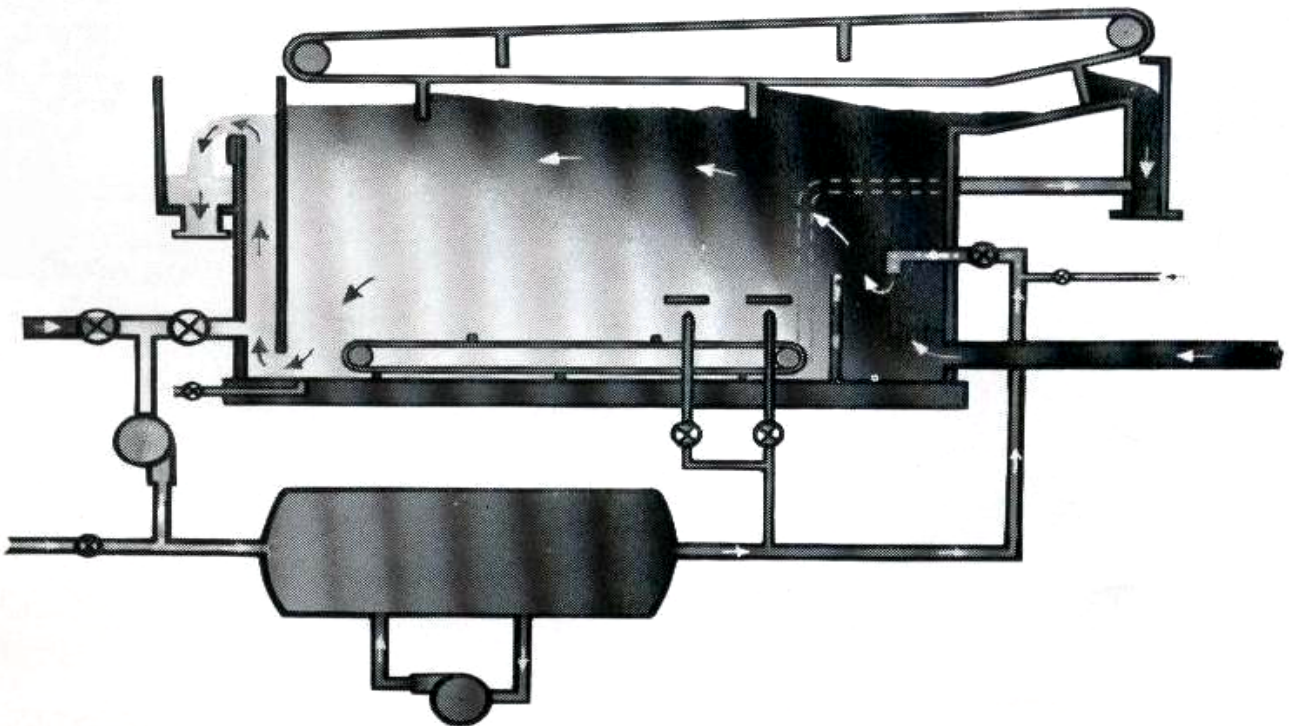
Mechanism

In this process air micro bubbles are attached to the feed solids creating positive buoyancy, which causes particulate matter to float to the surface rather than settle slowly. The principle behind the floatation process is to attach gaseous micro-bubbles to the feed solids in order to reduce their apparent density.



DAF Unit

Air dissolved under pressure in a proportion of the unit effluent is introduced into the small mixing chamber where it meets the incoming liquor to be treated. Flash mixing may be utilized to ensure thorough dispersion of any chemicals that may be employed for coagulation. Continuous scrapers remove the scum floating on the top of the floatation unit and bottom scrapers remove settled sludge.



Sketch Depicting DAF Process



The scum and sludge collected is suitably disposed. The unit is provided with the necessary instrumentation to ensure all necessary parameters are well in control to ensure proper process.

Applications

DAF is suitable for the primary solid/liquid separation stage necessary in the treatment of many potable and industrial water and effluents. It is adaptable to wide range of application.



Flash Mixer of DAF Unit

Size Range

Voltas has till date fabricated DAF unit for a maximum flow of 700 M³/Hr

Material of Construction (Under Water Parts)

Mild Steel Epoxy Coated/ Galvanized/ FRP Coated/ Stainless Steel 304/ Stainless Steel 316

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