

MECHANICAL SLUDGE THICKENERS



Mechanical sludge thickeners are quite similar to the scraper bridges. The drive mechanism whether peripheral or central and the bridge construction are all alike. Thickeners are designed to withstand the high loads created by stirring, blending, thickening and scraping of the sludge.

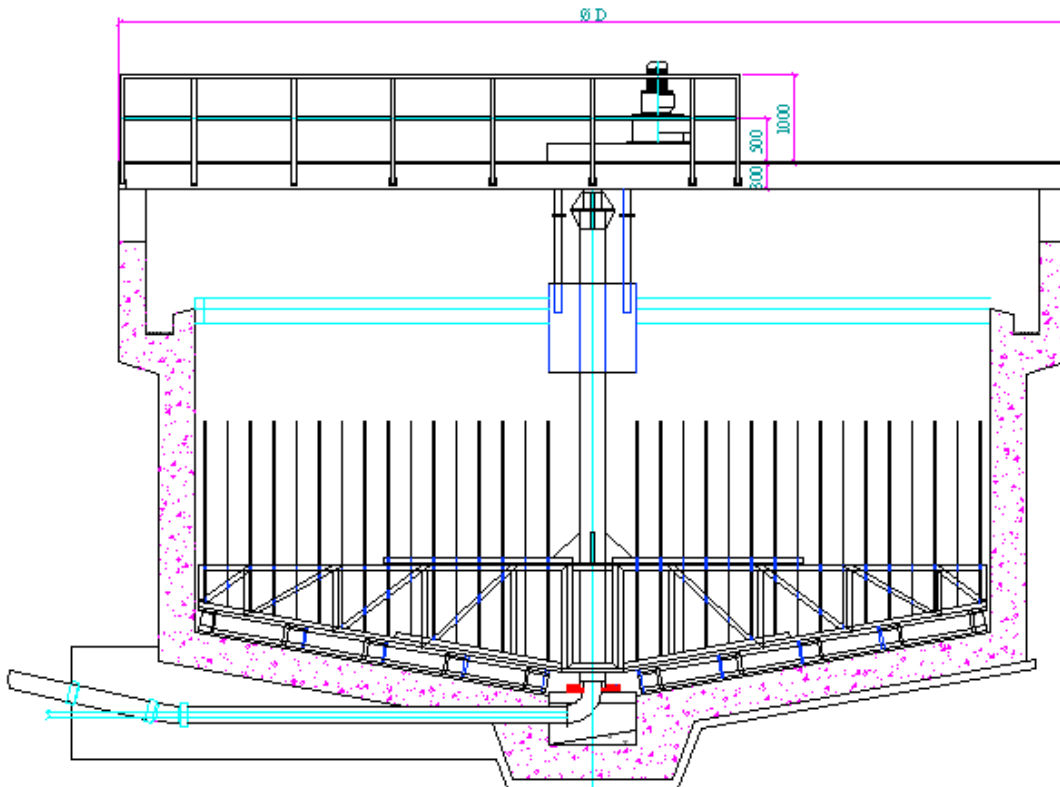
OPERATION

Whether the scraper is centrally driven or rotary bridge type; dilute sludge feed is introduced into a diffuser drum to obtain maximum solids capture and thickening efficiency.

The thickener mechanism consists of inwardly raking blades, drives mechanism and picked fence type stirrer which aid in thickening by gently rearranging the sludge particles to release entrapped water. On fixed full bridge machines if the sludge feed is fed from the side of the tank, the drive mechanism has a toe step bearing. If the feed is through a vertical pipe than a steady bearing for radial loads is used at the bottom and a trust and journal bearing at the bridge. The weight of the machine is carried to the tank walls. Slow rotation of the picked fence and bottom rakes moves the solid particles down and inwardly to the sludge hopper at the centre of the concrete tank. The effluent water is taken from the V shaped effluent weir.

Thickeners are of rugged and heavy duty construction and are protected by an automatic overload device which makes it virtually impossible for the units to be damaged by excessive loadings.

The Construction material is chosen according to the characteristic of the dewatered sludge. And variety of material can be used upon request such as Stainless steel, Aluminum and PE.





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