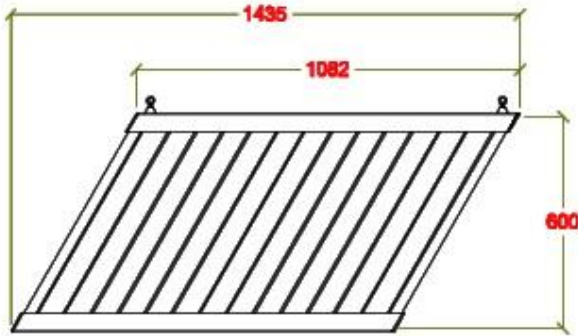
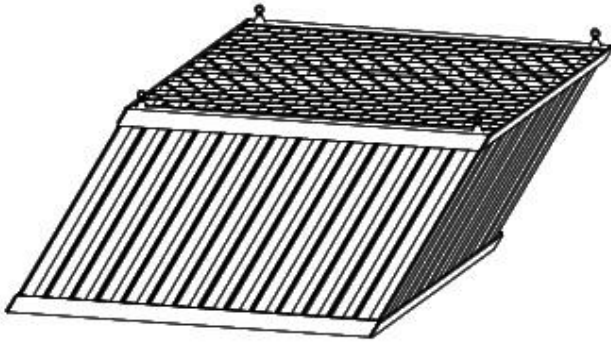


US-LMML is a **lamella clarifier** that is a water treatment process that features a rack of inclined plates, which cause flocculated material to precipitate from water that flows across the plates.

Inclined plate settlers or lamella clarifiers used in the water and wastewater treatment industries to separate solids from liquids in effluent streams.



Conventional clarification equipment requires a much larger surface footprint in order to match the solids removal capacity of a lamella clarifier. This is accomplished because the effective gravity settling area of the inclined plate design is proportional to the total surface area of the inclined plate rack.

Loading rates normally used for the design of conventional settlers be applied to the sizing of a Lamella clarifier/settler by substituting projected area for the surface settling area of a conventional clarifier.

The compact design essentially eliminates any hydraulic disturbances caused by wind or temperature changes that may be problematic with conventional clarifiers located outdoors.

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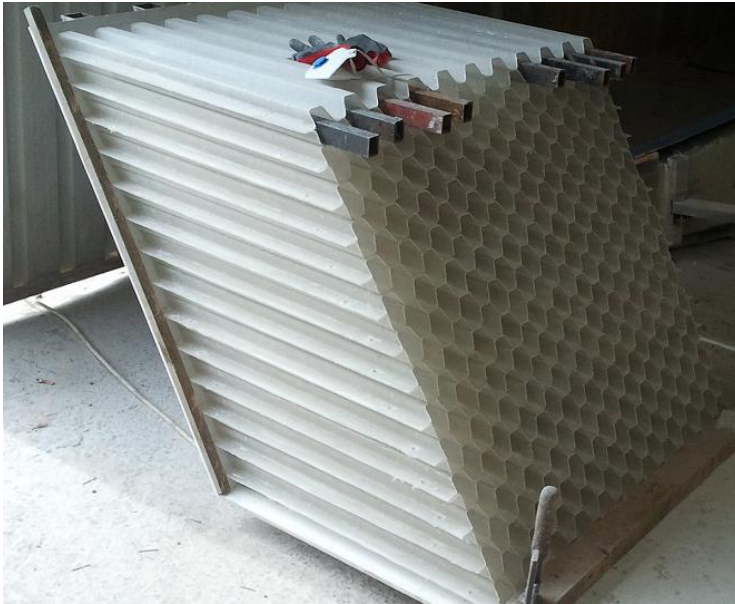
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Balanced flow distribution ensures equal flow to each plate and across the plate surface area, preventing short-circuiting. Units and plate packs arrive at the job site factory assembled which reduces installation time and lowers installed costs. Minimal moving parts means low maintenance costs.

Principle of operation

Effluent enters the lamella clarifier where it is flash mixed with alum and then gently agitated with a slow mixer. The water then flows downward through the inlet chamber in of the unit and enters the plate rack through side-entry plate slots. This cross-current entry method reduces the risk of disturbing previously settled solids. As the liquid flows upward, the solids settle on the inclined, parallel plates and slide into the sludge hopper at the bottom. Further thickening of the sludge achieved in the hopper due to compression of the sludge, as is the case with a conventional clarifier.

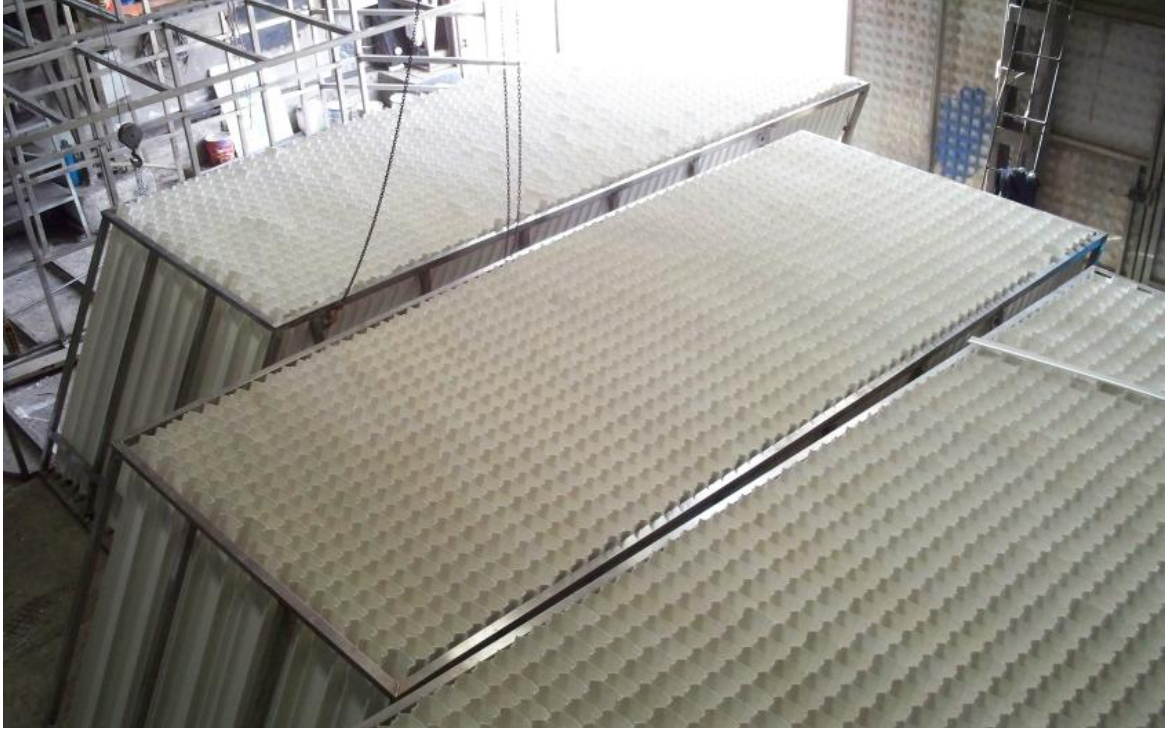


The clarified liquid leaves the plate assembly through orifices or weirs at the top and distributed into collection channels leading to the clarified water outlet.

Underflow water removed from the sludge hopper or sludge tank below the unit, and usually dewatered prior to disposal.

Hopper Plate Angle effects the cleaning time of the system. For high efficiency and quality of permeate water most important design criteria is the total surface load, water flowrate, lamella design and the efficiency of mixers.

For all the limitations literature shall give suggestions but for the angel of the plate, literature just mention that this depends on the company design.



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