

LAMELLA TECHNOLOGY

Lamella technology

Lamella technology is a technological product, which is used in the precipitation and flotation operations, in the water and wastewater systems. Although , it had been known as engineering product 100 years ago, it had not been used because it could not be developed product in practice.

Nowadays, lamella technology which is used common anew, provides many superiority and it has found a wide usage area.

Lamella technology has given successful results at obtaining the best outgoing water quality, by providing laminar flow conditions, in water and wastewater purifying systems and in flotation and precipitation operations.

At the present time in which purifying of water and wastewater have gained importance, advanced technologies have gained effectiveness importance. Lamella technology has decreased investment costs and increased the yield.

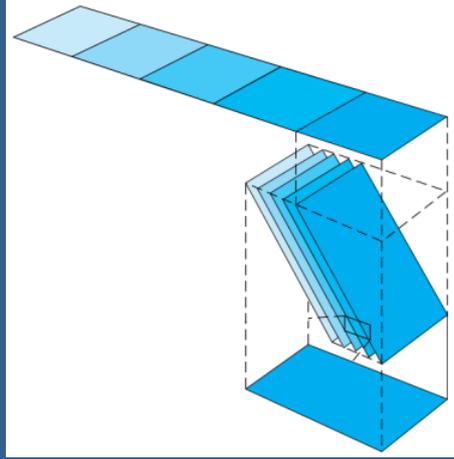
In Turkey, the first time, lamella tube technology that has been made its production from the PP or PVC material, has found a wide usage area, in the water and wastewater purification projects.

Lamella is used with intent to separate solid matters and floating matters from fluids. In general, the parts, which have dimensions 50 micron and greater, are separated from water by themselves via precipitation, but, with the intent to separate the smaller parts from water, the methods of precipitation having floc, are used.

By increasing effective area by means of lamella technology, high yield is obtained. Beside this, higher capacities are obtained with small investments.

In Lamella technology, the precipitation area is important. Lamella that determines this, is plate openings. Also, in lamella openings that have less lamella moduls, precipitation area has become higher. However, process has determined the selection of lamella modul. In wastewater, in precipitation operation, using wide opening is mandatory. Otherwise, blockages will occur. In case water purification systems, lamella modul having narrow opening must be used.

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The reasons of using Lamella Technique :

-Detritus tanks having smaller area is conceptualized the project by compact design. It increases the effective detritus area, 6-13 times more, as for that classical detritus tanks, depending on the lamella type.

- It does not require the need of maintenance, because there are not moving parts.

-Solution is produced with the lower investment costs with compact design.

-Its installation is easy.

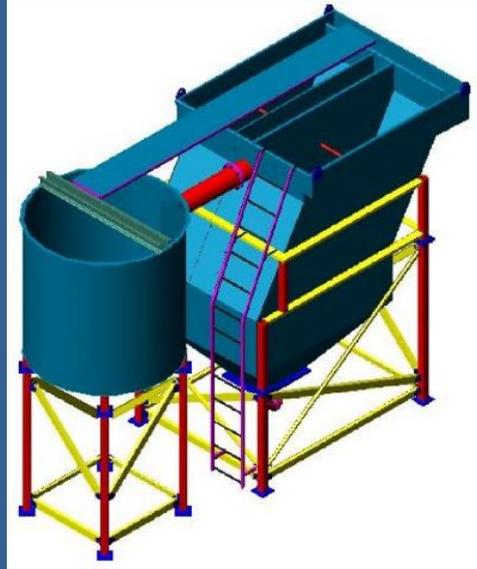
-Short circuit problems do not occur, by reason of the fact that the current is homogeneous.

-Leakages of hanging solid matter do not occur, because of providing particles have kept effective. Separating the mud from water, has become more effective via Lamella's private form.

-Dragging mud does not occur because it runs in the Laminar flow conditions, **effective sinkage is provided.**

-The rate of mud solid matter is higher with respect to classical systems. It is effective in decreasing mud purification costs.

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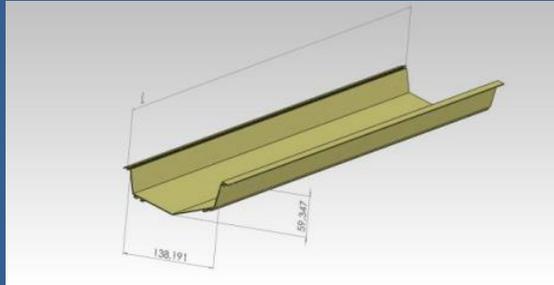
Comparing lamellas:

Parameter	Classical Precipitation Technique	Lamella Precipitation Technique
Short circuit	It is frequently encountered situation.	Short circuit problem is removed by suitable design.
Flow type	In dense flows, the flow having turbulence conditions occur.	In continuous laminar flow conditions, precipitation operation is provided.
The height of precipitation	2000-3000 mm	Less than 100 mm
The duration of precipitation	Depending on the particles precipitation speed, 1-3 hours are necessary for transmission into precipitation region.	Precipitation is provided in 1-5 minutes, because the particle precipitation distance is less than 100mm.
Yield		Also, in lamella, the small particles, are provided to collapse during the flow of small particles to the sub-section. Yield is higher than classical precipitation techniques.
Accumulation of mud	Mud blanket is affected from flow in sub-section and it shows tend to swim. It is necessary to control in order to be ripped the mud regularly.	Mud is cumulated in mud region because, flow goes from the inclined tubes into sub-section continuously. The problem of removing mud does not occur.

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TECHNICAL PROPERTIES



MODEL

AS-F625



Material

PVC / PP

Sedimentation area(60 degrees)

6,25

11

Sedimentation area (55 degrees)

7

13

Suggested modul length (mm)

700-2000

500-2000

Standard modul length (mm)

1000/1500

1000

Lamella's step (mm)

83 (+/-1)

45(+/-1)

Hydraulic radius(cm)

2.6

1,7

Working temperature

55

55

Maximum

60

60

Temperature(degrees)

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STORAGE AND CARRYING

The SW lamella moduls must be dispatched in cardboard or in plastic packing bags.

The materials that have dispatched or assembled, must not be left under the sun light for a long time.

The temperature of hiding environment must not be more that 45 degrees.

ASSEMBLIES



Lamella tubes' assembly is quite easy. Suitable assembly can be made to every geometry. Whatever the width that assembly will be done, assembly can be made complete with the same product by making vertical cutting.

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Disassembly of the products that their assemblies were made is easy,too. At the end of assembly operation that was done in the shape of interlock, two methods are used with the aim to fix the system. The first method: platform grid in which lamella plaques will sit, is made according to lamella steps, Making grid opening 100 mm is enough. In case in the second method, by determining profiles having wider opening instead of grid, its block assembly is made in the shape of moduls, in the shape of point welding.

Point weldings must be begin 50 mm from inside of plaque's farthermost part and , between the distances of the point weldings must be around 300-400 mm.



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APPLICATIONS

SW lamella moduls, have found a wide usage area in the drinking and wastewater purification systems.



Lamella application in the drinking and tap water purification system.



By making assembly of lamella moduls, they can be put easily into application area.



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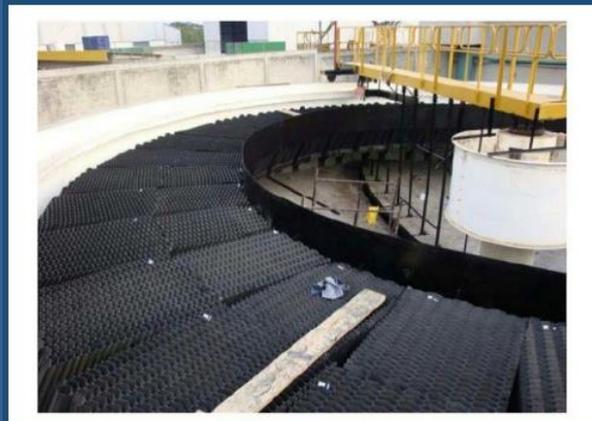
Lamella systems have been using effectively in the packet modul purification systems. Packet purification solutions can be produced in each wastewater and water purification systems.



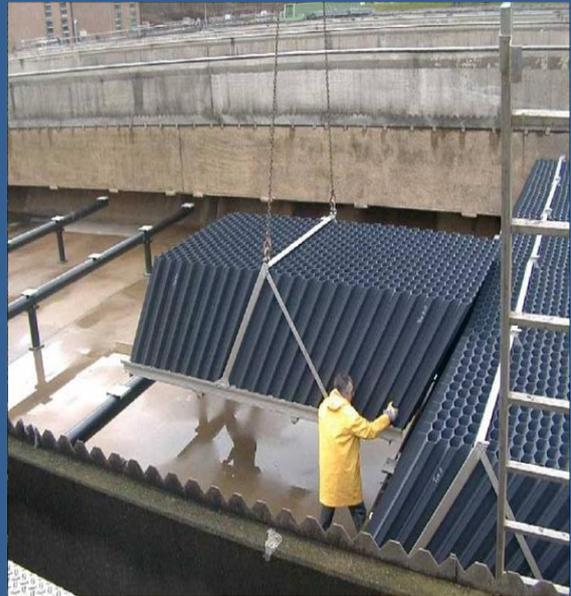
Particularly, in biological sinkage systems, in recent years, capacity increments and increase in efficiency have been provided by making lamella modul annexes with the aim to precipitate the mud with higher efficiency.



In circular tanks, installation of our lamella products is easy. It is the only solution for using them in circular geometric buildings because of their flexible structures.



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