

Inclined Solid-Liquid Separating Screen

- Solid-liquid separating screen for wastewater treatment and manufacturing processes

Main Features

- Incorporates a wedge wire screen that remains sturdy even with narrow slits.
- Easy maintenance due to reduced clogging and simple construction.
- Minimal restrictions on installation since no power is required for operation and installation footprint is small.
- More than 30,000 units installed across Japan as fine screens for wastewater treatment.



Example of use in treating effluent from dye scouring

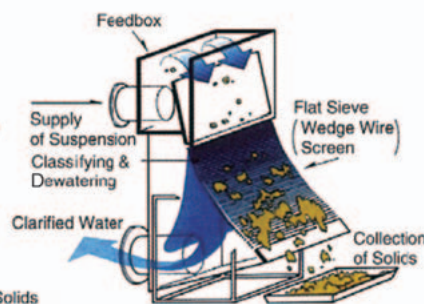
Summary

These inclined screens are used to separate solids from liquids in wastewater treatment and manufacturing processes. The screens have a large number of slit-like openings formed by adjoining V-shaped wires that form a wedge-shaped cross section. As shown in the illustrations, when unfiltered slurry is fed from above in a direction tangential to the screen surface, only particles smaller than half the slit width can pass through the screen. Foreign materials (solids) in the slurry that are about half the slit width or larger cannot pass through and are collected on the screen. Because the separation divide (i.e. circa half the slit width) differs from the slit width, clogging is reduced. Solids are collected without interruption and thus continuous operation is possible.

Functional Principle



Operational Illustration



Applications

- Wastewater treatment at facilities that use chemicals, such as chemical plants, food processing plants, textile mills, dye works, and tanneries.
- Classification, dewatering, and recovery at agricultural and marine product processing plants; sewage treatment for agricultural, livestock, and fishery facilities.
- Solid-liquid separation in production processes, such as those for chemicals and foodstuffs.
- Treatment of public utility sewage, community sewage, and wastewater from multistory buildings.
- Water intake from surface water, such as rivers and streams.

Guideline for Slit Width and Corresponding Water Treatment Capacity

Unit: m³/m²/hour

	Slit width			
	0.5 mm	0.75 mm	1.0 mm	1.5 mm
Dye scouring wastewater	50	60	—	—
Fruit processing wastewater	50	60	70	—
Swine farm wastewater	55	70	—	—
Sewage treatment plant	—	—	60	80
River water/public service water	—	100	110	130

Installation Examples

- China and Taiwan: Factory effluent treatment, textile-related water treatment, synthetic rubber-related solid-liquid separation, and other applications.
- Iran and Saudi Arabia: Plastic resin plant, equipment to recover plastic resin pellets, and other applications.
- Thailand, Indonesia, and other countries: Sugar mills and fertilizer plants.

Inquiries

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