

Oil-water Separation Systems

Factory Address:

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THE PROBLEM

The untreated wastewater from these overflows contaminate water and the environment, causes

- Serious water quality issues,
- property damage
- > and threaten public health
- Effects on the organisms of water bodies





Effective solutions are here!



- Oil Skimmers
- 2. Oil water Separators(API/TPI/CPI)
- 3. DAF (Dissolved Air floatation)System



1. Oil Skimmers

- It is designed to remove floating oil on a liquid surface
- It can effective remove all kinds of floating oil (including machine oil, kerosene, diesel oil, lubricating oil, plant oil
- And other liquids with specific gravity less than water.
- Compact design fits almost any tank or pit
- Types of oil skimmers
 - ❖ Belt type oil skimmer
 - Tube Type oil skimmer
 - Disc Type oil skimmer

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Belt oil skimmer

Tube oil skimmer

Disc oil skimmer



Advantages:

- Low maintenance cost and running cost.
- Compact Size and easy to mount on Tank or Vessel



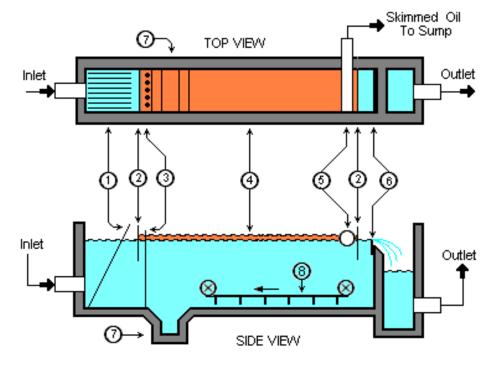
Application:

- Wastewater Sumps
- Parts washers
- Coolant Systems
- Automobile Industries
- Hotels & Food Processing Plants
- Refineries etc.



2. Oil Water Separator

- The design of the separator is based on the <u>Specific gravity</u> difference between the oil and the wastewater
- Most of the suspended solids will settle to the bottom as a sediment layer, the oil will rise to top of the separator, and the wastewater will be the middle layer between the oil on top and the solids on the bottom

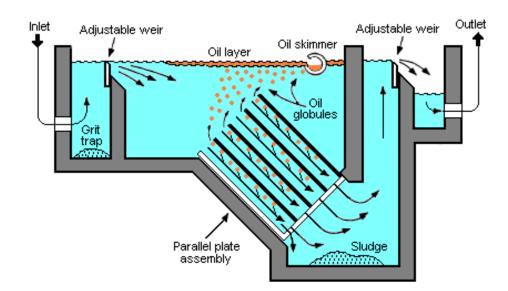


- Trash trap (inclined rods)
- 2 Oil retention baffles
- 3 Flow distributors (vertical rods)
- 4 Oil layer
- 5 Slotted pipe skimmer
- 6 Adjustable overflow weir
- 7 Sludge sump
- 8 Chain and flight scraper

API



- TPI/CPI are similar to API separators but they include tilted parallel plate assemblies
- Parallel plates provide more surface for suspended oil droplets to coalesce into larger globules.
- The result is that a plate separator requires significantly less space than a API separator to achieve the same degree of separation





TPI/CPI



Advantages:

- Very low maintenance cost since there are no moving parts.
- High efficiency and capacity combined with compact volume.
- Can handle shock loads without affecting effluent quality significantly

Application:

- Oilfield production onshore and offshore
- Refineries
- Petrochemical Plants
- Industrial Plants
- Rainwater runoff
- Water treatment facilities

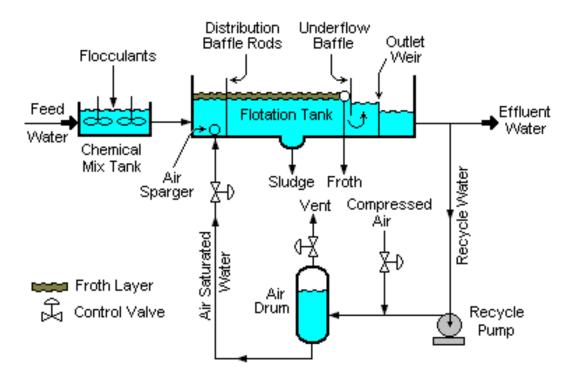




3. Dissolved Air Flotation

- Dissolved air flotation (DAF) is a clarification process that utilizes air to remove suspended matter from the surface
- DAF works by dissolving air under pressure and then releasing millions of tiny air bubbles into the water at atmospheric pressure.
- This process allows the dissolved air bubbles to adhere to a suspended matter within the water, causing it to come to the surface to be skimmed away.
- The process is also often assisted by the addition of a coagulant or a flocculant to the flow water

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Key Features:

- Complete, skid-mounted design available for ease of installation
- DAF system is efficient and can clarify high volumes of wastewater in one session
- Rectangular profile for maximum space utilization
- Designed to stand with extreme environment
- Superior performance with less inputs
- An improved high level system which is both efficient and simple to use
- Compact design to reduce space.
- Removes high concentration of oil and suspended solids



Application:

- Food processing industries
- Oil Refineries
- Chemical plants
- Pulp & Paper mills
- Dairy Industries
- Pharmaceutical industries

THANK YOU

