

IGF

Offering vertical and horizontal, mechanical and hydraulic, single and multiple cell designs, ProSep's induced gas flotation units can meet nearly any process requirement, onshore or offshore, upstream or downstream.



BENEFITS

- + Energy-efficient designs
- + No hazardous off-gas emissions
- + Minimal moving parts
- + Pumped and mechanical options
- + Unaffected by FPSO and floating platform motion
- + Low skimmed oil rates (typically 1-3%), minimizing downstream tank requirements
- + Low chemical consumption
- + Low maintenance/operator intervention

IGF

IGF units are ideal for secondary treatment of produced water in upstream oilfield locations, as well as waste waters in refineries and petrochemical plants.

systems typically have increased separation efficiency when handling large upsets and high flow rates, while the vertical single cell systems provide efficient removal with minimal footprint impact.

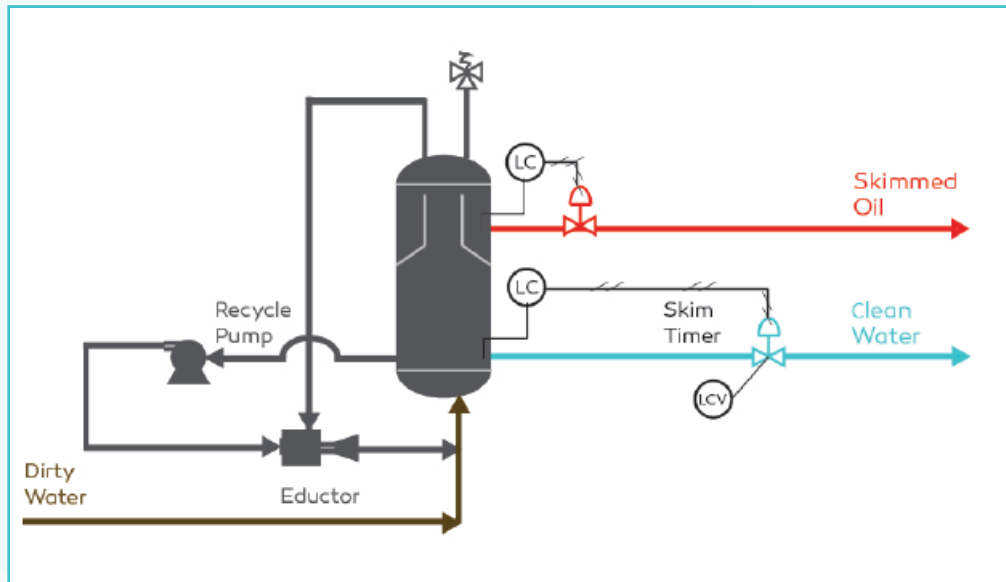
and inducing gas into the recycle water stream. The induced gas at the eductor is drawn from the vapor space at the top of the IGF.

VARIATIONS

ProSep's IGF units are available as either a vertical single cell or horizontal multi cell, and as hydraulic and mechanical units. The horizontal multi-cell

HOW IT WORKS

The hydraulic IGF process uses a venturi-type eductor utilizing pressurized effluent water as the motive fluid passing through the eductor, creating a vacuum on the gas suction port,



The induced gas is thoroughly mixed with the recycled produced water stream through the aid of a mixing device. This homogenous mixture is then released into a separation vessel, where the gas bubbles contact and adhere to the oil droplets and solids particles.

The resultant oil-solids-gas agglomerates are floated to the top of the unit and are then skimmed from the surface. The clarified effluent exits from the bottom of the vessel where a small portion is used for the gas induction process.

The mechanical IGF process utilizes a rotor/stator/disperser mechanism to

create a vortex which draws fluids up from the bottom and gas down from the free board of the cell.

The resultant turbulent aerated, contaminated produced water causes the gas bubbles to contact the oil droplets and solids particles and attach to form oil-solid-gas agglomerates. Passing through the disperser, the agglomerates enter a quiescent zone where they float to the gas-liquid interface, forming a froth.

The resultant froth is then skimmed from the vessel for collection and oil recovery. The clarified water then exits the unit for further treatment, discharge, or reuse, depending on

facility requirements. Improvements in the design promise lower emissions and reduced maintenance.

APPLICATIONS

These units can be integrated into existing systems or supplied as fully skid mounted, turnkey packages. They are ideal for onshore and offshore applications.

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PROSEP'S INDUCED GAS FLOTATION UNITS COVER A WIDE RANGE OF OPERATING FLOW RATES, FROM < 3,000 TO FAR GREATER THAN 100,000 BPWD, WITH EXPERT FABRICATION AND DESIGNS THAT ACHIEVE SEPARATION EFFICIENCIES OF UP TO 98% IN COMPLETELY CONTAINED TREATMENT SYSTEMS

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