

# KOCKEN

## SISTEMAS DE ENERGIA INC.

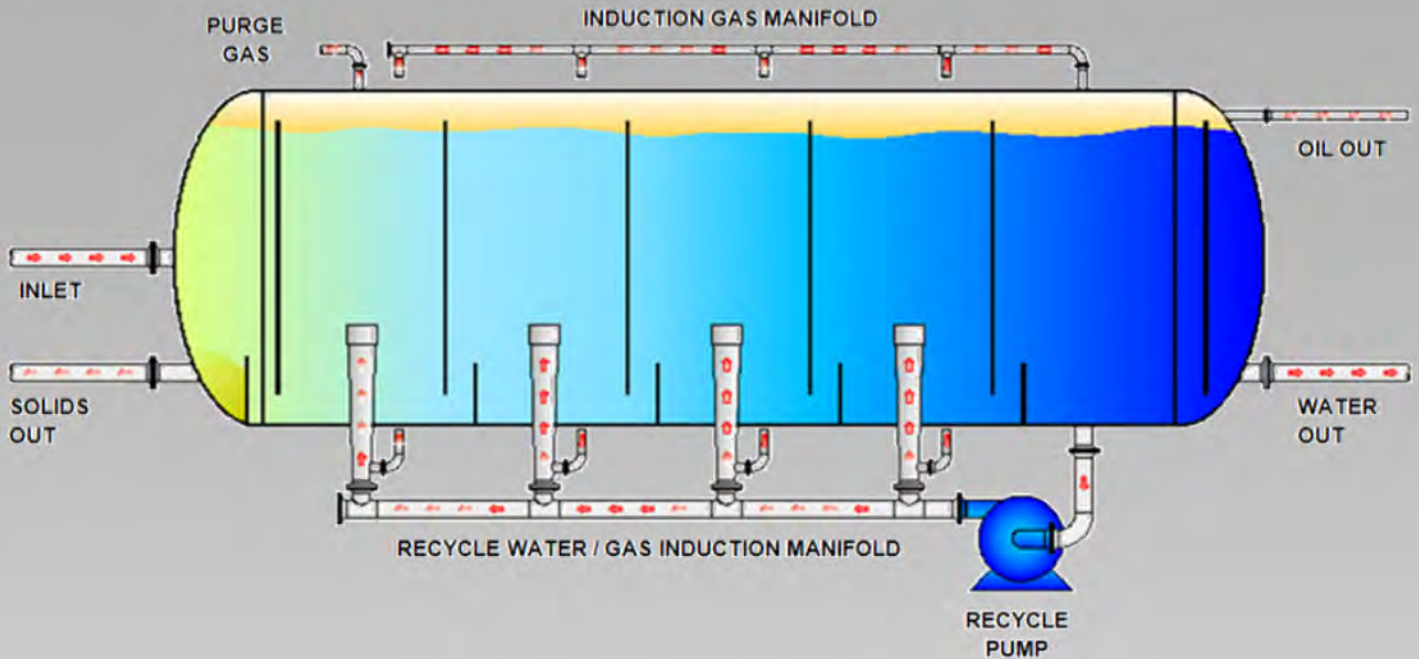
### INDUCED GAS FLOTATION



The KOCKEN Sistemas de Energia Inc Induced Gas Flotation Separator removes 90–98% of insoluble oil and suspended solids from water. Removal efficiency is influenced by physical characteristics of the feed stream such as pH, total dissolved and suspended solids, temperature, presence of chemicals, and the electrokinetic potential of the water being treated.

There are a wide variety of applications for the Induced Gas Flotation Separator including:

- Boiler Feed Water Treatment
- Produced Water Treatment
- Residual Water Treatment
- Recycle Water Treatment
- Waste Water Treatment



**SUMMARY OF OPERATION**

The separation chamber is divided into multiple sections ( varies by process requirements ) that are divided by over-under flow baffles. The configuration of the baffles mitigates the affects of flow surges thereby maintaining removal efficiency even in upset and slugging conditions.

A slipstream of clean water is taken from the final chamber and recycled back into each of the respective separation chambers. Water is introduced into the chamber via a induction-type nozzle that combines clean water with induction gas.

The gas is induced at a controlled rate using globe valves and a controlled bubble-size using tunable venturi type orifices in the induction-type nozzles. In controlling the size and rate of the gas induced, the volume is also effectively controlled ideally to efficiently lift the oil and suspended solids. The lifted contaminants accumulate and float on the water and are continuously skimmed from each of the separation chambers.

**FEATURES**

- Operates at Stream Pressure
- Zero VOC Emissions
- Works with Plant Gas or Air
- Accomodates High Gas:Water
- No Moving Parts in Chamber
- Various Skimming Methods
- High Efficiency

**DESIGN PARAMETERS**

- Operating Pressure
- Operating Temperature
- Flow of Water
- Content of Oil in Water
- Water Spec ( ppm Oil )


**APPLYING WORLD CLASS TECHNOLOGIES IN PURSUIT OF SUPERIOR EFFICIENCY**

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