



Solid-Liquid Separation

In-line Separation of Solids from Liquids at Operating Pressures

Technology Background

Caltec's patented I-SEP technology can be used to separate produced sand from mixtures of liquid and solids, in-line with the process, at the process operating pressure.

How it Works

The fluid containing the solids enters the I-SEP; due to very high centrifugal forces generated within the separator, the two phases are very quickly separated. This gives a clean liquid phase, containing only some very fine solid particles, typically below 50 microns.

The solids outlet can either be connected to a cartridge type knockout vessel for collection and disposal of the solids or it can be passed straight to a standard commercial solids cleaning package.

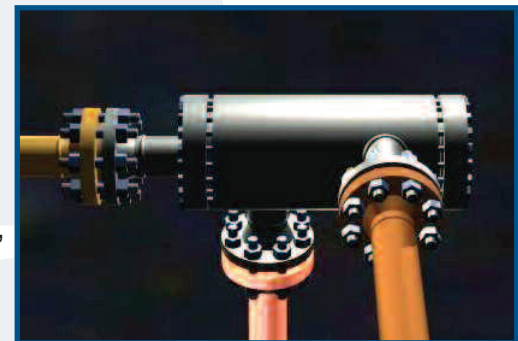
Where gas is also present, a Caltec gas/liquid compact separation system can be placed in-line with the process, to further increase separation efficiency.

Benefits

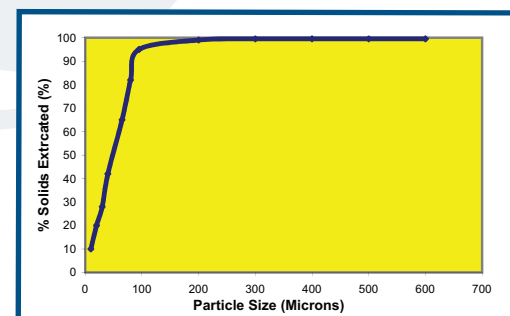
- Very small footprint:
 - Typically 50 times smaller than a conventional gravity separator
 - Lower pressure loss than a hydrocyclone: typically 1 bar dp
- Scalable systems from 1,000 bpd to 70,000 bpd: for example
 - 2" Inlet size approx. footprint 350mm x 350mm with a maximum liquid flowrate of approx 3000 bpd
 - 10" inlet size approx. footprint 950mm x 950mm with a maximum liquid flowrate of 60,000 bpd
- Robust, reliable
- No moving parts
- Low maintenance
- High turn-down ratio, typically 1:5
- Ideal for high pressure/high temperature wellhead applications (to 10,000 psi)
- Designed to withstand abrasive erosion

Why not come and see it for yourself at the Caltec demonstration labs?

Seeing is believing



I-SEP Solids compact separator



Takes practically all of the solids out