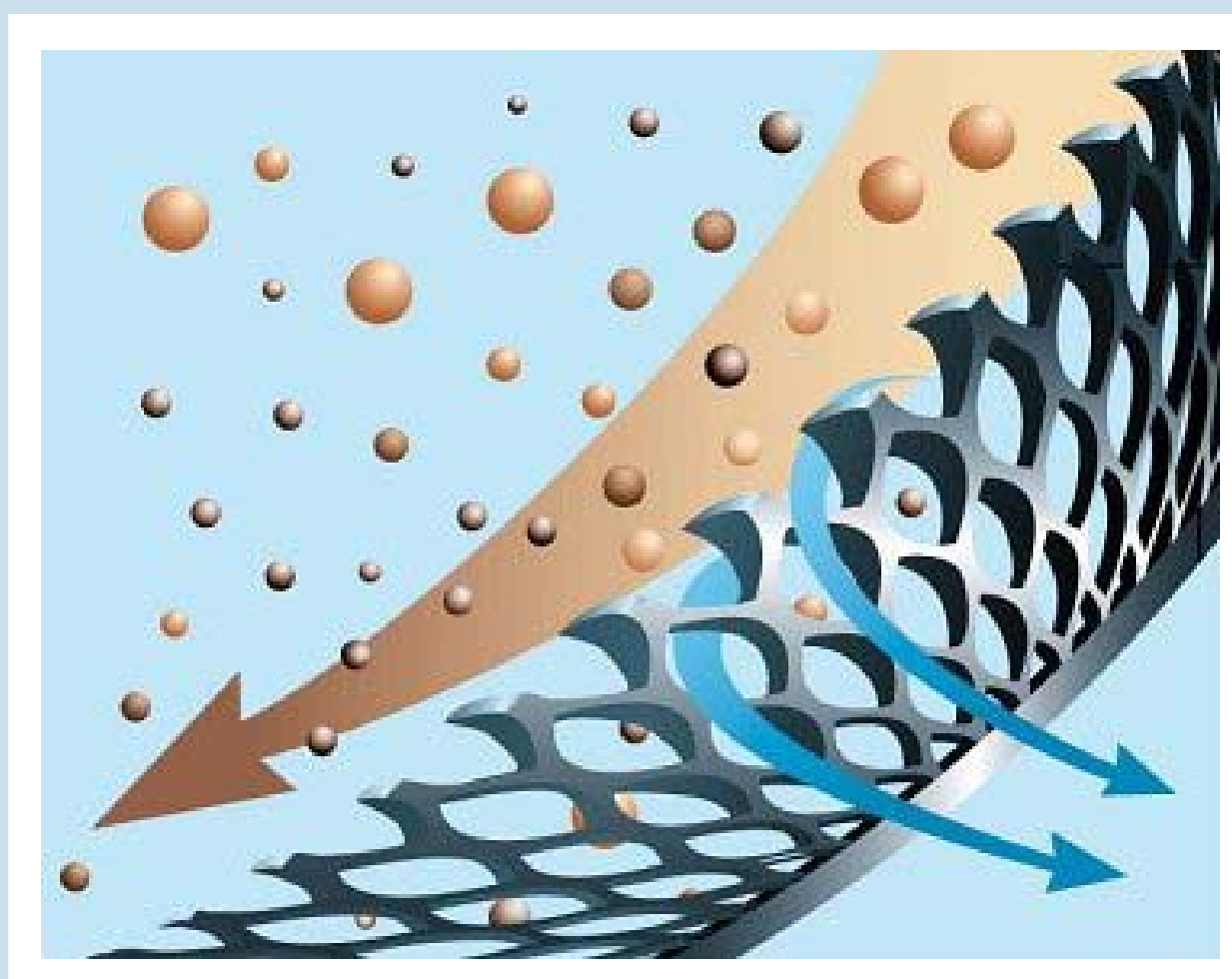


# CDS Solid/Liquid Separation using Indirect Screening

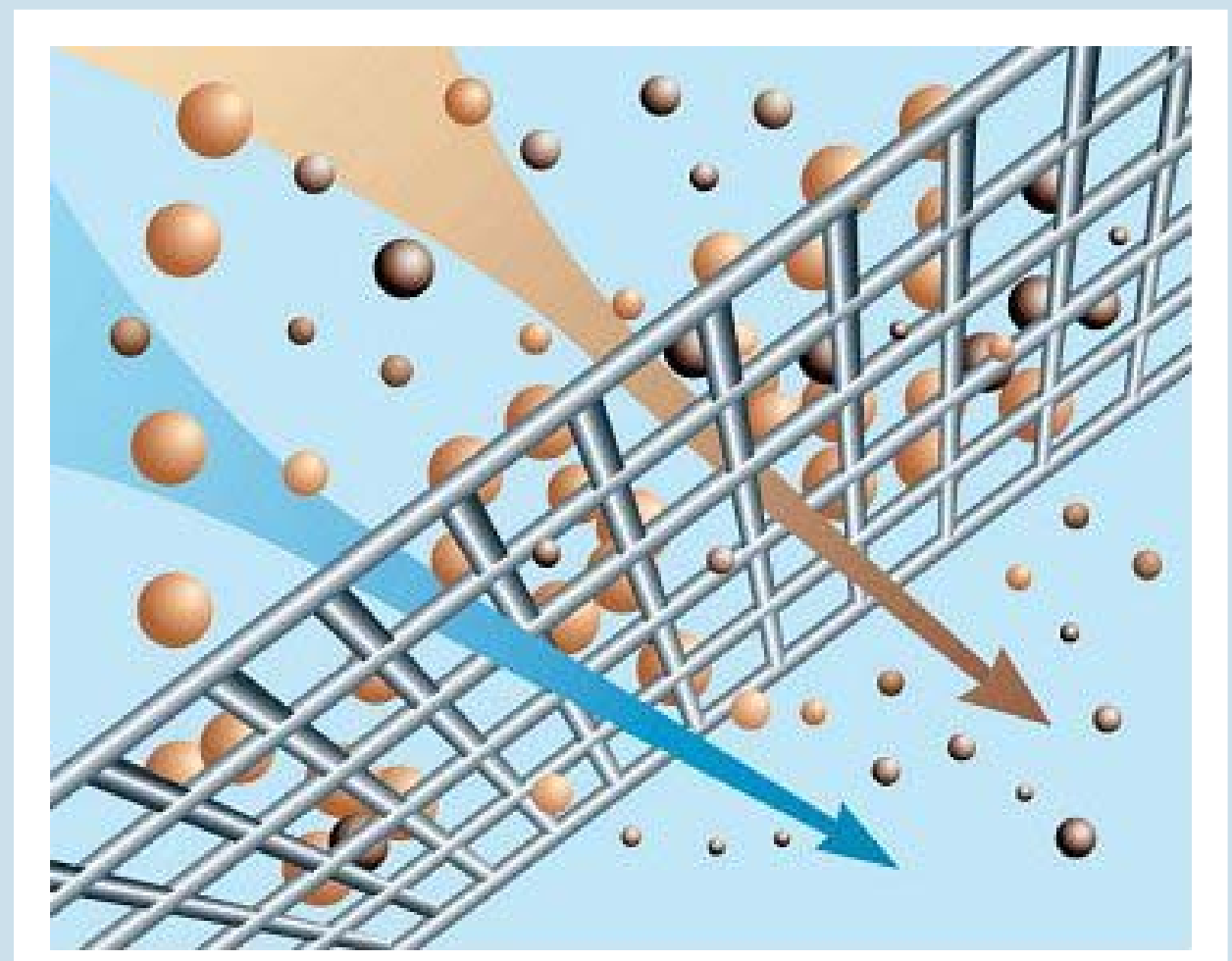
The separation of solids from liquids is an important step for many operations in the process industry. One such separation technique is **screening**, which utilizes a physical barrier (screen) to remove solids of a predetermined size. These solids may be valuable or may be unwanted contaminants, but the problem is the same – removing them at low to high flow rates without causing blinding (blockage) of the screen is a task.

## The CDS Technology for Storm Water

The principle that underpins the *patented CDS technology* is **indirect screening** (see below). It is a significant improvement over conventional or direct screening in the way that the fluid is presented to the screen.



**CDS Indirect screening technology**  
Flow tangential to screen retains solids without binding



**Conventional direct screening**  
Flow directed to screen causes binding

In most conventional screening operations the solids to be separated collect directly on the screen. Although they are separated from the water flow, collection of the debris on the screen surface soon causes blinding of the screen and a significant impediment in its capacity to continue the separation process. Coffee filters, pool filters operate like this, they work well for a while until the filter becomes blinded and the flow rapidly reduces and eventually stops. The *patented CDS technology* is **Not a direct screening** separation system – fluids are not introduced directly into the screen face.

Rather, the fluid flow is introduced tangentially to the screen that is presented to the incoming flow in such a way that the fluid cannot easily see the screen apertures. The raised lips of the screen mesh apertures cause the solid particles to be deflected away from the face of the screen. Once inside the separator, solid particles denser with SG (specific gravity) higher than the fluid are carried past the openings in the screen and retained inside the separator or sump area.

The CDS technology allows separation to be carried out continuously at both high and low flow rates. Our highly skilled engineering staff can easily design and size the CDS screening technology to suit your applicable flow rates to capture that 3 to 20 year storm event. Performance of CDS Screening Separators, unlike vortex separators or settling tanks, is essentially independent of the flow rate.

**Capture performance** of solids larger than the screen aperture is 100% *without blinding* of the screen. Significantly high percentages of smaller particle sizes are also retained in the Separation chamber satisfying the desired 80% TSS removal efficiency. With the CDS indirect screening technology capturing and retaining significant amounts of the *larger pollutants* too, you are also removing even higher concentrations of contaminants, heavy metals, phosphorous and organic pollutants that adversely impact our waterways.