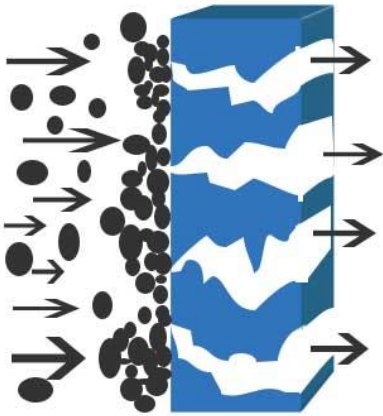


## Filter Facts #1

What is the difference between surface and depth mode filtration, and what are the relative advantages/disadvantages?

**Surface filtration** is used where there are high levels of solids present in the fluid to be filtered. It relies upon the particulate being stopped at the surface of the membrane or media.

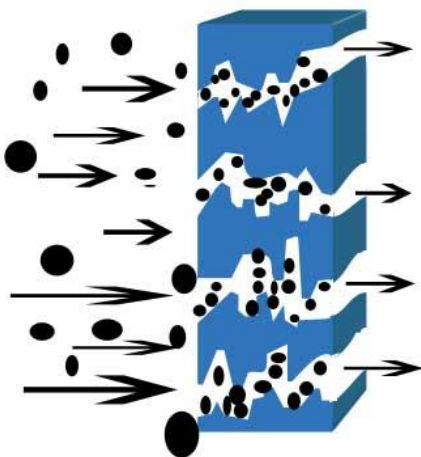
An issue that presents is the formation of a cake (particulate matter) on the membrane. This cake will progressively reduce the filter flux rates, unless the cake can be cleared during the filter operation. The path through the membrane should open out wider than the surface pore size so to ensure a quick exit and clearing from the membrane of filtrate.



Surface filtration

**Depth filtration** relies upon an indirect and sometimes “torturous” path for the fluid to be filtered to pass through. The pathway “traps” the particulate matter, leaving the clear filtrate to pass fully through. This type of filtering is utilised for fluids with low solids loadings.

The main issue for depth filtration is the cleaning of particulate from the membrane or media.



Depth filtration