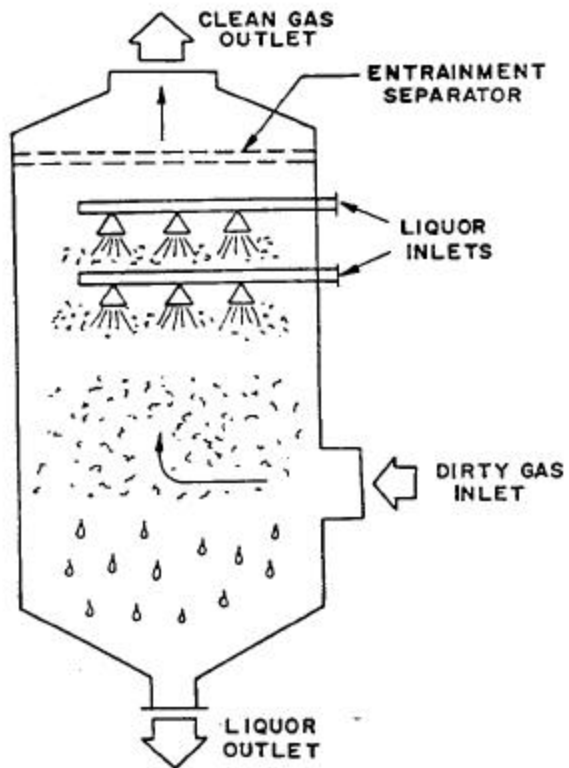
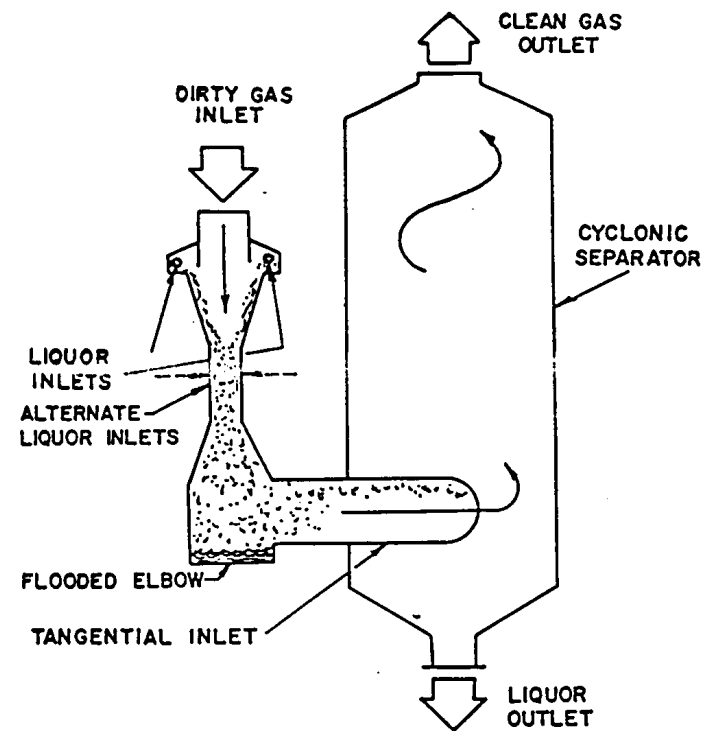


SCRUBBERS FOR PARTICLE COLLECTION



Schematic of spray tower. Liquid comes in at the top and drains out the bottom. Gas enters at the bottom and leaves through the top.



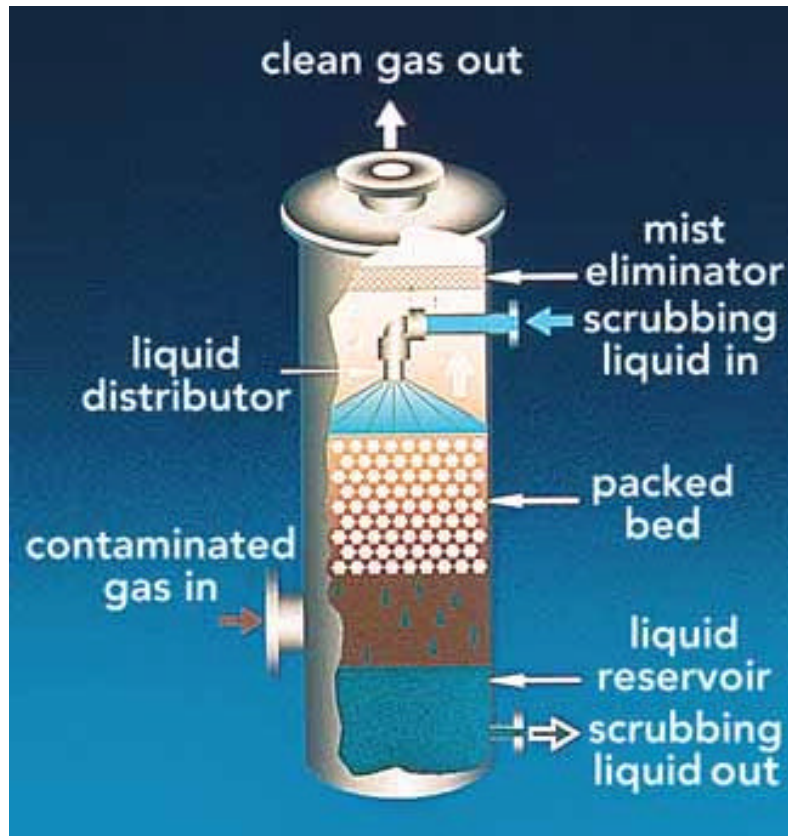
Schematic of a venturi scrubber. Liquid flows into the venturi throat, where small particles collect on large droplets. Then the droplets collect in a centrifugal entrainment separator.



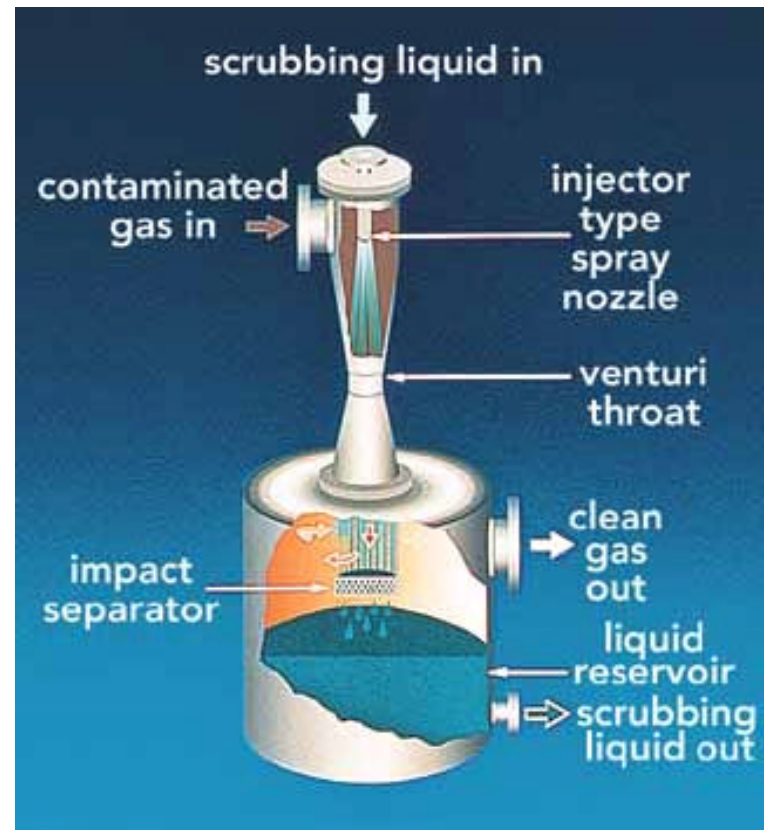
Spray tower scrubber used in industry



Venturi scrubber used in industry. Note the centrifugal entrainment separator



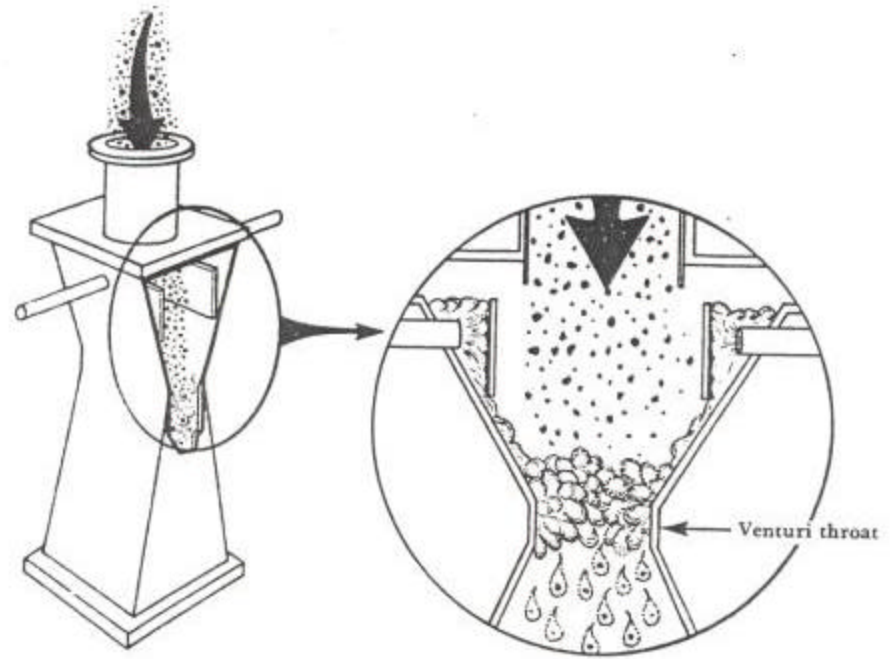
Packed tower scrubber used to remove pollutant gases (not particles)



Injector venturi design. The injection of liquid through the top of the venturi induces gas to flow through the unit.



Alternative venturi design.



Sketch of how one venturi adds water to the throat.