MULTICYCLONE SEPARATOR

The multicyclone separator uses dual tangential inlets to impart high centrifugal force to the inlet gas, solid particles, and liquid droplets to achieve high efficiency separation of liquids and associated solids from gas dominant flow regimes. This reverse flow cyclone uses compact, miniature cyclones to achieve separation efficiencies that are much higher than conventional, large, single element reverse flow cyclones.

Gas enters the vessel through the inlet nozzle into the cyclone chamber, which is isolated using upper and lower tubesheets. As the gas, liquid, and other contaminants flow into the cyclone elements, a high centrifugal force is applied. Solid and liquid contaminants are captured on the inner surface of the cyclone and drained into the sump for removal. Gas flows upwards through a central cyclone tube entering the outlet chamber of the vessel. The solid and liquid contaminants are drained using conventional means from the lower sump. This design may also be used for dry particle removal from gas.

The multicyclone design may also be used in conjunction with filters to extend the life of filter elements. By removing the solid particulates prior the filters, the filters do not become prematurely plugged, resulting in extended intervals between changeouts.

ADVANTAGES:

- High Efficiency Separation (99.9% of 8-10 micron and larger solid and liquid particles)
- Resistant to fouling, ideal for dirty service
- Compact design resulting in a small footprint
- Very low maintenance
- Proven technology, used in oilfield applications for many years.

APPLICATIONS:

- Dry Gas Separators
- Inlet Separators
- Pre-separation to protect downstream filters

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