



Inlet Separation Filtration and Coalescing Systems

Contamination ingress is one of the most prevalent causes that negatively affect most amine units. Improper or deficient inlet filtration and liquids separation before the contaminants enter the amine unit can often lead to foaming, fouling, or corrosion among other detrimental effects. Ultimately, these effects result in a treated gas that is out of specifications, and flaring, reduced amine processing rates, or even plant shut down becomes necessary.

To address the separation of solids and liquids in both liquid and gas feed streams entering the amine unit, the technology of choice is high efficiency cartridge filtration and coalescence. Both in general are used in series for proper inlet contamination removal. The development of coalescing technology makes it possible to separate essentially all emulsions and liquid aerosols.



Coalescing systems from Amine Filtration incorporate the latest vessel designs and internals technology, achieving superior separation under demanding conditions. Amine Filtration coalescers make use of proprietary micro-fiber media formulations, customized element designs, and advanced fiber geometries. These qualities allow inlet coalescing systems to intercept entrained droplets of even sub-micron sizes and effectively remove them from the process. Coalescing protects amine units from lubrication oils and condensates, water contamination, and any salts or acids they may contain.

To ensure suspended solids carry-over do not hinder the amine process, effective inlet filtration should be in place prior to the coalescing. Typical filter elements for amine units are disposable cartridge filter elements with high “exposed” surface area because of the large amount of solid mass to be removed with the inlet gas.

Critical functions of inlet separation:

- Filter solids (sand, elemental sulfur, corrosion products)
- Coalesce liquids (lubrication oils, hydrocarbons, produced water, additives)
- Adsorb gas phase contaminants (mercury, mercaptans, surfactants)
- Stop liquid slugs from entering the amine absorber (contactor)

For more information, please contact **Amine Filtration** at Help@AmineFiltration.com.