



MIST ELIMINATOR



FOR EFFICIENT SEPARATION

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WHAT IT IS

A mist eliminator is designed to remove mist and liquid entrainment from gas and vapor streams. Penn Mist Eliminators consist of porous blankets of mesh supported on and held down by high open area grids. Manufactured in any size required. The mist eliminator comes in a variety of materials and is ready to install in an existing process vessel or packaged in a Penn Pressure Vessel. They feature smooth, clean, bright mesh for rapid liquid drainage. Careful construction of mesh and supporting grids assures perfect fit, eliminating vapor by-passing.

HOW IT WORKS

When vapor carrying entrained liquid droplets or mist passes through the mesh, the vapor moves freely through the mesh pad. But the liquid droplets, with the greater mass, contact the mesh surfaces and are briefly held there. As more droplets collect, they grow in size, run to the bottom surface of the mesh and fall free. The overhead vapor is now pure, free of any entrained liquid.

GENERAL APPLICATIONS

Air Pollution Prevention - Penn Mist Eliminators prevent discharge of contaminants into the atmosphere, including sulfuric acid and elemental sulfur. Also, chemical discharge from pulp mill smelt dissolver vent stacks, quench towers and many other scrubber solutions. **Evaporators** - Penn Mist Eliminators eliminate valuable product loss as carryover . . . or by preventing carryover of non-volatiles, produce high quality condensate suited for use in process, as boiler feedwater or other in-plant uses. **Knock Out Drums and Separators** - Penn Mist Eliminators decrease process costs by removing any liquid entrainment from air or gas . . . recovering gas oil previously lost to vacuum system . . . reducing compressor maintenance costs . . . the efficient scrubbing action of the Penn Mist Eliminator will decrease the size of vessels required for entrainment separation. **Steam Systems** - Penn Mist Eliminators insure clean, dry, steam . . . with virtually no carryover at peak capacities. Less than 0.5 ppm solids in the steam from a steam drum or waste heat steam generator insures the clean operation of virtually all equipment. **Scrubbers** - Penn Mist Eliminators are ideally suited for the effective separation of liquids from gasses in typical horizontal or vertical scrubber system. **Absorbers** - Penn Mist Eliminators remove substantially all types of liquid entrainment — absorption oil, glycol and amine solutions — superior to vane type separators the Penn Mist Eliminators give clean, dry gas with essentially no liquid losses. **Refinery Vacuum Towers** - Penn Mist Eliminators permit operation at higher throughput rates and improve the quality of the gas oil produced. Also allow deeper cutting into the reduced crude. The improved gas oil, with lower carbon, asphalt and catalyst-poisoning metals, serves to increase cracking capacity due to reduced load on the regenerator. This gives high gasoline yields by maintaining higher catalyst activity.

PROPER SELECTION

The selection of the proper mist eliminator for your specific need can best be obtained by presenting detailed information to Penn Separator.

Include the following wherever possible:

1. Flow Rate
2. Vapor Density
3. Liquid Density
4. Liquid Viscosity
5. Liquid Particle Size and Quantity, and Process and System Description
6. Operating Temperature and Pressure
7. Line Size, and Horizontal or Vertical Flow

With this data, Penn Separator can supply the mist eliminator designed for optimum performance at minimum cost.