



SS FILTERS PVT. LTD.

AN ISO 9001:2008 COMPANY

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Specification Sheet

DEMISTER PADS



Demister pads or Mist eliminators are porous blankets of metal wire or plastic knitted mesh, designed and constructed for the efficient, economical removal of entrained liquid droplets from vapor streams. Demister Pads can be fabricated in any required size and shape and may be installed in new or existing process vessels.

HOW IT WORKS

When vapor and entrained liquid droplets pass through a mist eliminator, the vapor moves freely through the mesh pad but the liquid droplets, due to their greater inertia, cannot make the necessary sharp turns and as a result are thrown into contact with the wire surfaces and briefly held there. As more droplets enter the pad and collect on the wires, they grow in size, run down the wire to the bottom surface of the mesh separator and fall from the unit. Overhead vapor is now free of entrained liquid.

MATERIAL OF CONSTRUCTION

Mesh and grids may be made from most metals and plastics i.e. SS-304, 304L, 316, 316L, Metal, Nickel, Copper, P.T.F.E. (Teflon), H.D.P.E., P.P. etc. and other metals, alloys or plastic which can be drawn or extruded.

Air filter mesh is most commonly used filtration material in the automotive industry. It has typical applications as air filters, entrainment separators, silencers, flam arrestors, oil filters etc.

EFFICIENCY

When properly designed demister pads can give efficiency up to 99.9% with minimal pressure drop. Normally demister pads can remove droplets down to 5 microns and lower with a free volume of up to 99% and a surface area of up to 1940 m²/m³. Due to high value of free volume the pressure drop across the demister pad is sufficiently low, negligible for most applications.

FUNCTION

Demister pads are installed at some distance above the surface of liquid and it allows free disengagement of mist droplets and the coarsest particles. The vapor/ gas-liquid mixture run at a predetermined velocity through the demister pad, the vapor/gas finds an open path through the mesh easily, but due to greater inertia the droplets and mist impinge on the mesh and gradually increase to a bigger size and fall down due to gravity allowing the vapor/gas to pass freely without any entrainment from the top of the demister pad.

SALIENT FEATURES:

High removal efficiency
Negligible pressure drop, less than 25mm of water gauge
No maintenance or service required
No corrosion or temperature limitations
Easily installed in existing vessels
No limitation on size or shape.

TYPICAL APPLICATIONS:

Evaporator, Refining vacuum tower, Refining lube towers, Steam drums, Absorber, Scrubbers, Separators vessels and knock out drums.
and any process vessels handling liquid and vapor where complete separation of entrained liquid droplets is desired from gas/vapor phase.