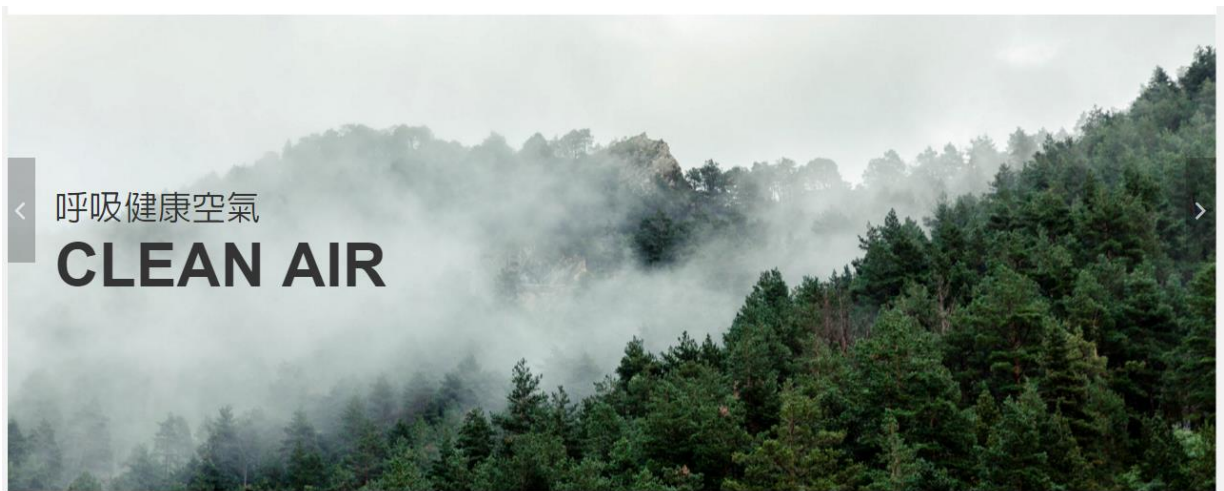




Original Life CO., LTD.

GECOMAT

The good partner in your life



Original Life CO., LTD - GECOMAT

The leading brand of GECOMAT

Original Life CO., LTD. has manufactured plastic net for more than fifty years. With the concept of manufacturing natural, healthy, safe and innovative products, we use breakthrough technology to apply GECOMAT to many industries. **Original Life** try our best to improve quality in order to provide safe and healthy textile products to our customers.



Original Life Eco-friendly PP Mist-Eliminator Filter can filter out

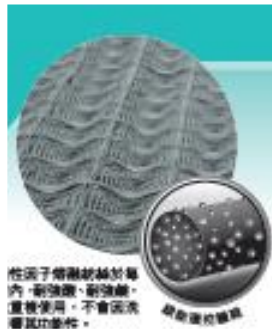
- ✧ Liquid and gas
- ✧ Organic gas
- ✧ Lampblack
- ✧ Particulate matter
- ✧ Acetic acid
- ✧ Ammonia
- ✧ Others

GECOMAT –

Apply for industry

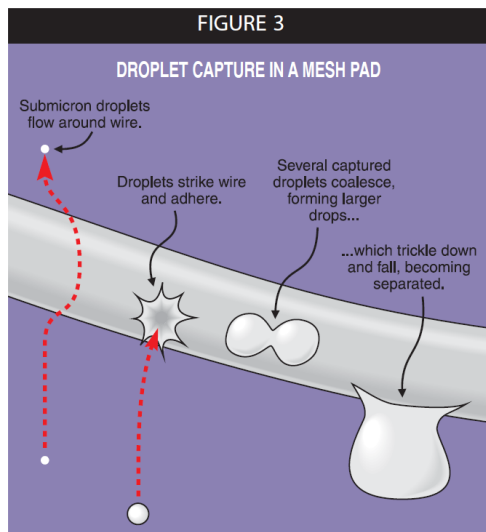
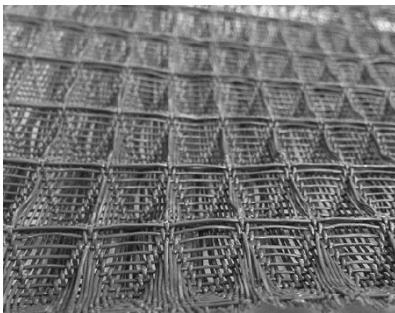
For Original Life Eco-friendly PP Mist-Eliminator Filter, we provide customized service to maximize the performance.

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Fused functional factor in every fiber, it's easy to clean and reusable. There is no impact on its functions after washing.

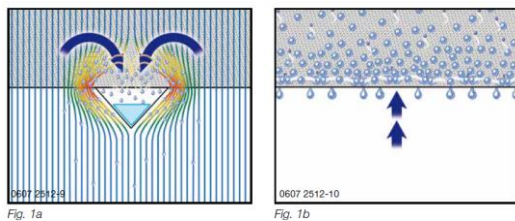
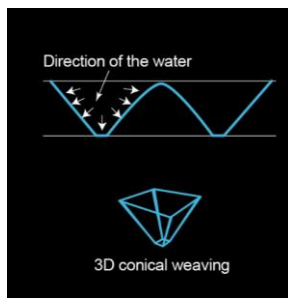
Three-dimensional woven structure



Originallife develops three-dimensional woven structure of functional fiber. In order to increase droplet trapping, it makes more than 90% of fiber be vertical to the flows. On the contrary, most of traditional type of mesh can't exceed 67% of fiber be vertical to the flows.

The droplets we need to filter out flow around fibers. After droplets strike on fibers, by the theories of stacking, blocking, and static friction, most of dirt stuck on the fibers. Several captured droplets merge into larger drops. When drops are large enough, they will trickle down and separate. Then, the process of filtration completes.

Numerous fibers vertical to droplets will lead to lower pressure loss, energy consumption, and cost of maintenance. You can have immediate performance by using our filter.



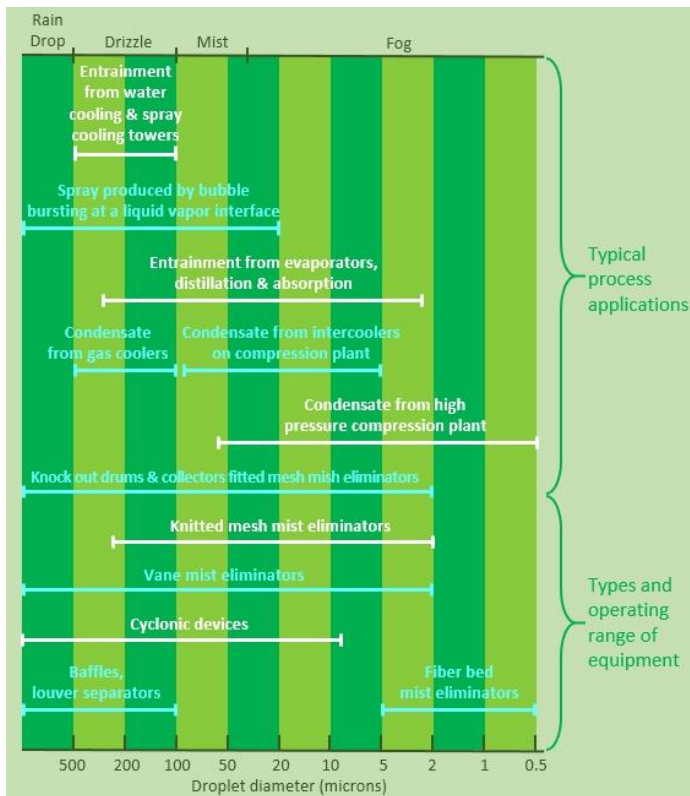
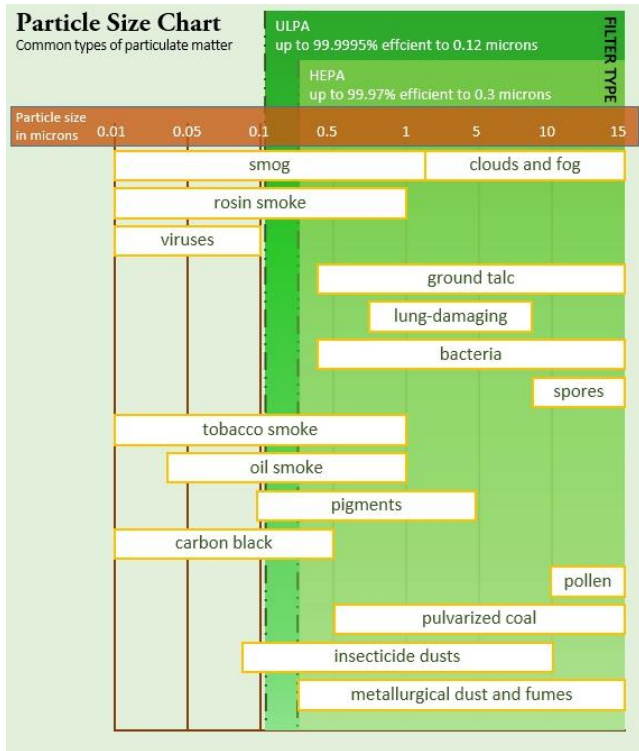
Our products are made of polypropylene (PP). Considering different corrosion resistance demands of various industries, polypropylene have more advantages than metal mesh. Besides unique knitting method, our products have three-dimensional structure which changes directions of air flows. It can enhance the ability of capturing by effects of stacking, blocking and static electricity. Three-dimensional crossing structure makes our Eco-friendly PP Mist-Eliminator Filter more flexible and stress-resistant.

Function of Eco-friendly PP Mist-Eliminator Filter

The major functions of PP mist-eliminator filter are collecting, capturing, removing droplets, avoiding machine damage and reducing maintenance cost as more as possible.

To have appropriate performance, mist-eliminator filter should be designed to collect and capture droplets in mist elimination system. After droplets flow through mist-eliminator filter, they are collected and effectively removed by drainage system. Surely, the design of filter and mist eliminator should reduce operating cost as more as possible, and satisfy with needs of customers.

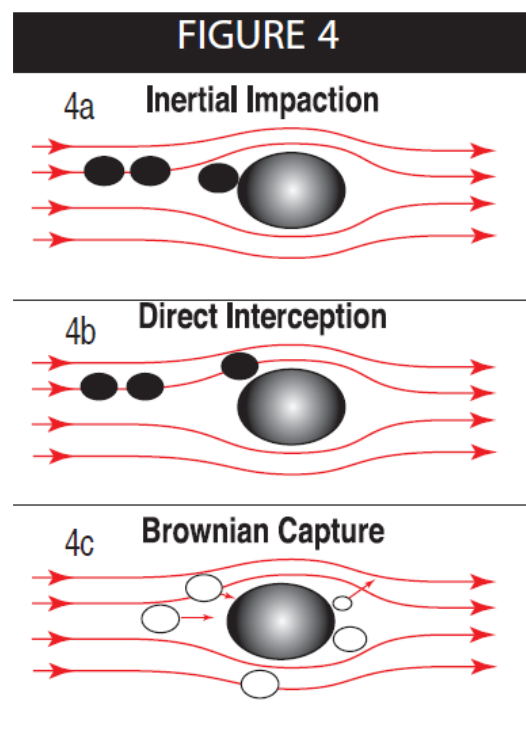
Definition of particles



To have better performance of mist elimination, we have to understand basic sizes of droplets.

1. Clouds and fogs are particles less or equal to $10 \mu\text{m}$ in diameter
2. Mist is particle less or equals to $1 \mu\text{m}$ in diameter

Collection Mechanism



Two major mechanisms are inertial impaction and direct interception.

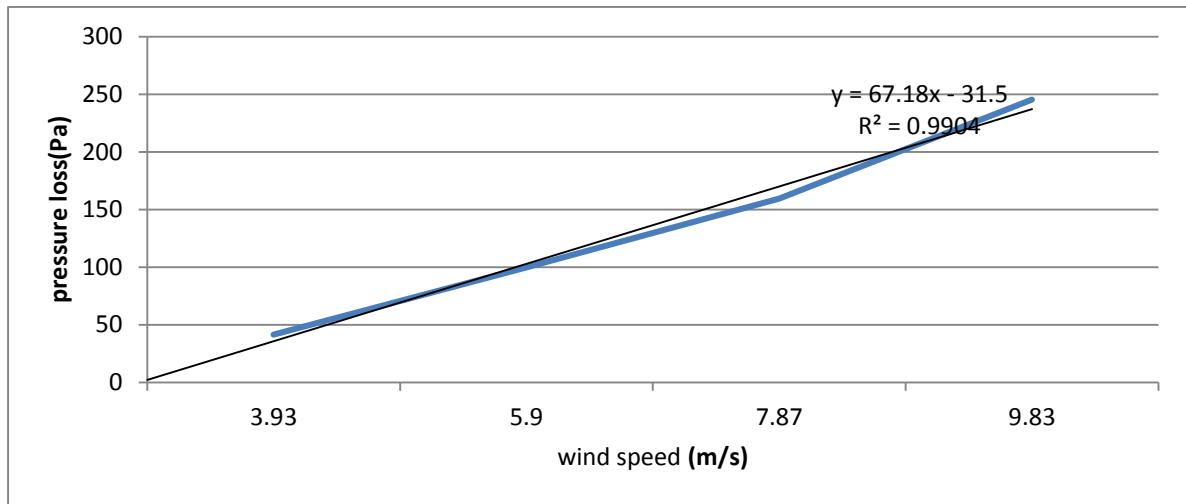
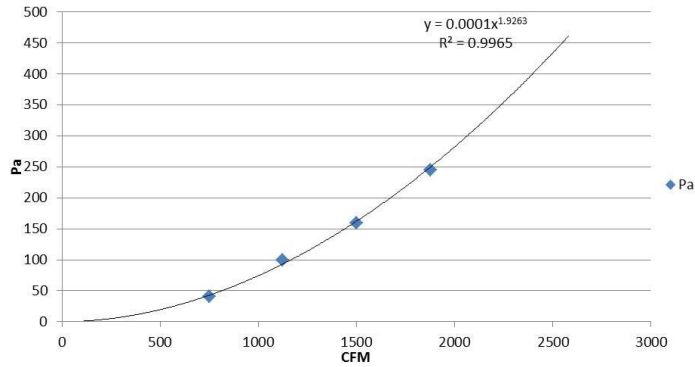
Inertial motion mechanism – Particles in gas directly strike on surface of mesh. It is most effective when droplets are $20 \mu\text{m}$ or larger in diameter.

Direct Interception of action – Droplets won't strike on surface of mesh directly. They flow with gas, and in the nearest place of mesh, those droplets are intercepted. This effect is disproportionate to textile fiber, applying to droplets which are $1 \mu\text{m}$ or larger in diameter.

過濾理論 **filtering theory**

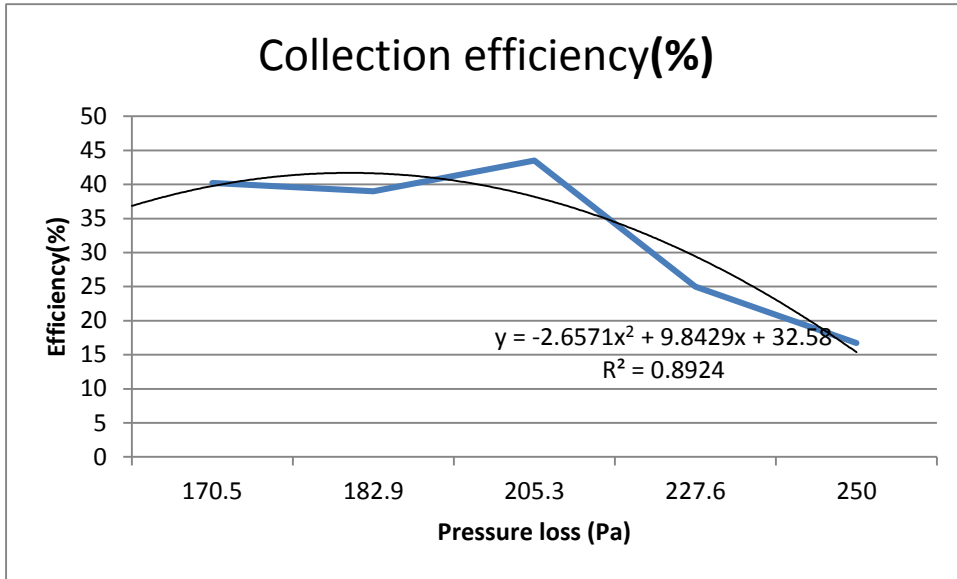
靜電效應 **electrostatic effect**

Advantages of mist-eliminator mesh



Test of monolayer

Rated glass flow	ASHRE52. 1-1992	1500CFM (7.6m/s)
Filtration efficiency of dust		38.7E%
Type of aerosols		ASHRE52.1 aerosols(0.3-10 μ m)
Initial pressure loss		159.5 Pa
Terminal pressure loss		250 Pa



Particle size (μm)	Mist-elimination technique	Advantage
2-20	Woven mist eliminator	Low pressure loss High porosity Resistance to plug up High removal of dust Selection of functions

Original Life Eco-friendly PP Mist-Eliminator Filter has lower pressure loss, high porosity and high removal of dust. In addition, it also has multiple functions, e.g., deodorization, sterilization.

Size in diameter

Original Life Eco-friendly PP Mist-Eliminator Filter

Sizes in diameter

- 0.1mm (7.1 MIL)
- 0.63mm (24.8MIL)
- 1mm (39.4MIL)

Original Life Eco-friendly PP Mist-Eliminator Filter is made of polypropylene. The

advantages of our product are having less pressure loss per unit, improving ability of liquid handling, and resistance to plug up.

The ability of liquid handling relates to porosity. Consequently, porosity of **Original Life** Eco-friendly PP Mist-Eliminator Filter is about 94%. Compared to traditional textile (67% porosity), our filter has bigger liquid loading and improve the plug-up situation.

The application of mist-eliminator filter

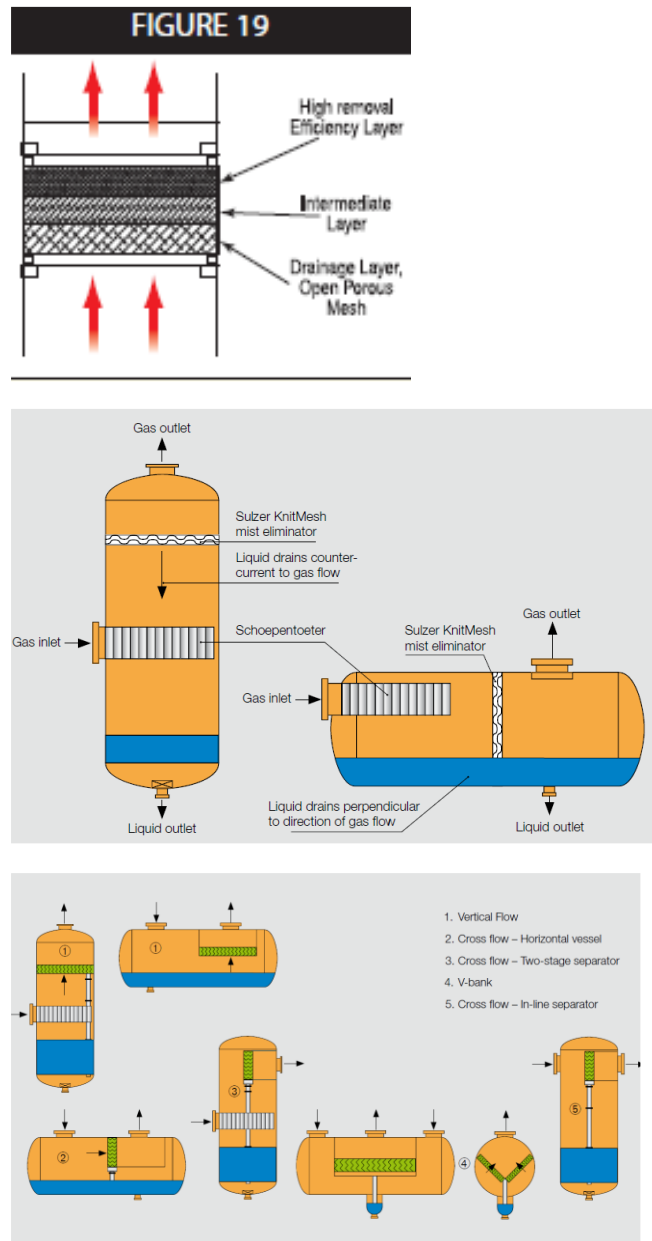


FIGURE 17

SIMPLIFIED VIEWS OF TYPICAL MIST ELIMINATOR CONFIGURATIONS IN SEPARATOR VESSELS

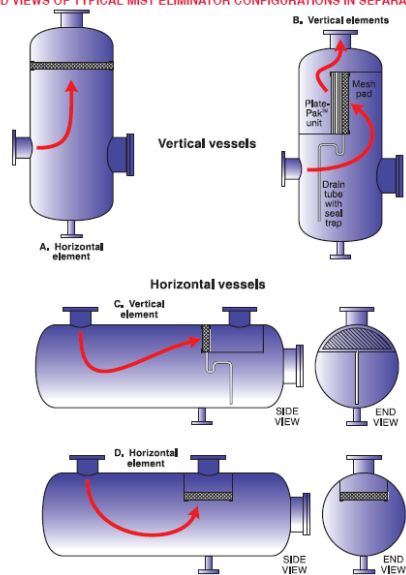


FIGURE 18

Guidelines for maintaining even flow distribution across mesh pads or vane units with axial flow in cylindrical vessels. Height of vessel head is assumed to be 1/4 of vessel diameter. Flow distribution devices can minimize required disengagement space above mesh pads. Contact AMACS for assistance.

