

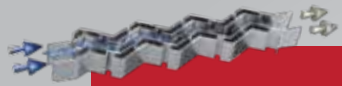
petroMESH

**ENHANCED DOUBLE POCKET
VANE PACK SOLUTION**

**THE LATEST TECHNOLOGY IN
GAS/LIQUID SEPARATION**

* Patent Pending

petroMESH ENHANCED DOUBLE POCKET VANE (EDP)



The EDP is the latest technology in gas/liquid separation

Optional Flow Distribution Coalescing Device

Outlet

PetroMesh Enhanced Double Pocket Vane Assembly

Inlet

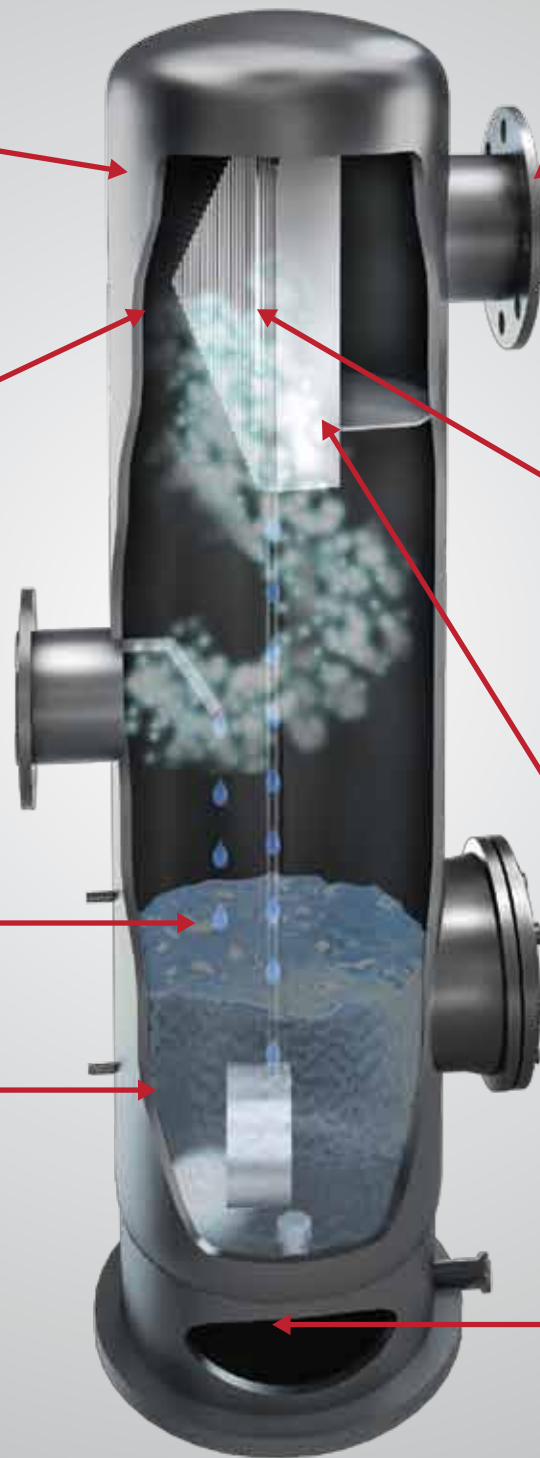
PetroMesh Boxing/Seal Material

Downcomer Pipe

Manway Optional

Liquid Seal

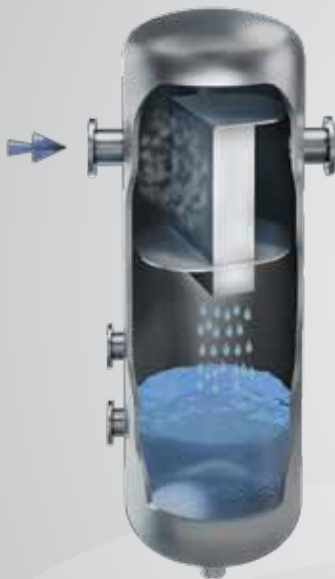
Vortex Breaker



VERTICAL GAS SEPARATOR

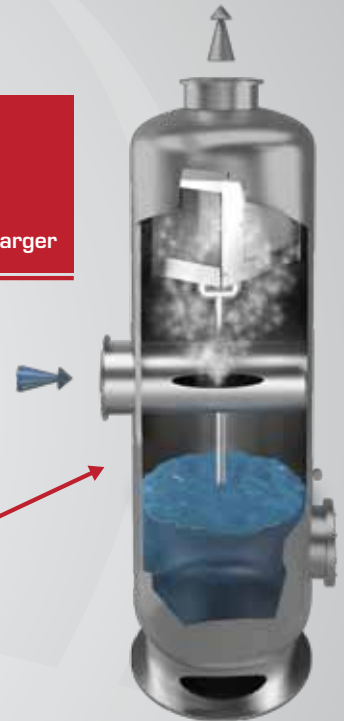
FLEXIBLE APPLICATIONS TO FIT YOUR SPECIFIC PROJECT REQUIREMENTS

- Natural Gas Conditioning
- Oil Mist Removal
- SAGD (Wet Steam Conditioning)
- Final Gas/Liquid separation in 3 phase separators
- Natural Gas processing for removal of amines, glycols and absorption oil
- Nuclear power industry for steam drying in steam generators and reheaters
- Steam Service for the removal of water & oil
- Chemical Plants



In-Line Separator

- Various Inlet/Outlet configurations
- Negligible pressure drop
- Ideal for applications with limited space
- Guaranteed removal of all liquid droplets 8 microns & larger



4 Bank Vertical Gas Separator

- Handles slug flow
- Used in very high capacity applications
- Guaranteed removal of all liquid droplets 8 microns & larger
- Enables small diameter solutions for high pressure applications



Compensating Horizontal Separator

- Extremely high gas capacities
- Can handle large slug flow
- Separated liquid drains into lower chamber or barrel
- Guaranteed removal of all liquid droplets 8 microns and larger



V-Bank Horizontal Separator

- Extremely high gas capacity
- Can be used for 3 phase applications
- Can handle large slug flow
- Guaranteed removal of all liquid droplets 8 microns and larger

WHAT ARE THE BENEFITS OF THE *petroMESH* EDP?

- Utilizing the patent pending *petroMESH* Enhanced Double Pocket Vane (EDP) will enable you to use the smallest possible vessel size for the given gas flow rates.
- Efficiencies are guaranteed as a result of our extensive in house wind tunnel testing, CFD analysis, and 3rd party laser testing of field applications.
- All configurations have a very high turndown ratio giving guaranteed separation at the highest variation of gas flow rates.
- The *petroMESH* EDP has higher liquid handling capabilities than competing vane technology.
- The *petroMESH* separates smaller particles than competing vane technologies.
- The *petroMESH* costs less than all competing vane technologies.
- Removable vane blade designs are available.



PAST

Simplistic vanes have limited gas flow rates. The separated liquid is carried through the vane at relatively low velocities.

PRESENT

Hooked style vanes have limited liquid handling capacity, turndown ratios and will carry over due to induced turbulence at low velocities.

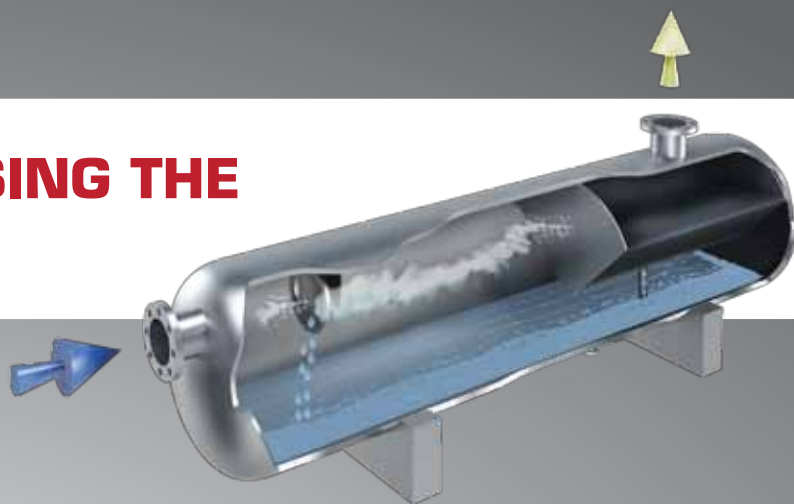
FUTURE

The *petroMESH* EDP has the highest capacity gas flow rates, highest capacity liquid handling, and lowest overall cost.

HOW THE ENHANCED DOUBLE POCKET VANE WORKS

- Bulk liquid is removed from the incoming gas/liquid flow.
- Gas and liquid mist and liquid particles enter the Petromesh Enhanced Double Pocket Vane assembly (patent pending)
- The gas and liquid are forced to change direction. This change in direction ultimately forces the liquid to be trapped in the large pockets of the vane assembly.
- The removed liquid collects in a collection tray and then is drained to the bottom of the vessel via the downcomer, preventing re-entrainment.
- Automated level controls monitor the collected liquid and dump it as required.

WHY EVERYONE IS USING THE *petro*MESH EDP



WHY #1

THE PETROMESH EDP (PATENT PENDING) INCORPORATES A SHIELDED POCKET WITH A ROLLED LEADING EDGE THAT HELPS THE LIQUID FILM GO INTO THE POCKETS VIA SURFACE TENSION.

WHY #2

More sophisticated traditional Vanes that incorporate a double pocket design are very expensive to manufacture. Not only does the **petro**MESH EDP cost much less to manufacture it has higher liquid handling capabilities and more efficient separation of smaller particles.

WHY #3

The most simplistic vane designs just change the direction of the gas several times. The liquid forms a film on the vane and eventually drains from the vane face. Gas velocities are limited as medium to high velocities of the gas will pull the liquid through the vane. The end result is limited separation. Turndown ration is limited. Vessel sizes need to be larger.

WHY #4

Another simplistic vane design has hooks that protrude into the gas passages. These hooks help to catch the liquid film. However, velocities are limited before the liquid is carried through the vane because of turbulence created by the protruding hooks. Turndown ratio is limited. Vessel sizes need to be larger.

WHY #5

The basic principle of changing fluid direction to promote the separation of liquid from gas has many forms. Cyclo type separators use a spinning action. These types of separators have limited turndown ratios compared to our advanced vane styles. The **petro**MESH EDP has a 10:1 turndown ratio compared to 3:1 for cyclo technology.

WHY #6

All spot welding is done to aerospace specifications using the most advanced technologies. Plus, MTR's on boxing and vanes are standard.



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