Pan America Environmental, Inc.

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ENGINEERING SPECIFICATION

TPI Series Oil Water Separator Coalescing Media pack

Engineering Specification

GET A QUOTE	SPEAK TO AN ENGINEER
technical@panamenv.com	262.716.0105

PRODUCT PAGE

https://www.panamenv.com/oil-water-separators/tpi/

SECTION 1.0 MEDIA PACK DESIGN

Performance

The Pan America Environmental TPI Series Oil/Water Separator coalescing media packs are designed to produce the following performances:

Oil removal:	50-99%
TSS removal:	75-90%

The design is based on an effluent concentration of 50 mg/l or less of oil droplets 60 micron and larger of non-emulsified, free and dispersed oils. By virtue of our Wave Plate™ TPI/CPI corrugated coalescing media and tank designs readily settleable solids are also removed.

Each waste stream has characteristics particular to that stream particle size distribution differs from application to application. Due to differences in each application, it is required to review and analyze each project for proper TPI design and sizing.

1.01 Design

The TPI Series tilted plate pack coalescing media packs are designed per API-421 1st Edition, February 1990, Section 4 Parallel Plate Separators. The Corrugated plate interceptor media pack design is based on a 60-micron oil droplet size with an expected performance of 50 mg/L or less.

Tilted plate oil water separator media angle can be provided from 45° - 60° and a plate spacing of 0.75-2″. Pan America provides its Wave Plate™ TPI plate pack which allows more surface area per plate pack than a standard flat plate pack. The TPI separator design is recommended for applications where high solids loadings are expected. The TPI design can handle solids better than higher performance coalescing designs.

1.02 TPI Wave Plate™ Corrugated Coalescing Media Pack

Pan America Environmental Wave Plate™ corrugated, FRP construction coalescing media shall be provided as manufactured by Pan America Environmental, Inc. The media plates will be bound together in a pack via spacers and continuous 304 SS connecting rods allowing all plates to be removed from the tank simultaneously. The plate pack(s) also include lifting lugs to facilitate installation and removal of the plate pack at a 45° angle from the horizontal. The standard plate spacing will be 3/4”. Tank media pack

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support structure sets pack angle. As an option the plate pack(s) can be provided mounted in and encased by a 304 stainless steel frame system with lifting lugs and removable lids to allow ease of moving media packs and disassembly/assembly.

1.02 TPI Flat Plate Coalescing Media Pack

Pan America Environmental flat plate PVC construction coalescing media shall be provided as manufactured by Pan America Environmental, Inc. The media plates will be bound together in a pack via spacers and continuous 304 SS connecting rods allowing all plates to be removed from the tank simultaneously. The plate pack(s) also include lifting lugs to facilitate installation and removal of the plate pack at a 45° angle from the horizontal. The standard plate spacing will be 3/4". Tank media pack support structure sets pack angle. As an option the plate pack(s) can be provided mounted in and encased by a 304 stainless steel frame system with lifting lugs and removable lids to allow ease of moving media packs and disassembly/assembly.

1.03 Tank Review Engineering

A review of your TPI tank can be reviewed by one of Pan America's in house design engineers if desired. If this cost is not included in this quotation please contact PAE for a quote if you would like the tank reviewed.

Applications

- Oil water separator coalescing media
- Industrial oil water separator media pack
- Wastewater oil separation media
- Refinery oil water separator media
- Produced water treatment media pack
- Frac water oil separator media
- Groundwater remediation oil water separator
- Machining coolant oil removal media
- Petrochemical oil water separator plates
- Biodiesel plant oil separator media
- Railcar tank cleaning operations

Replacement Coalescing Media

When looking for TPI oil water separator media packs for an existing oil water separators contact Pan America to discuss the existing ows tank for retrofitting replacement coalescing media for TPI oil water separators.

TPI tilted plate pack for concrete or steel oil water separators can be sized and designed for most tanks with high solids and oils. TPI media pack wastewater treatment processes are also very effective with viscous oils. Pan America Environmental can provide corrugated plate media for oil water separators 5-10,000 GPM and greater for efficient oil fuel separation media pack retrofit projects.

SECTION 2.0 MATERIALS OF CONSTRUCTION

2.01 Media Pack Construction

Media pack component construction:

- Plates: PVC flat plate or FRP Wave Plate™
- Connecting rods: 304 SS
- Spacers: schedule 80 PVC
- Pack frame: 304 SS

2.02 Fasteners

All wetted fasteners to be ANSI, 300 series stainless steel.

2.03 Manufacturer

The manufacturer of preference shall be Pan America Environmental, Inc.

2.04 Warranty

Pan America Environmental warrants its products to be free of defect in materials and workmanship for a period of one year from the date of shipment.

SECTION 3.0 DESIGN DETAILS

3.01 General Details

Tank Dimensions:	65’L x 105‘W x 27’-6”H
Tank bottom style:	Hopper bottom
Media packs provided:	4
Media cu. ft.:	100 total
Media sq. ft.:	400
Media plate spacing:	3/4”
Media type:	PAE Wave Plate™/flat plate TPI, corrugated coalescing
Flow path:	Diagonal per TPI design
Max. flow rate:	50 GPM
Oil sp. gr.:	Equal to or less than 0.95
Water sp. gr.:	1.0
Water viscosity:	0.0115
Performance:	50 mg/l or less, 60 micron, non-emulsified, free & dispersed oil droplet

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SECTION 4.0 ITEMS PROVIDED WITH THIS QUOTATION

4.01 Components Provided

- (2) TP media pack with frame
- (1) Pack drawing

4.02 Approval Package

The Approval Package will consist of the following:

- Dimensioned TPI pack drawing for customer use

SECTION 5.0 FREIGHT AND SHIPPING PREPARATION

5.01 Freight Cost

The quoted freight cost is an actual or estimated cost. This cost is subject to change throughout the life of the quote and any resultant order.

5.02 Shipping Preparation

The following are provided:

- TPI pack is provided with an export crate.

SECTION 6.0 PAN AMERICA ENVIRONMENTAL STANDARDS

6.01 Pan America uses elements of the following standards in its design and fabrication processes.

AWS D1.1/1.1M	API	API-650	API-421
ANSI	IEC	AWS D1.6	UL
UL-508	UL-845	SSPC	ASME
CSA	CE	NEMA	NFPA79
NEC			

Specifying a TPI Series Oil Water Separator Coalescing Media pack for your project?

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