

enduro

Composite Engineered Solutions



Headquarters
16602 Central Green Blvd.
Houston, TX 77032
713-358-4000 Phone
800-231-7271 Toll Free
713-358-4100 Fax
www.endurocomposites.com

Middle East
ENDURO MIDDLE EAST
2nd Industrial Area
Dammam, Saudi Arabia
+966-50-955-0061 Phone



Company Overview

Expert in design & manufacturing of technologies utilizing
reinforced composites (GRP/FRP)
for highly demanding industrial & infrastructure applications



Founded in 1975

- Houston, Texas
- Freeport, Texas
- Dammam, Saudi Arabia (new)

A PARTIAL LISTING OF OUR CLIENTS

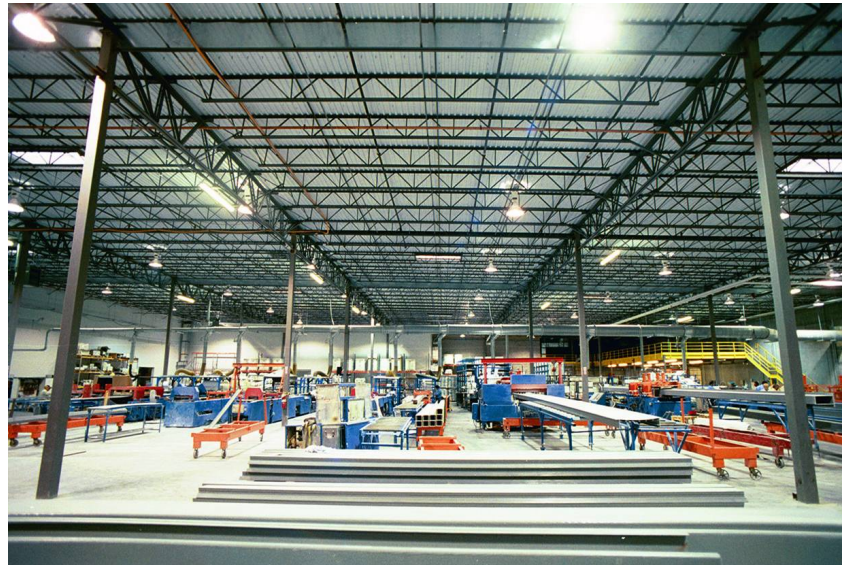


INDUSTRIES SERVED

Offshore & Marine
Chemical
Oil & Gas
Pulp & Paper
Mining
Metal Processing
Food Processing
Transportation
Water & Wastewater

About Enduro Composites

- Revenues approximately \$50 Million
- 400 Employees
- Over 55 Years of composite technology & corrosion applications



Mission Statement

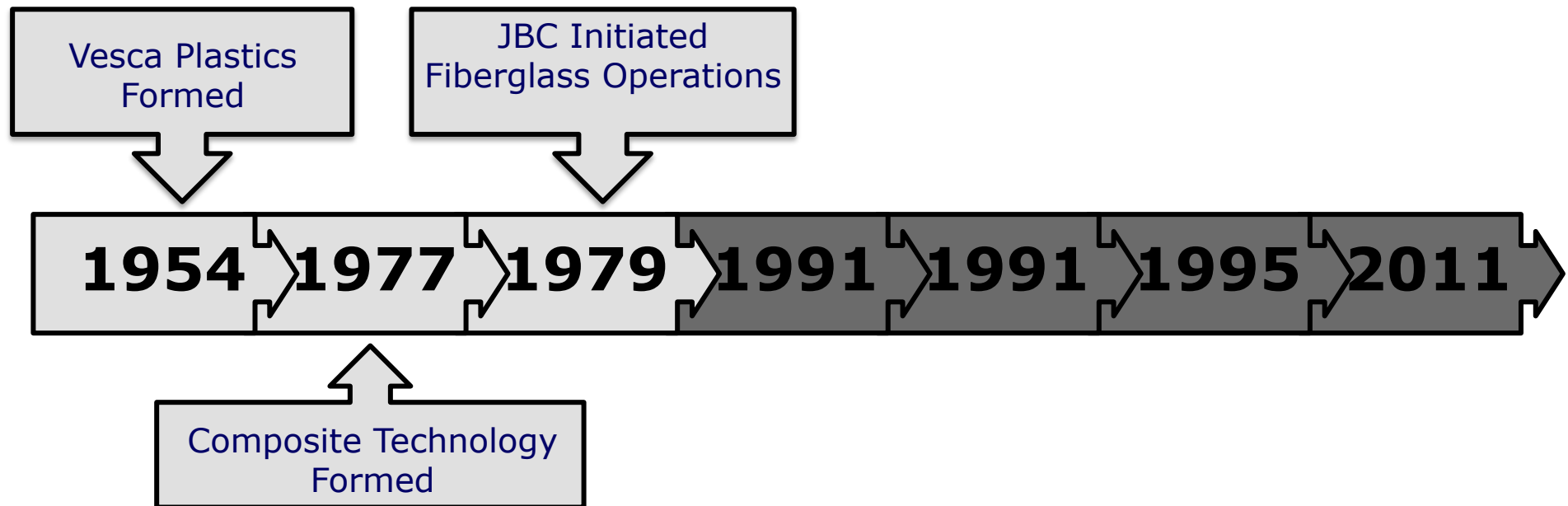
Serve Customer Needs

by

*Providing Value through the Use of
Reinforced Composite & Odor Control Solutions*

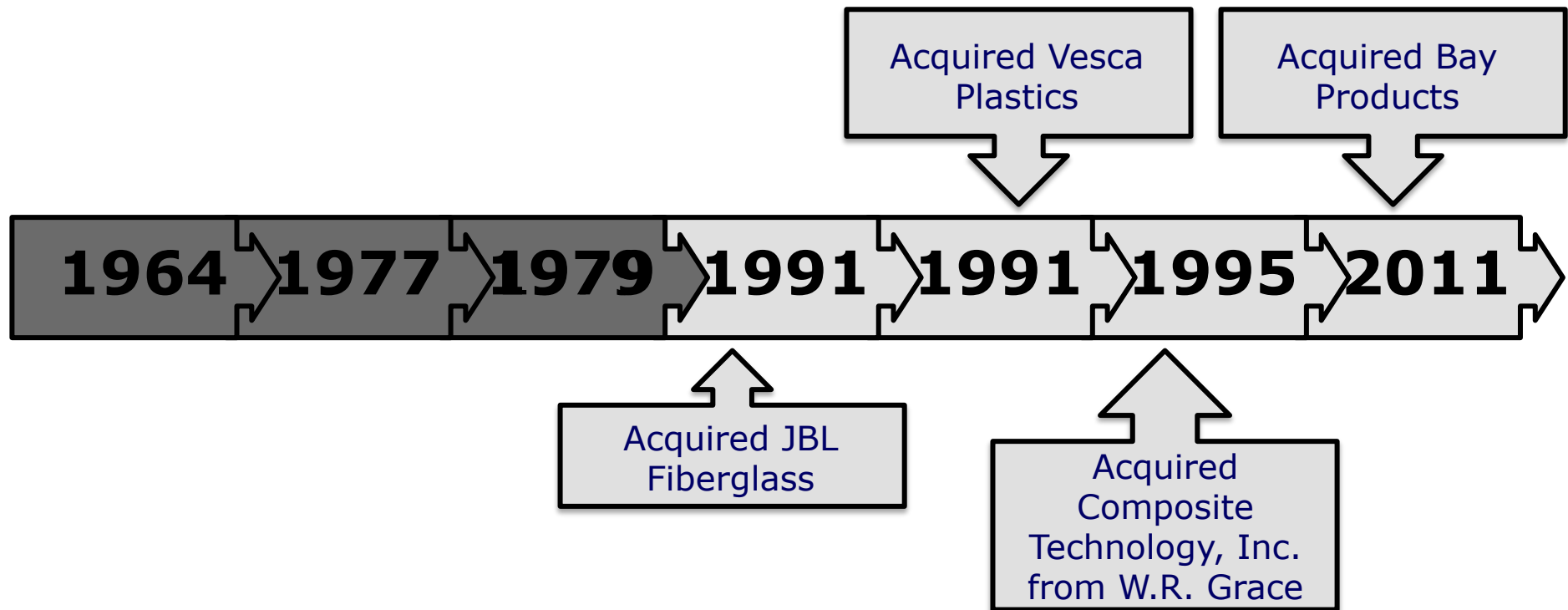
History of Enduro Composites

Beginnings

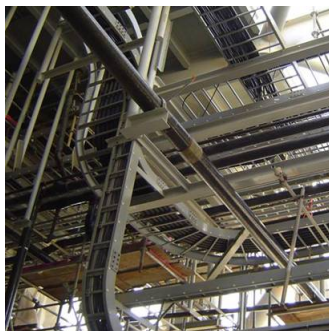


History of Enduro Composites

Growth & Acquisition Era



Product Groups



Electrical Products

Ladder Cable Tray
Channel Cable Tray
Flanged Cable Tray
Wireway
Strut & Structural Supports
Instrument Stands
Third Rail Cover Board



Building Products

Roofing & Siding Panels
Roof Deck & Form Deck
Structural Shapes
Industrial Louvers
Ridge Vents
Industrial Gutter
FRP Enclosures/Buildings



Environmental Products

XL6 Tank Cover
SureGrip Tank Cover
Tuff Span Tank Cover
Baffle & Partition Wall



Odor Control Process Systems

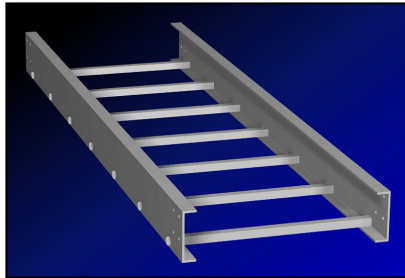
Adsorbers
Scrubbers
Biological Filters



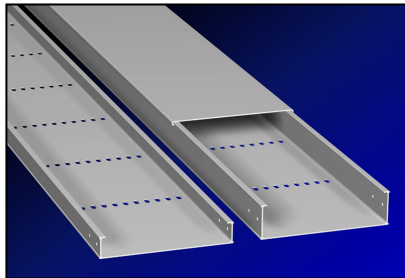
Pipe & Vessel Products

Filament Wound Pipe
Hand Lay Up Pipe
Dual Laminate Pipe
Concrete Coatings
Plant Maintenance

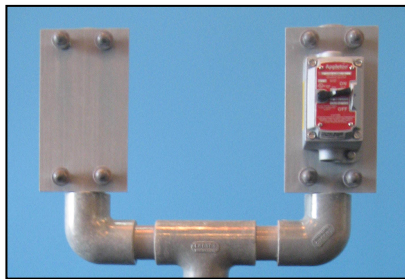
Electrical Products



LADDER CABLE TRAY



CHANNEL INSTRUMENTATION CABLE TRAY



FLANGED INSTRUMENTATION CABLE TRAY

WIREWAY

STRUT & STRUCTURAL SUPPORTS

INSTRUMENT & PUSHBUTTON STANDS

THIRD RAIL COVER BOARD

Proven History of Cable Tray Performance



BP Thunderhorse

- Atlantis, GoM
- Holstein, GoM
- Mad Dog, GoM
- Mango/Cashima, Trinidad
- Marlin VK915, GoM
- Kapok Cassia A/B



ConocoPhillips Magnolia

- Bohai Bay, China
- CoroCoro, Venezuela



Chevron Tahiti

- Sabine Pass LNG Terminal, Louisiana
- Petroneus, GoM



Anadarko Independence Hub

- Anadarko Marco Polo, GoM



Exxon Diana

- ExxonMobil, Zafiro, W. Africa



Valero Refinery / Saipem – Aruba

Proven History of Performance in the Energy Sector

- Enduro has cable tray applications in coastal marine environments that have been in use for approximately **30 years**
- Other major projects
 - Atlantic LNG
 - BHP Angostura
 - Marathon Alba
 - Petrobras (multiple)
 - Kerr McGee Red Hawk
 - EOG Toucan
 - Noble Drilling (multiple)
 - Husky Energy



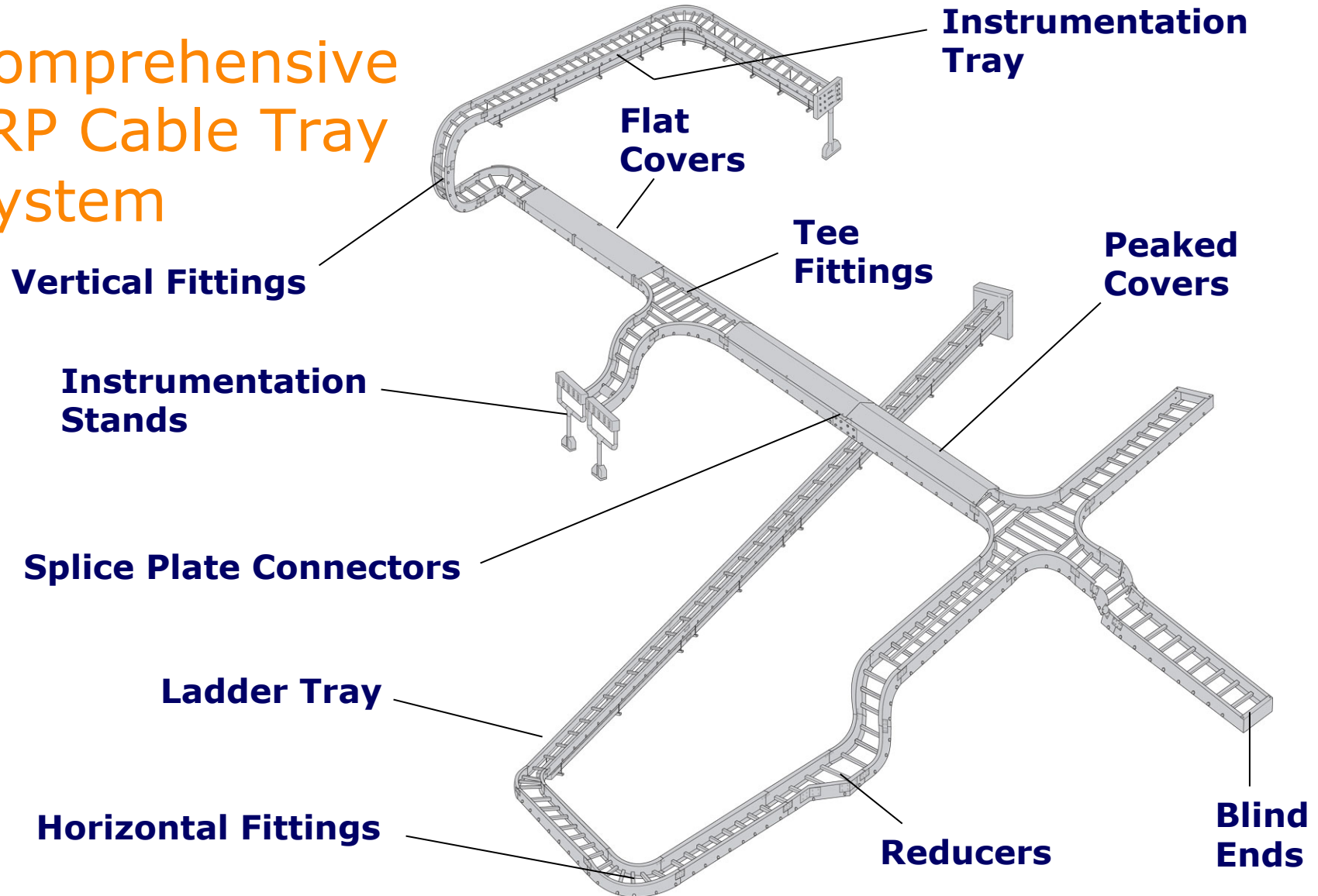
ConocoPhillips
Bohai Bay Platforms A-F & FPSO, China
70 km of Enduro Cable Tray



PEMEX
Minatitlan Refinery, Mexico
120 km of Enduro Cable Tray

BP - Mad Dog, Thunderhorse, Holstein, Atlantia
Gulf of Mexico
70 km of Enduro Cable Tray

Comprehensive FRP Cable Tray System



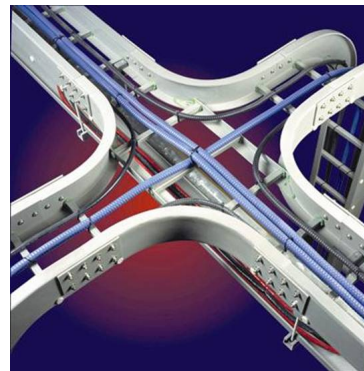
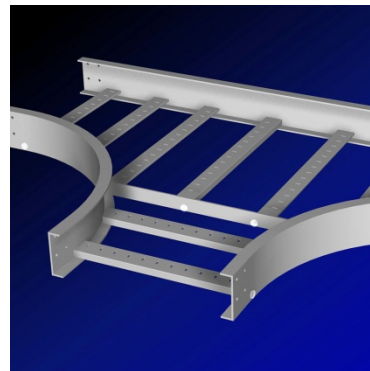
Ladder Type Cable Tray



Widths: Depths: Complete Offering

- | | | |
|--------------------|-------------|---------------------------|
| – 6" (150) | – 4" (100) | – Straights & Fittings |
| – 9" (225) | – 6" (150) | – Covers |
| – 12" (300) | – 7" (175) | – Standard or Marine Rung |
| – 18" (450) | – 8" (200) | – Multiple Resin Options: |
| – 24" (600) | – 10" (250) | • Polyester |
| – 36" (900) | | • Vinyl Ester |
| – Custom available | | • Halogen Free |
| | | • Conductive |
| | | • Modar |
| | | • Phenolic |

Rung design
results in
LARGEST
usable fill area
available



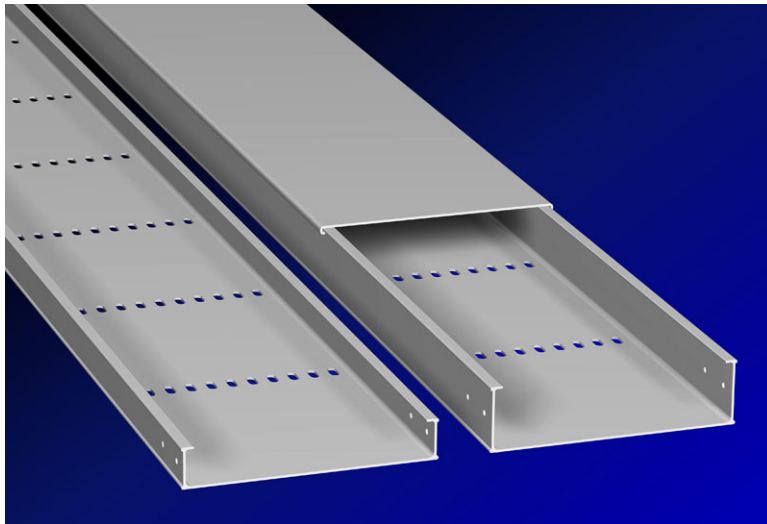
**Mechanical & Adhesive
Locked Rung**

Custom Capabilities



Instrumentation Tray

Both flanged and traditional channel type



Widths:

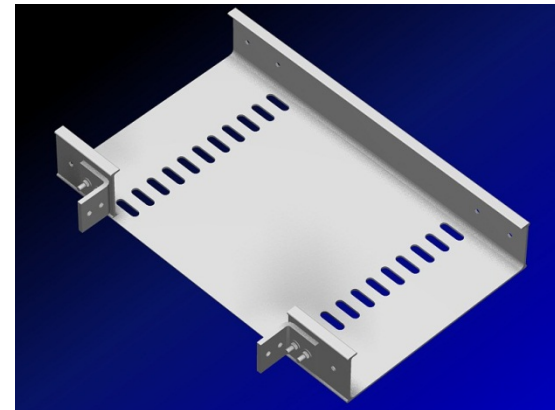
- 50mm (2")
- 100mm (4")
- 150mm (6")
- 200mm (8")
- 300mm (12")

Depths:

- 50mm (2")
- 80mm (3+")

Complete Offering

- Straights
- Fittings
- Covers
- Support Systems
- Accessories
- Multiple Resin Options
- Slotted or Solid



Comway - Lay-in Wireway

- Ideal for
 - Underground
 - Wash-down areas
 - Integrated within concrete slabs
- Sizes Available
 - 2.5" x 2.5"
 - 4" x 4"
 - 4" x 12"
 - 6" x 6"
 - 6" x 12"



Fiberglass Instrument & Pushbutton Stands

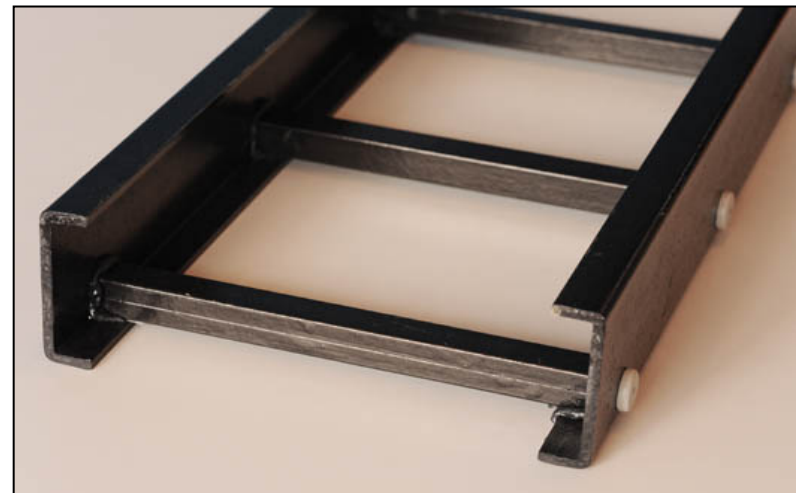
- Less expensive than stainless steel
- **Corrosion resistant**



ABS Summary on Enduro EHRT Conductive Tray on FPS Offshore

ABS has approved Enduro FRP Tray for use in specific areas
(outside / hazardous locations)

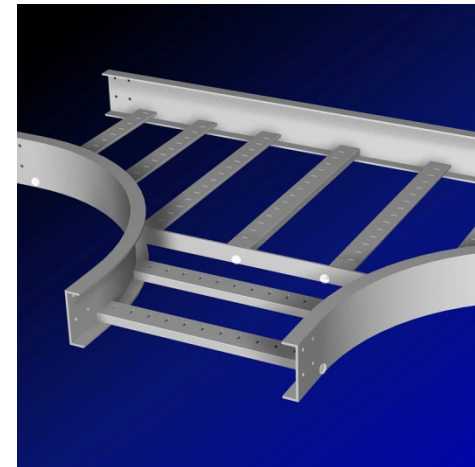
Low Smoke option also available



Enduro Conductive Fittings

ABS Approved

- Enduro provides Molded & Mitered
 - Ladder & Channel Type
- Molded type is industry preferred
- Molded fittings are approximately 50% Lighter v. Mitered
 - Design Advantage (Weight)
 - Installation Advantage (Ease)
 - Result: Cost Savings
- Molded Fittings often preferred aesthetically



Building Products



TUFF SPAN® ROOFING & SIDING PANELS

**STRUCTURAL SHAPES – BEAMS, ANGLE,
CHENNEL**



RIDGE VENTS & LOUVERS

GUTTER



**PRE ENGINEERED BUILDINGS /
ENCLOSURES**

Odor Control Process Systems



ABSORBERS



SCRUBBERS

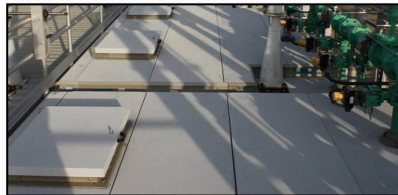


BIOLOGICAL FILTERS

Environmental Structures



XL6 TANK COVER SYSTEM



SUREGRIP TANK COVER SYSTEM



TUFF SPAN TANK COVER SYSTEM



BAFFLE WALL

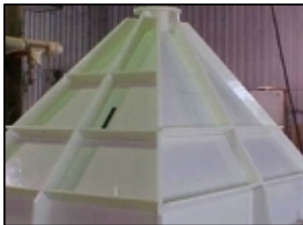
Pipe & Tank Products



FILAMENT WOUND PIPE



HAND LAY UP PIPE



DUAL LAMINATE PIPE



CONCRETE COATINGS

PLANT MAINTENANCE

Enduro Support

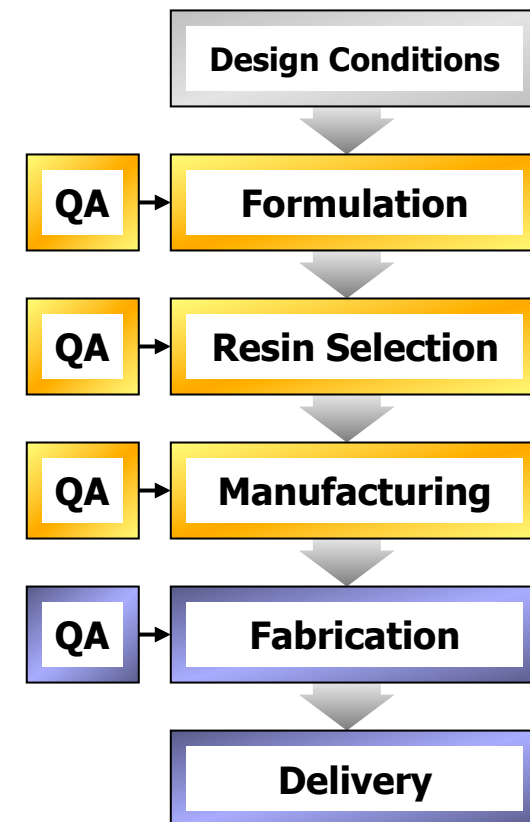
- PDMS
- AutoCAD Drawings
- Specification Assistance
- Custom Solution Design
- Factory Tours
- Lunch & Learn Presentations



Vertically Integrated Manufacturing

What does vertically integrated mean?

- We DON'T purchase and assemble another manufacturer's components; we make our own
- We control the process from raw materials to the finished product
- **We control the quality from beginning to end**
- We can design products specific to your application



Pultrusion Process



Glass Reinforcements



Resin Impregnation



Heated die cures resin



Pullers drive the process

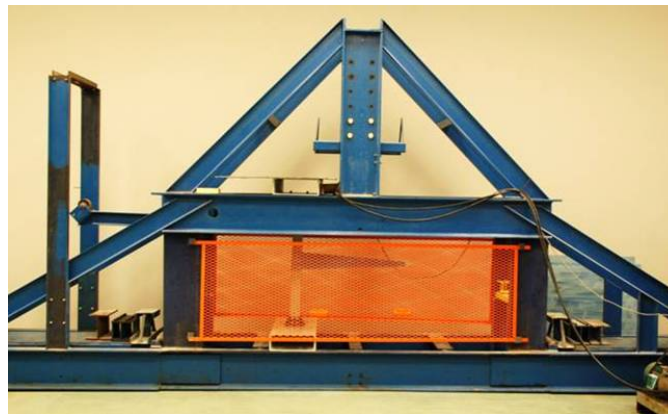
Quality Control Systems

World Class Quality Control & Testing

- Comprehensive quality control, in-house testing capability, and 3rd party, independent validation



Full-scale vacuum
box testing



3-Point Load test

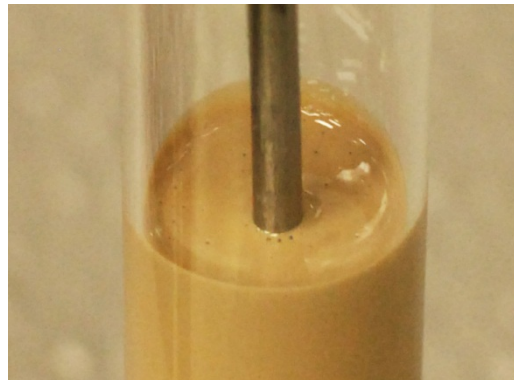


QUV (ultraviolet/
accelerated
weathering)

Quality Assurance

Quality control through in-house testing capabilities and 3rd party, independent validation

- **LOI (glass content)**
- **Interlaminar shear strength**
- **Compression strength**
- **Pin shear strength**
- **Barcol (surface hardness)**
- **SPI (gel time, cure time, peak exotherm, viscosity)**



SPI – “Gel Test”

- **Conductivity (if required)**
- **Intra-die peak exotherm**
- **Load test**
- **Visual inspection according to ASTM standards**
- **Dimensional validation**
- **QUV (ultraviolet/accelerated weathering)**
- **Color match**
- **Raw material inspection on all incoming materials (including certificates of compliance)**



Enduro Facilities

- **Headquarters:** Houston, TX
- **Enduro Middle East:** Dammam, UAE
- Freeport, TX
- Pearland, TX



Joint Venture

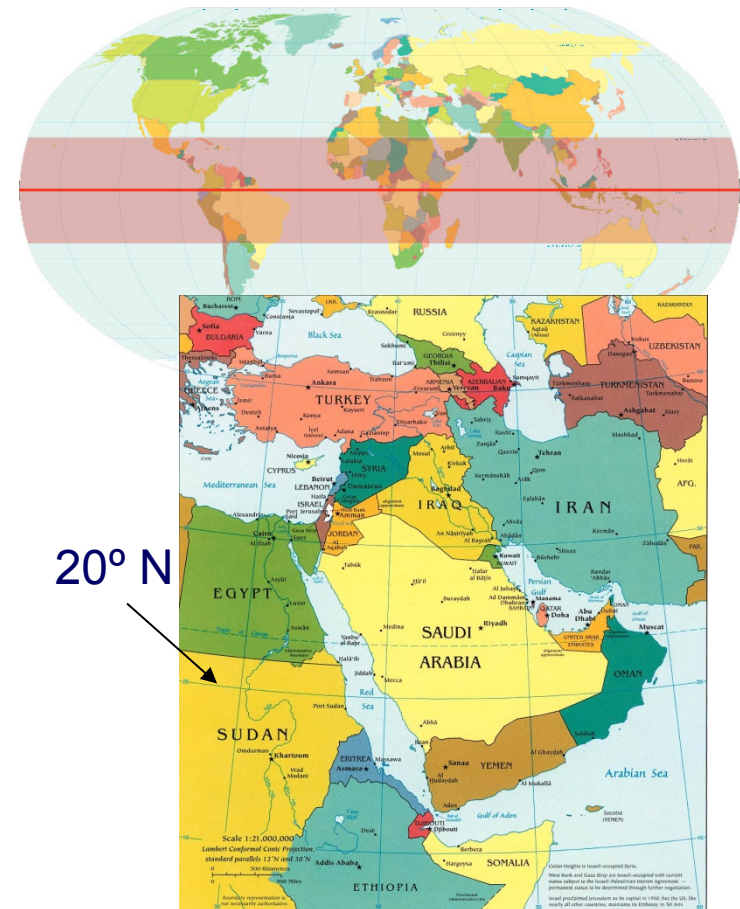
ISG & Enduro Composites, Inc.



Middle East Market Drivers

Application Environment & Technology Adoption

- **Geographic Location**
 - The most attractive markets border the two saltiest bodies of water in the world
 - High heat causes higher rate of saltwater evaporation
 - Proximity to equator within latitude of 20 degree North translates into windy environment (tradewinds) which moves evaporating salt
- **Suitable Environment for Composites**
 - All variables creates a highly conducive need for the use of corrosive resistant materials including:
 - Coated metals / Stainless Alloys / Non-metallic materials
- **Market Acceptance**
 - Precedent for FRP/GRP has already been set with a few industrial majors
 - Many engineering ops and design segments are uneducated on the value and historical success of composites



Why Partner with Enduro?

- Enduro's industry brand reputation
- AKH has previous purchase history with Enduro
- Manufacturing opportunity
 - Aligned with KSA domestic growth
 - Saudi ownership supported by KSA government & plant owners
- Emerson's support and recommendation as a commercial alliance partner
 - Valuable alternative to Cooper Crouse Hinds & B-Line



Partnership with ISG

- Recommended to Enduro by strategic partner – Emerson EGS Electrical Group
- 30 Branches in MENA & Globally with 200+ Salespeople
- Experience with major EPCs & Owners
- Subsidiary, ISG, has manufacturing agreement with EGS / Appleton Electrical Group
- One of KSA's Largest Electrical & Instrumentation Distributors
- Stocking distribution agreement with ARAMCO
- Potential to assist on other Enduro product lines





Experience, Reliability & Value

Thank You!