

Leading Supplier of Structural Fiberglass Products



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## AIMS Composites is a world leader

in offshore vortex induced vibration (VIV) suppression, engineered fiberglass structural systems, and platform dock fendering systems. Since 1982, AIMS has been the leader in supplying, engineering, and fabricating fiberglass grating and structural systems. AIMS supplies a full line of platforms, dock fenders, fiberglass signs, vortex breakers, VIV suppression products, blast panels, and mudmats. In addition, we are a leading supplier of fiberglass handrail and stair systems, as well as and other specialty fiberglass products.

AIMS prides itself on its ability to take the customer project from the initial design and engineering phase to the implementation and installation of the finished product.

In an effort to continually improve services, AIMS actively seeks expansion opportunities within the United States and in overseas markets. In 1993, we purchased Teledyne Monarch Rubber's platform fender product line, moved the product tooling to Houston, and began manufacturing and marketing a platform fender product line, i.e., energy cells, rubstrips, and barge bumpers. In 2017, AIMS began fabricating aluminum structures and handrails.

To market our products and services around the world, AIMS forms partnerships with local companies in various countries, including Malaysia, Australia, Korea, Singapore, India, United Arab Emirates, Nigeria, Brazil, and Mexico. Everywhere there is offshore oil and gas, you will find AIMS Composites.







## **Engineering & Design**

As a leader in engineered fiberglass structural systems, AIMS staffs a team of professional engineers, and each project bears the seal of a Registered Professional Engineer. Further, AIMS has developed and utilizes a computerized, 3-dimensional fiberglass structural design software package. The program not only performs stress and deflection calculations, but also calculates the unity ratios of each modeled, structural member using the latest "allowable stress formulas" in the structural fiberglass industry. Our software will resize any significantly "under-stressed" member to a more efficient size and will also resize "over-stressed" members in order to achieve a unity ratio of less than 1.0. This program allows AIMS engineers to provide the most efficient structural systems possible. Our engineering staff is unequaled in the design of fiberglass structural systems.

AIMS has published the AIMS Fiberglass Structural Design Manual, which is a complete design guide for use by structural engineers when designing fiberglass structures.

Please feel free to contact us for a copy, or you may download a copy from our website.

AIMS employs highly skilled designers with both 2-D and 3-D capability who design primarily with AutoCAD for 2-D drawings and with SolidWorks for 3-D projects. However, we also have PDMS capability. With our state-of-the-art structural analysis package and our excellent design capabilities, AIMS produces the safest and most economical fiberglass structures in the industry.



## TalonTM System

The Talon<sup>™</sup> System is an innovative attachment system that has been developed and patented by AIMS Composites for the purposes of mechanically fastening a molded fiberglass grating to the framing members of an offshore platform subjected to wave action.

AIMS guarantees the performance of the Talon<sup>™</sup> System, which is designed to resist the most severe wave forces exerted by hurricanes and typhoons. This guarantee states that if a panel of our grating is lost due to wave action, we will provide free labor and free replacement materials to restore the grating system to its original integrity. Contact us for more details on our comprehensive Wavezone Guarantee.



The patented AIMS TalonTM System is designed to resist hurricane wave forces with guaranteed results.

## **Fiberglass Fabrication**

AIMS is a world leader in the fabrication and installation of fiberglass structural systems. As a turnkey fiberglass contractor, we design, fabricate and install fiberglass structural systems.

The AIMS fabrication shop consists of 18,000 ft<sup>2</sup> of floor space with expansion capabilities to double in size to 36,000 ft<sup>2</sup>. Our experienced fabricators take engineered drawings and produce a fabricated product that is completely customized to meet the customer's requirements. Quality control is an integral part of the fabrication process.

AIMS' fabrication process ensures that the material arrives at the jobsite ready for installation. Due to the critical nature of offshore work and the difficulty of resolving problems on the open water, AIMS has implemented a stringent quality assurance program. All material is fabricated and assembled to ensure that all



parts fit and are included in the shipment. We always strive to improve the fabrication process by using our proven standard fiberglass structural details while retaining the flexibility and engineering capabilities to design structures to the customer's requirements.

AIMS fabricates numerous other custom products, such as fiberglass platform ID signs, stair treads, ladders, handrail systems, and other specialty products.

## **Installation Services**

Offshore, onshore, and offsite installation crews give AIMS the flexibility to service what it sells. AIMS crews have worked in every major fabrication yard along the Gulf Coast, and, in addition, AIMS' crews have labored in the Gulf of Mexico, offshore Trinidad, Nigeria, and Southeast Asia. AIMS crews have supplied experienced support to virtually every operating company in the Gulf of Mexico.

AIMS provides offshore and offsite installation services for wellhead access platforms, fiberglass grating and handrail systems, syntactic foam insulations, and many other types of projects requiring offsite installation services.



#### Wavezone Fiberglass Handrail System

As further evidence of AIMS' commitment to providing high-quality products and services, our engineers diligently seek to improve upon and develop technology. AIMS fiberglass handrail system for use in the wavezone areas of an offshore platform is one of those advancements. AIMS fiberglass handrail system eliminates the costly maintenance problems associated with conventional steel handrails and resists the extreme wave slam forces realized in top-of-jacket walkways, boat landings, and other wavezone areas of offshore platforms. Tubing is available in both round and square.

The key to our new system is the design, which sustains a 1,000 pounds per square foot (PSF) wave slam force and comes with a washout warranty, including hurricane waves.

# ROV, Diver, and Moonpool-Friendly Vortex Strakes

AIMS has developed ROV-friendly vortex strakes and fairings. Having successfully supplied the strakes for the Mardi Gras Pipeline Spans, AIMS has reduced the cycle time (the time required for an ROV to install a strake or fairing) to less than 5-7 minutes compared to 20-25 minutes for our competitors' systems.

# ROV, Diver, and Moonpool-Friendly ADFS Fairings (Patented)

AIMS has developed a very low drag, highly efficient VIV suppression device known as the AIMS Dual-Finned Flow Splitter (ADFS). While this device has shown to be upwards of 95 percent effective at suppressing the lateral amplitudes associated with VIV, the product also offers a very low drag coefficient (CD = 0.4 approximately). Testing on this product has been performed at 1/4 scale, 1/2 scale, and at full scale over a range of Reynolds' Numbers from the low 1000's to 1.9 million. Installation cycle times are about 7-12 minutes per part.







## **Boat Landing Rubstrips**

AIMS rubstrips are manufactured from a high-strength polyether urethane that possesses twice the tear resistance of conventional extruded butyl rubber rubstrips, while also providing a much lower coefficient of friction.

## **Barge Bumper Systems**

AIMS provides "fully fabricated" barge bumper systems, complete with energy cells, kingposts, doubler plates, clamps, etc. AIMS' engineering staff can meet the requirements of any project.







The AIMS "TMR" Energy Cells utilize a "bond-in-compression" manufacturing process that yields two significant improvements compared to competitive products:

- Rubber-to-metal bond is in compression, not tension, as with competitive cells
- Absorbs twice the kinetic energy of competitive cells

### **Removable Fire-Proofing Panel Systems**

AIMS now offers removable fire-proofing panels for areas where fireproofing is needed and where the need for future inspections prohibit the use of conventional spray-on systems. Our panel system provides certifiable fire protection, while allowing for removal, inspec- tion, and re-installation. Shut-in valves, wellheads, and major structur- al joints are excellent examples of where our removable fire-proofing panels are to be used.



#### **Fiberglass Windwall Panels**

Many offshore platforms incorporate windwalls to serve as a windbreak for personnel and equipment. The conventional method is to provide steel sheathing onto a steel frame, which can produce tremendous corrosion in just two years. AIMS designs, fabricates, and installs fiberglass windwall panels supported by fiberglass shapes, thus eliminating corrosion and excess weight.

## **Fiberglass Mudmats**

AIMS fiberglass mudmats eliminate the need to cathodically protect the skin of conventional steel plate mudmats. Due to our high- strength fiberglass mudmat planking (flexural strength of 65,000 psi), many anodes are no longer required and are, therefore, eliminated—lowering the expense of a project. With the elimina- tion of anodes and the reduction in steel tonnage, AIMS fiberglass mudmats are more cost effective than steel plate mudmats.





#### **Fiberglass Security Fencing**

AIMS security fencing systems provide a superior level of security. Cutting tools and torches are virtually useless against the strength and characteristics of our fiberglass fences. Threaded fasteners bolt through fence panels and securely tighten with AIMS panel plugs behind the fence, adding an additional level of security.

### **Fiberglass Platform Identification Signs**

Our fiberglass platform ID signs are lightweight, corrosion resistant, and remain brilliant for years. These signs attach directly to the handrails—eliminating the need for the steel angle frame normally required to attach steel plate signs.





### **Dry Tree Work Platforms**

Deepwater projects utilizing "dry" trees require work platforms to provide access to the wing valves, chokes, and other valves and gauges. AIMS incorporates a hybrid steel and fiberglass system to maximize strength, resist corrosion, and reduce the weight of the work platform, which is structurally connected to the stem of the tree.

#### **Fiberglass Work Platforms and Walkways**

AIMS fiberglass work platforms and walkways provide a safe work environment. Grating is available in both molded and pultruded fiberglass. Our grating products possess all of the great qualities of fiberglass, some of which include, slip resistance, electrical and thermal non-conductivity, light weight, non-corrosive, and low maintenance.

**Fiberglass Structures Around** Wellheads and Vessels

Lightweight and easily installed without heavy-lift equipment or welding, our fiberglass structures are an excellent alternative to conventional steel structures. Custom designed for any well config- uration, our FRP structures are a corrosion-resistant and mainte- nance-free alternative. Total installed costs are typically less than steel, while also eliminating maintenance costs.

#### **Fiberglass Pipe Penetration Collars**

These collars provide the 4" kickplate required by OSHA and also provide additional support to the grating where the pipe penetra- tion has been made. They eliminate the need for additional struc- tural members to support the cut grating at the penetration.

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## **Fiberglass Ladders and Cages**

Meeting OSHA requirements, our fiberglass ladders and cages are 1/3 the weight of steel ladders. For those long vertical spans where lateral support is not possible, our "stiffened" ladders are the solution.

## **Fiberglass Stair Treads**

Have you walked down a stair system with steel treads on a wet and rainy day? It is an accident waiting to happen. Our gritted fiberglass treads are many times more skid resistant than steel grating treads and are corrosion resistant.

### **Fiberglass Stair Tread Covers**

Cover up those rusty and slippery steel grating treads with our skid-resistant fiberglass tread covers. They are easy to install and eliminate unsafe walking conditions. Fluorescence is also available for added nighttime safety.

## Vortex Induced Vibration (VIV) Suppression

AIMS vortex strake and fairing designs (AIMS Dual-Finned Splitter–ADFS) are supported by the most comprehensive test data in the industry. AIMS has also developed a ROV-friendly system that allows for the retro-fit installation of our strakes and ADFSs. Our strakes and fairings are very efficient in the elimination of VIV. AIMS has spent in excess of \$2,000,000 to obtain data that we freely issue to engineering firms for use in their projects.









## **Market Applications**

AIMS products and services have been successfully used in various applications in many different industries. Wherever there is value placed on safety, eliminating maintenance expenditures, ease of installation, and long service life, AIMS should be consulted. The following are industries and locations where our products are found:

#### **Offshore Drilling & Production Facilities**

wellhead access platforms around wells & vessels, stair towers, grating systems, electrical cable trays, mudmats

Petrochemical Plants & Refineries walkways & platforms around vessels and equipment, stair towers, trench grating

Industrial & Municipal Wastewater Facilities walkways & catwalks in and around clarifiers, settling basins, and platforms used as storage areas

Pulp & Paper Mills walkways & catwalks in and around their waste water plants, including bleaching and washing areas

Metal Plating & Mining Facilities platforms in processing areas, catwalks, stair towers, and storage areas

Commercial Warehouses grating systems for additional storage areas and mezzanines

Beverage & Food Processing Plants grating systems & platforms in and around wash-down areas, access platforms, and storage areas

Hi-tech Computer Industry Facilities grating systems in clean rooms and etching areas

#### Water Park & Recreational Facilities

trench grating in and around pools, structural systems for flowing streams

Cooling Tower Industry access walkways & towers, de-misters

Federal & State Parks bridges & erosion control

#### Valuable features of AIMS' products for these and other industries

include: • Excellent corrosion resistance and elimination of maintenance

- Lightweight and ease of installation
- High strength-to-weight ratio
- Excellent non-skid characteristics, safety, and ergonomics
- Fire resistance
- Electrical and thermal non-conductivity
- Durability and long service life
- Great return on investment



## AIMS COMPOSITES

Dedicated to customer service and support

#### **AIMS Composites**

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