

# ADVANCED INDUSTRIAL & MARINE SERVICES, INC.

**VIV SUPPRESSION SYSTEMS  
(STRAKES AND FAIRINGS)**

**ROV FRIENDLY STRAKES  
AND FAIRINGS**

**FIBERGLASS GRATING SYSTEMS**

**FIBERGLASS STRUCTURES,  
LADDERS, HANDRAILS,  
AND STAIRS**

**FIBERGLASS MUDMATS**

**FIBERGLASS PLATFORM  
IDENTIFICATION SIGNS**

**CUSTOM FIBERGLASS  
HAND LAY UP**

**SUB-SEA INSULATION  
PRODUCTS AND SERVICES**

**BARGE BUMPER SYSTEMS**

**REMOVABLE FIRE-PROOFING  
PANEL SYSTEMS**

**FIBERGLASS SECURITY  
FENCING SYSTEMS**

# Company Overview

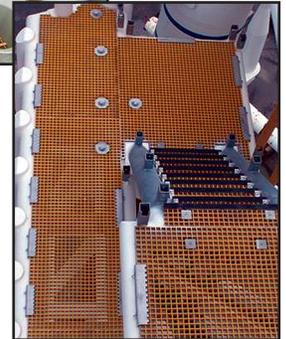
AIMS International, Inc., is a world leader in offshore vortex induced vibration (VIV) suppression, engineered fiberglass structural systems, and platform dock fendering systems. Since 1982, AIMS has been the leader in supplying, engineering, and fabricating fiberglass grating and structural systems for the offshore oil and gas industry. AIMS supplies a full line of platforms, dock fenders, fiberglass signs, vortex breakers, VIV suppression products, subsea thermal insulation, blast panels, and mudmats. 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. A full staff of structural engineers and AutoCAD technicians are available to assist with all aspects of your structural requirements in both steel and fiberglass.

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.

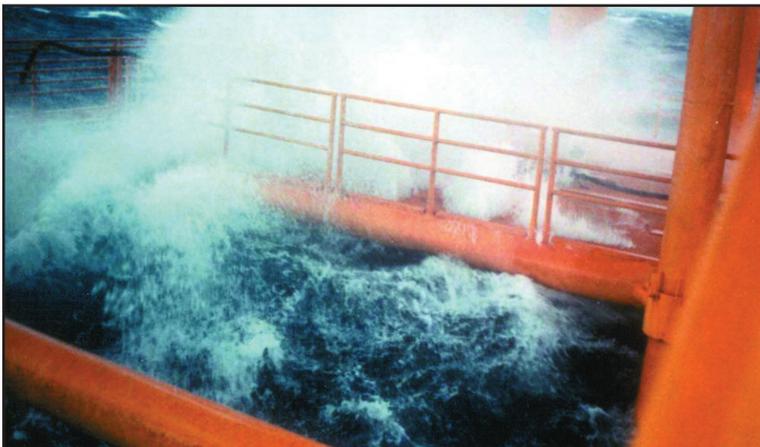
To market our products and services around the world, AIMS forms partnerships with local companies in various countries, including Malaysia, Australia, Korea, Singapore, India, United Arab Emirates, Nigeria, Brazil, and Mexico. Everywhere there is offshore oil and gas, you will find AIMS International.



*Wave-Zone Resistant Grating System  
–The Talon™ System*



**The Talon™ System** is an innovative attachment system that has been developed and patented by AIMS International 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™ 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 AIMS for details on its comprehensive Wave-Zone Guarantee. **Who else can provide this guarantee?**

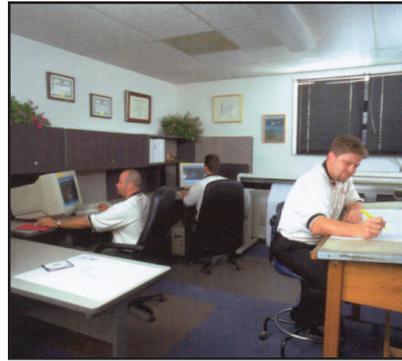


*The patented AIMS Talon™ System is designed to resist hurricane wave forces, and it is guaranteed!*

# Engineering Design

**AIMS International, Inc.**, is a world leader in engineered fiberglass structural systems. With its professional engineering staff, each project bears the seal of a Registered Professional Engineer. Further, AIMS has developed and utilizes the only computerized, 3-dimensional fiberglass structural design software package in the industry. 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 unequalled 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.

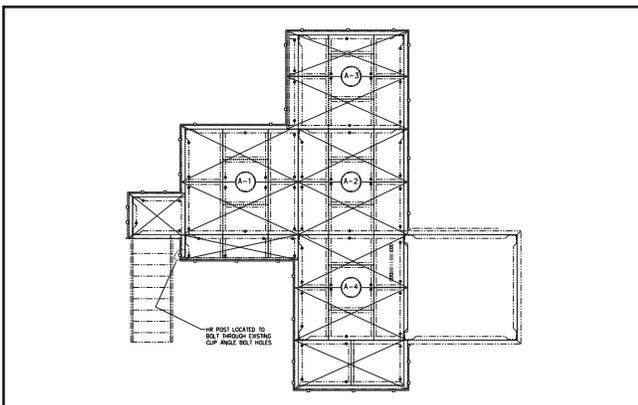


AIMS also employs highly skilled designers with both 2-D and 3-D capability. AIMS designs primarily with AutoCAD for 2-D drawings and with SolidWorks for 3-D projects; however, we also

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.



*Fiberglass structure for two-level Turbine Access Platform*



*Fiberglass structural framing plan for an offshore wellhead access platform*



*AIMS installation offshore—Trinidad*

# Fiberglass Fabrication

AIMS International, Inc. is a world leader in the fabrication and installation of fiberglass structural systems. As a turn-key fiberglass contractor, AIMS designs, fabricates, and installs fiberglass structural systems.

With 18,000 ft<sup>2</sup> of fabrication floor space and expansion capabilities to double (to 36,000 ft<sup>2</sup>), AIMS' fabrication shop is one of the largest in the fiberglass industry. AIMS' 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 fixing 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. AIMS always strives 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 custom requirements.

AIMS fabricates many other custom products such as fiberglass platform ID signs, stair treads, ladders, handrails, etc.

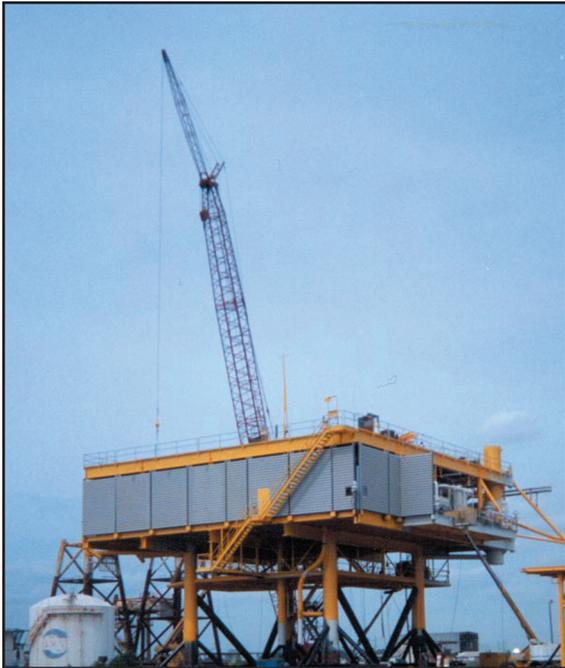


*AIMS engineers, fabricates, and installs complex fiberglass structural systems.*



*Installation around wellheads*

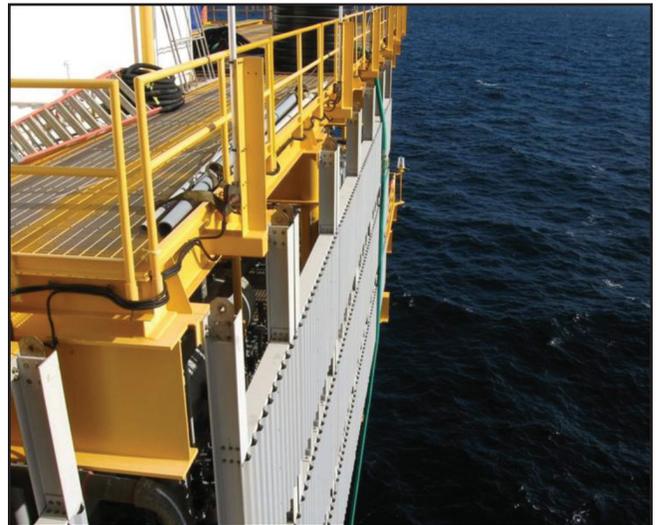
# Installation



*AIMS Fiberglass Windwall Systems offshore–Trinidad*

Offshore 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 crews provide 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.



*Insulation of subsea trees, manifolds, and jumper piping*



*AIMS installation crews are experienced fiberglass experts.*

# New Products



## ***THE AIMS WAVE ZONE 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 wave zone areas of an offshore platform is the most recent advancement. 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 wave zone areas of offshore platforms.

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.



*AIMS Dual-Finned Flow Splitters (ADFS)*

## ***ROV, DIVER, AND MOONPOOL FRIENDLY ADFS FAIRINGS (PATENTED)***

AIMS has just recently 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.

# Other Products



## ***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.



## ***ENERGY CELLS***

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

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



## ***REMOVABLE FIRE-PROOFING PANEL SYSTEMS***

AIMS now offers Removable Fire-Proofing Panels for areas where fire-proofing is needed and where the need for future inspections prohibits the use of conventional spray-on systems. Our panel system provides certifiable fire protection while allowing for removal, inspection, and re-installation. Shut-in valves, wellheads, and major structural joints are excellent examples of where our Removable Fire-Proofing Panels are to be used.

# Other Products



## **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. The net result of this in two years is **tremendous corrosion**. AIMS designs, fabricates, and installs fiberglass windwall panels supported by fiberglass shapes thus eliminating weight and corrosion.



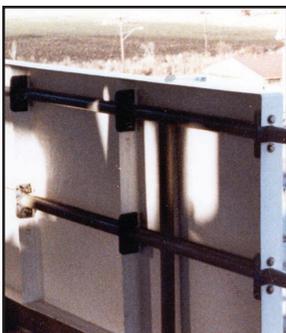
## **FIBERGLASS MUDMATS**

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 your expense. With the elimination of anodes and reduction in steel tonnage, AIMS Fiberglass Mudmats are more cost effective.



## **FIBERGLASS PLATFORM ID 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 required to attach steel plate signs.



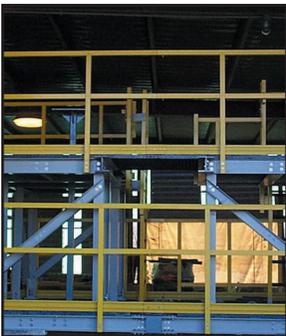
*Shown here is the attachment of our fiberglass signs directly to the handrails, thus eliminating the steel angle frame.*

## Other Products



### **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.



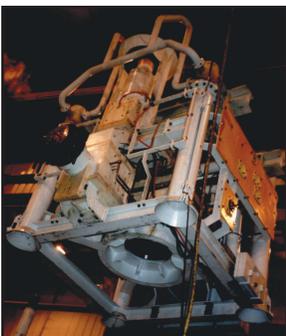
### **DRY TREE WORK PLATFORMS**

Deepwater projects utilizing “dry” trees require work platforms to provide access to the wing valves, chokes, and other valves and gages. 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 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 configuration, our FRP structures are a corrosion-resistant and maintenance-free alternative. Total installed costs are typically less than steel, while also eliminating maintenance costs.



### **SUBSEA THERMAL INSULATION**

Thermal insulation of subsea trees, manifolds, and flowline jumpers is typically a requirement for deepwater oil and gas projects. AIMS was involved in the very first deepwater projects requiring subsea insulation materials—the Troika Project. Since then, AIMS technicians have provided thermal insulation for many deepwater projects.

# Other Products



## ***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 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.



## ***FIBERGLASS PIPE PENETRATION COLLARS***

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



## ***VIV SUPPRESSION***

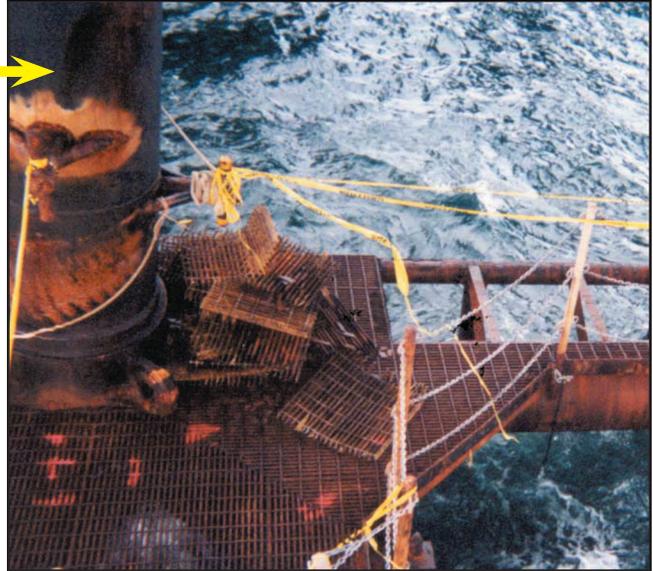
AIMS vortex strakes and fairings designs (AIMS Dual-Finned Splitter [ADFS]) are supported by the most comprehensive test data in the industry. AIMS has also developed a ROV-friendly system—allowing for the retro-fit installation of our strakes and ADFS. Our strakes and fairings are very efficient in the elimination VIV. AIMS has expended in excess of \$2,000,000 to obtain this data and freely issues the data to the engineering firms for use in their projects.



# Other Products

## *Do Your Structures Look Like This?*

**CORROSION** costs industries over \$80 billion a year. These high costs have reduced overall profitability for many companies, forcing them to look for alternative structural materials with high corrosion resistance.



## *Your Structures Can Look Like This!*

This walkway originally had traditional steel products that were replaced with non-metallic, lightweight, corrosion-resistant fiberglass materials.



*AIMS Fiberglass Grating System after 16 years of service*



Fiberglass Structure-Wellhead  
Access Platform

## Market Applications

AIMS International's 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 International should be consulted. The following are industries and locations where our products are found.

- *Offshore drilling & production facilities* as wellhead access platforms around the wells & vessels, stair towers, grating systems, electrical cable trays, and mudmats
- *Petrochemical plants & refineries* as walkways and platforms around vessels and equipment, stair towers, and trench grating
- *Industrial & municipal wastewater facilities* as walkways, catwalks, in and around clarifiers, settling basins, and platforms used as storage areas
- *Pulp & paper mills* as walkways & catwalks in and around their waste water plants, including bleaching and washing areas
- *Metal plating & mining facilities* as platforms in the processing areas, catwalks, stair towers, and storage areas
- *Commercial warehouses* as additional storage areas and mezzanines
- *Beverage & food processing plants* as grating systems and platforms in and around the wash-down areas, access platforms, and storage areas
- *Hi-tech computer industry facilities* in clean rooms and etching areas
- *Water park & recreational facilities* as trench grating in and around pools and structural systems for the flowing streams
- *Cooling tower industry* as access walkways and towers and de-misters

Some features of AIMS' products making them attractive to these industry applications are:

- 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
- **Return on Investment**



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