



**PROFLOAT**



**THE FLOATATION PROFESSIONALS**

## OUR COMPANY

**ProFloat** are experts in Drill Riser Buoyancy, offering industry-leading repairs, modifications, spares supply and lifecycle management worldwide. Since establishment we have repaired thousands of Buoyancy Modules for various drilling contractors on every continent, with specific focus on the high-frequency energy maintenance hotspots.

Our repairs are not only world-class, but present significant long-term value relative to their cost, by ensuring that buoyancy equipment achieves its intended life span. We carry out repairs in the field, at any location required by the Drilling Contractor, and we do so at any time throughout the lifecycle of the buoyancy, often coinciding with 5- and 10-year riser recertification windows but also ad hoc as our customers may require.

**“BEST IN CLASS” BUOYANCY REPAIRS**

**EFFICIENT PROJECT DURATIONS**

**LOW CRITICAL MASS FOR MOBILIZATIONS**

**HIGHLY FLEXIBLE, IN AND OUT SERVICE**

**AVOID SAFETY RISKS**

**REDUCE ENVIRONMENTAL IMPACT**

**PREVENT RISER JOINT REJECTION DUE TO DAMAGED FITMENTS**

**MAXIMIZE BUOYANCY LIFESPAN**

## OUR TEAM

**ProFloat** is proudly represented by a team of dynamic people with key skill sets covering a range of areas that are of importance to our work and the interests of our customers.

**KEANE HARVEY**

Managing Director

**GARTH TOOTH**

Sales Director

**MARLON OKKERS**

Production Manager

**SIVUYILE KLAAS**

Coating Manager

**TRACEY ZURNAMER**

Finance Manager

**SHARNE LANDSBERG**

In-House Legal



# BUOYANCY REPAIR

**Drill Riser Buoyancy** is costly equipment intended to last 20 years. Potential down-time or rejection of riser joints with impaired fitments can result if this equipment is not properly maintained in fit-for-service condition.

Buoyancy is unfit for service if it is cracked, broken in multiple pieces, missing major sections, contains deteriorated buoyancy material or has suffered water ingress.

ProFloat has developed a “best-in-class” repair methodology over 10 years of service in the industry. We have multiple technicians trained extensively in all categories of repair. Combining this expertise with specialized products and materials intended for rigorous offshore use, we provide a repair quality, speed and flexibility which is difficult to beat.

Following is a high-level overview of our repair process.



Transverse Crack Repair



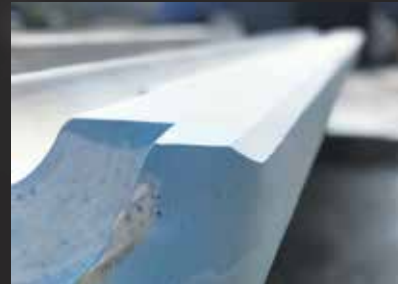
Longitudinal Crack Repair



Buildup of Major Sections



Channel Alignment For Main Tube & Aux Line Housing



Shaping & Fairing of Critical Dimensions



Lamination & Skin Restoration



Painting & Marking



QC & Weighing



Reporting & Data Packs







## RISER DRESSING

**ProFloat** often conducts services in field locations where our customers have little or no personnel and support.

In these situations, we provide a turn-key solution by undressing riser joints, repairing buoyancy and then redressing riser joints to be ready for load-out and return to the rig.

We also carry out buoyancy swop-out, which entails readying the desired number and depth of riser joints, providing reporting regarding damage observed and providing a reliable basis for future budgeting.







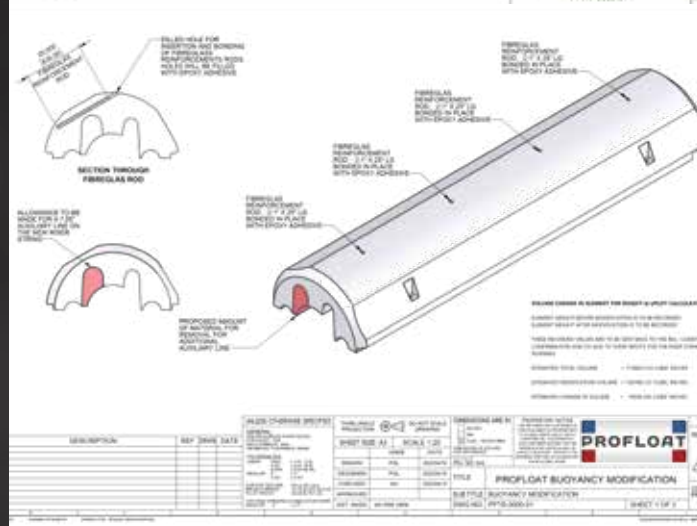
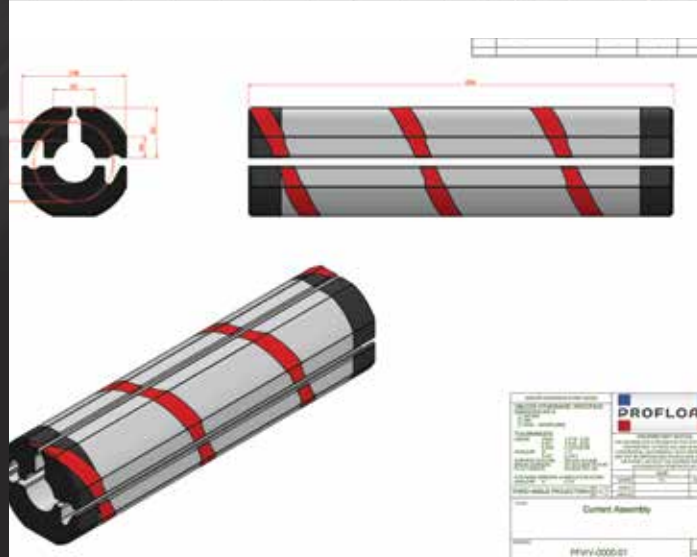
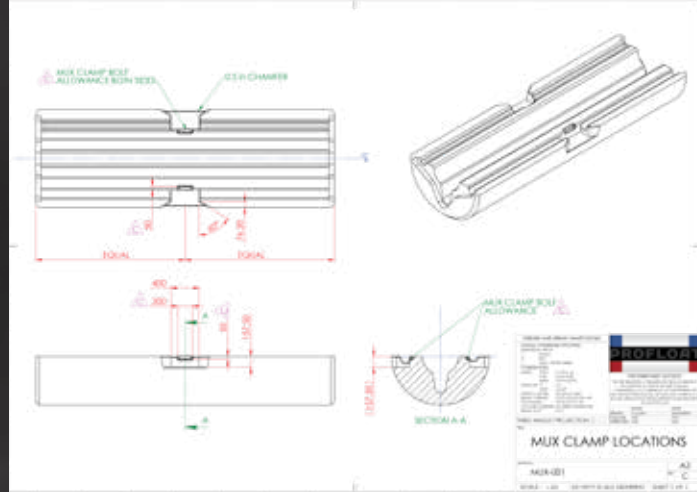
# STRAP & VIV RETROFIT, CHANNEL MODIFICATIONS & MUX WINDOW INSTALLATION

Buoyancy frequently requires other remedial work to improve performance, safety or usability.

This can include modification of the main channels order to accommodate a different aux line configuration, installing MUX clamp windows or retrofitting retention strap and tensioner recesses or VIV-suppression improvements.

ProFloat offers seamless engineering and implementation of bespoke modifications through onsite installation and ProFloat proprietary modification techniques.

This work is provided as a stand-alone service or as a part of on-going repairs. The output is a product which is more suited to the Drilling Contractor's needs.





# MANUFACTURE AND SUPPLY OF AUXILIARY EQUIPMENT

**ProFloat** supplies & manufactures a range of auxiliary equipment required for the fitting of the riser string.

This includes:

## Riser Guards

(designed & manufactured)

## Telescopic Joint Guards

(designed & manufactured)

## Kevlar Retention Straps

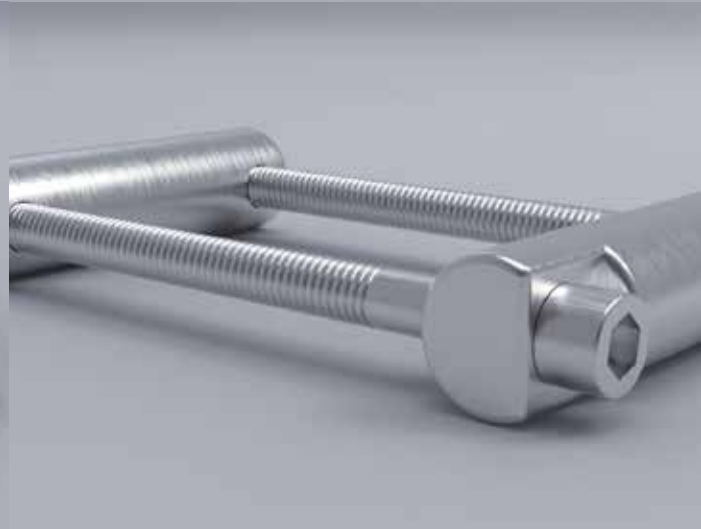
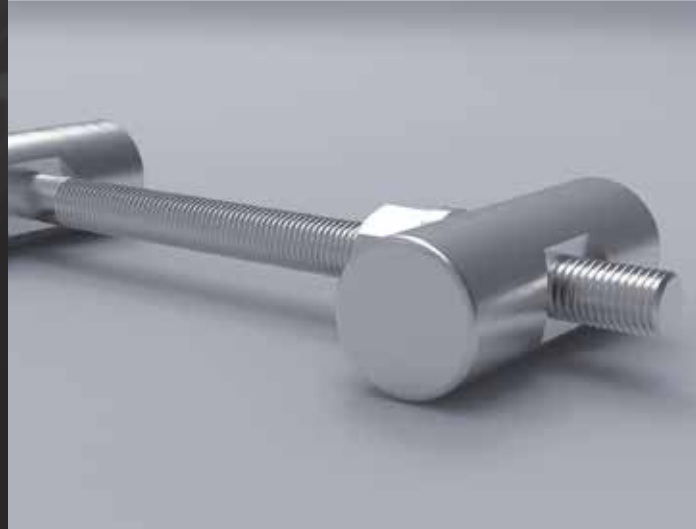
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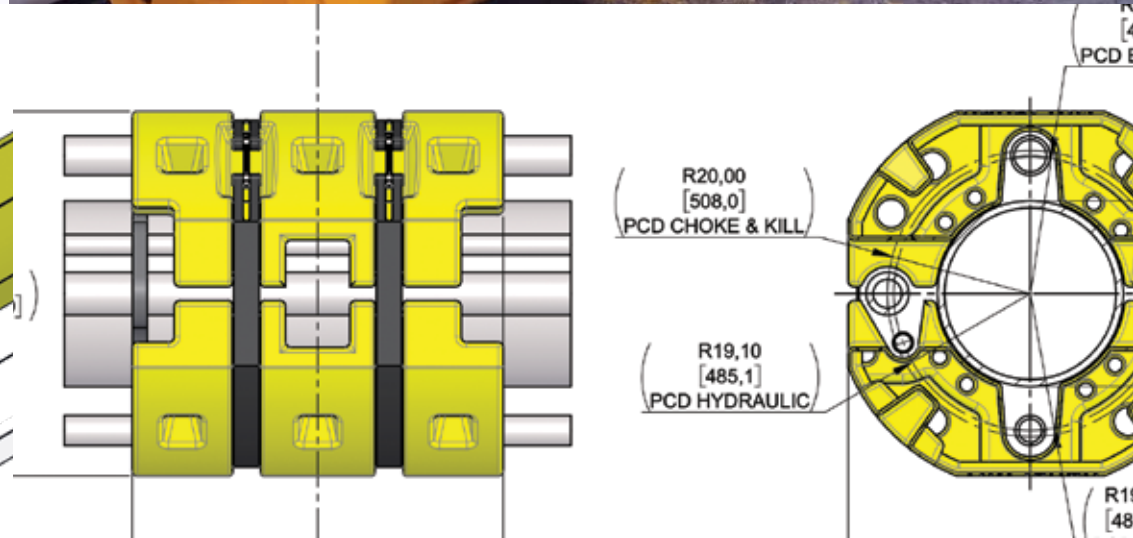
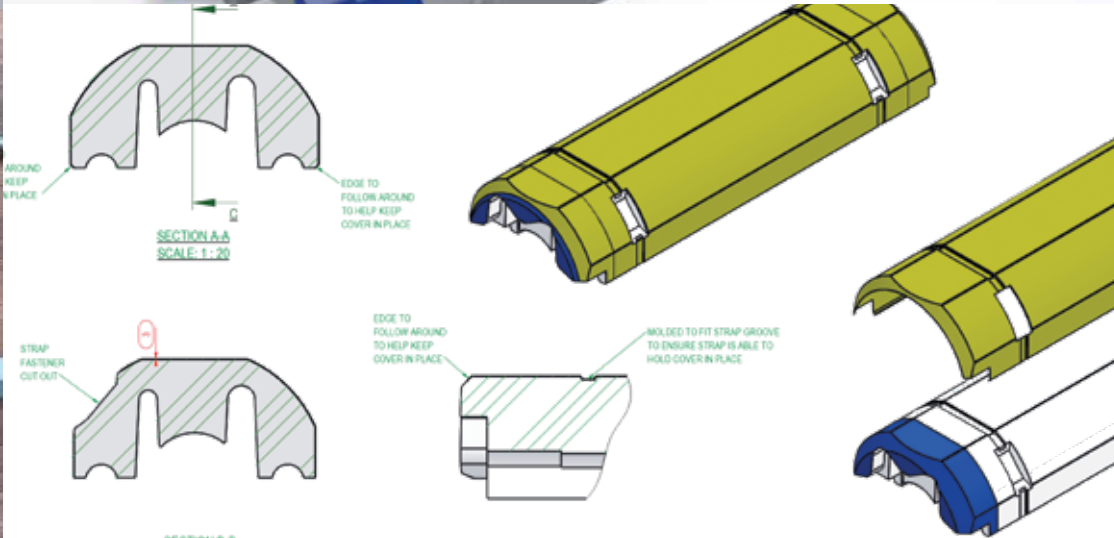
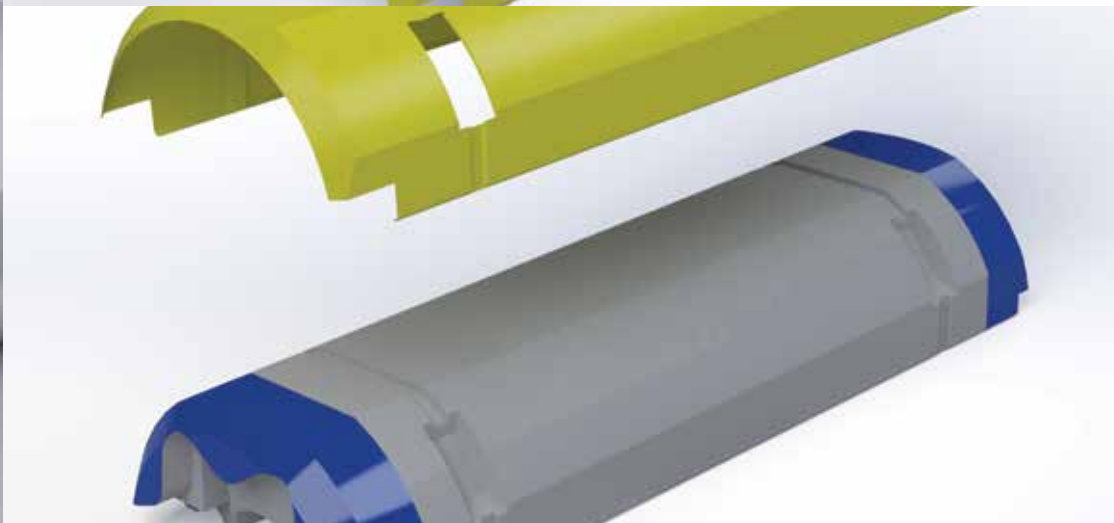
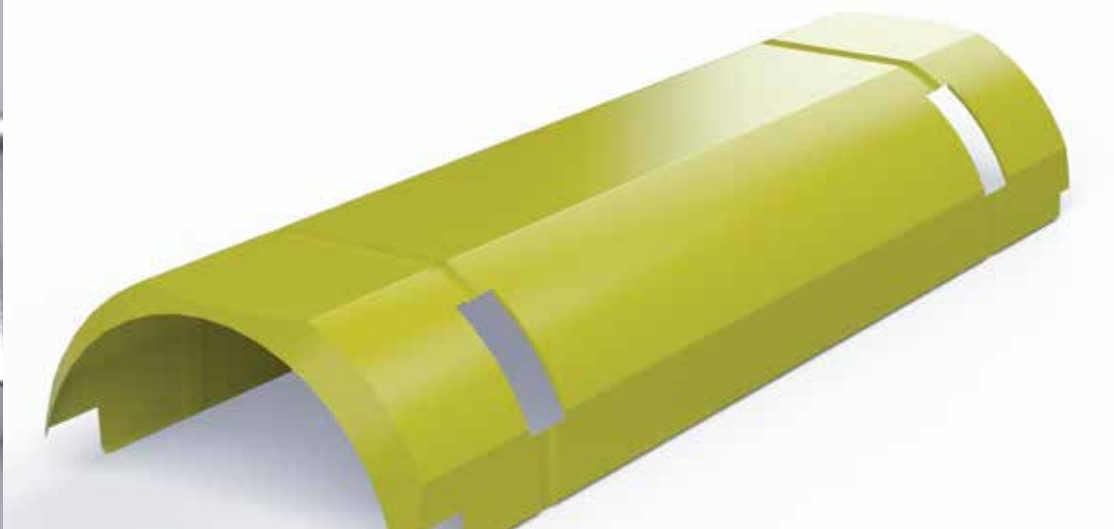
## Tensioners & Bolts

(sourced & supplied)

## VIV Fairings

(sourced & supplied)





## **BUOYANCY CONDITION BASED MAINTENANCE**

**ProFloat** provides condition-based maintenance of buoyancy through our first-of-a-kind FloatCon™ CBM.

FloatCon™ provides assessments, tracking and repair which align with existing riser CBM programs.

FloatCon™ operates on a fixed price subscription model, delivering extreme value as a lifecycle management tool.

The program includes visits carried out at least once annually during Between Well Maintenance or at another suitable time.

Visits are followed by detailed Condition Assessment Reports, proposed repair schedules, guidance to subsea personnel and engagement with shore-based asset management.

Certain repair quantities are included at no extra cost in the subscription cost, ensuring that the majority of repair requirements are fully budgeted without additional unplanned-for expenditure.



### **BENEFITS**

**Avoid utilizing damaged buoyancy  
which presents a risk of harm to people and equipment.**

**Avoid rejection or quarantine of joints with damaged fitments.**

**Avoid minor damage (e.g. edge damage)  
leading to material deterioration or edge damage.**

**Rig Subsea personnel will be report detected defects at any time.**

**Drill Riser Buoyancy Modules are a 20-year investment.  
For buoyancy to reach this life span requires  
prompt attention to damage.**



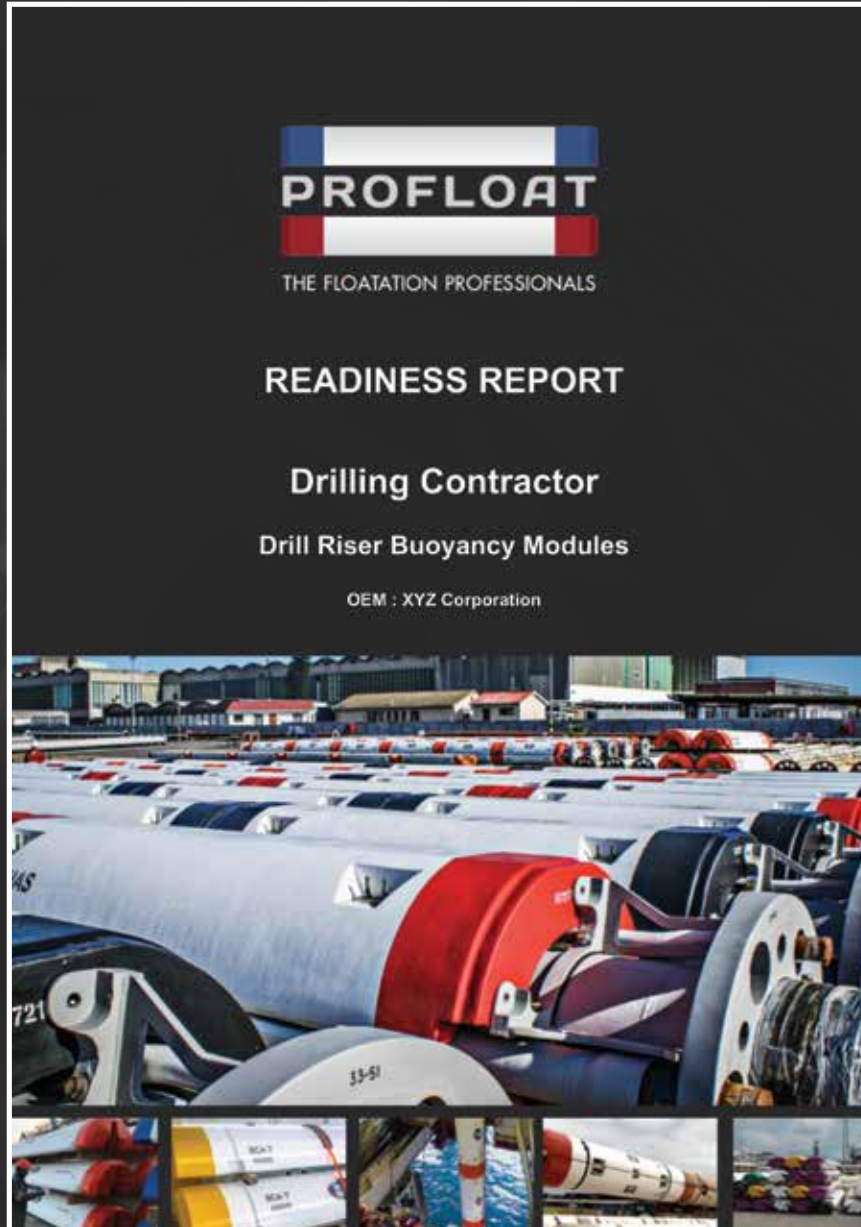
# REPORTING

ProFloat provides 3 important reports:

- **Readiness Reports:** This specialized reporting process gives Drilling Contractors insights into the depth readiness of their riser string's buoyancy, by detailing the number of elements requiring repair to fulfil contractual depth obligations.

- **Repair Reports:** Following repair, we provide detailed overview of the work scope conducted per buoyancy element, together with traceability management and COC's.

- **Uplift Reports:** We provide detailed uplift reporting indicating weight, volume and expected uplift per buoyancy element following repair. This serves in calculating riser string hook loads – an important consideration during ambitious well depths.





**II. Categories of Damage and Repair**

Throughout this document, reference will be made to three distinct Medium and High Damaged Elements and the various forms of damage. The below table indicates the criteria to be used to determine the extent of the damage to the element.

Element	Element criteria are as per the following: 1 - 20% area damage, which includes (partial loss) that there may still be an indication required, minor outer damage and requires painting with shop-spray primer based on findings as per M1-100
Minor	Element is categorized as Minor and requires repair to be approved.
Medium	Element criteria are as per the following: 20 - 50% area damage, medium outer damage (partial loss) or 0.3/0.4 in volume with major repair required, medium outer damage / medium outer damage and requires painting with shop-spray primer based on findings as per M1-100
Major	Element is categorized as Major and requires repair to be approved.

The below table provides overview of the forms of damage which are assessed in the different categories of repair. Further information is set out in the accompanying Inspection Procedures.

Element	Element criteria are as per the following: 1 - 20% area damage, which includes (partial loss) that there may still be an indication required, minor outer damage and requires painting with shop-spray primer based on findings as per M1-100
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**III. Traceability and Identifying of Joints**

Traceability of the repair on the Big Boat is demonstrated. All repair joints are properly marked and easily read and distinguishable with regards to serial numbers, date, materials and depth of repair. It is recommended that the equipment is maintained only by authorized personnel and that the joints are well protected after the finishing of the joints prior to the start of construction to prevent that someone else to come along during the job, an accident that there is a chance of being damaged.

If approved repair that non-polyester resin is used to repair the resin boat, it is recommended that the repair is done in the same area as the original resin boat, and that the repair is done in the same area as the original resin boat, and that the repair is done in the same area as the original resin boat.

The location of the repair on the Big Boat is clearly marked and is clearly visible. The repair is done in the same area as the original resin boat, and that the repair is done in the same area as the original resin boat, and that the repair is done in the same area as the original resin boat.

**IV. Special Commentary on Delamination**

Delamination is observed on the elements. This is extremely common for the longevity of the elements which are exposed to sea for 20 years. This is a feature which is not seen only after 20 years, but also after 10 years, and even after 5 years. This is a feature which is not seen only after 20 years, but also after 10 years, and even after 5 years.

- There were 12 test joints at the top of the Big Boat. These joints included only throughs, and no delamination was observed on the joints.
- There were 128 repair joints on the Big Boat, which are marked one by one for the other to identify. These joints are marked with a red marker and a red marker, and each joint is marked with a red marker and a red marker, and each joint is marked with a red marker and a red marker.
- There were approximately 10 - 15 additional repairs to repair the delamination that could not be visually inspected.
- Based on the elements identified for repair, being 67 plus the additional quantity indicated, the total for repair is 67, which is a repair rate of about 0.3%.
- There are approximately 10 other elements requiring repair, the repair of which is optional and not highly recommended except for the primary benefit of preventing delamination damage which is likely to become major, such as elements showing early signs of repair.
- We did not find any elements to be in need of repair.

- Various of the damage are listed identified all repair to be done for the elements which are identified in an actual location to the element. The reason for this is that the element is in a safe state, and a feature on the exterior surface of the element which is identified in an actual location to the element. The reason for this is that the element is in a safe state, and a feature on the exterior surface of the element which is identified in an actual location to the element.
- The repair and repair inspection is allowed to carry out inspection with a light of 10% intensity, which is a feature which is not seen only after 20 years, but also after 10 years, and even after 5 years.

**VI. Special Commentary on Delamination**

We observed extensive delamination on the elements. This is extremely common for the longevity of the elements which are exposed to sea for 20 years. This is a feature which is not seen only after 20 years, but also after 10 years, and even after 5 years.



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Minor	Element is categorized as Minor and requires repair to be approved.
Medium	Element criteria are as per the following: 20 - 50% area damage, medium outer damage (partial loss) or 0.3/0.4 in volume with major repair required, medium outer damage / medium outer damage and requires painting with shop-spray primer based on findings as per M1-100
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**VI. Special Commentary on Delamination**

- There are only two repair joints on the Big Boat, which are marked one by one for the other to identify. These joints are marked with a red marker and a red marker, and each joint is marked with a red marker and a red marker.
- The repair and repair inspection is allowed to carry out inspection with a light of 10% intensity, which is a feature which is not seen only after 20 years, but also after 10 years, and even after 5 years.
- We have found no elements requiring repair on the Big Boat and High Damaged Elements.
- Often, the repair of elements categorized as Medium can be avoided but in the present case, it is not feasible to repair the elements, so elements have to be repaired.
- Repairs have been carried out for the elements on the Big Boat and High Damaged Elements, and the repair of which is optional and not highly recommended except for the primary benefit of preventing delamination damage which is likely to become major, such as elements showing early signs of repair.
- We did not find any elements to be in need of repair.

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Major	Element is categorized as Major and requires repair to be approved.

**VI. Special Commentary on Delamination**

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- Office
- Work locations



**ProFloat delivers industry-leading buoyancy support services at a multitude of locations worldwide.**

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# SATISFIED CUSTOMERS

