



SIMR
ABANMARINE CO.

As General term is a subset of asset integrity management



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Abanmarine Co. - Your Offshore Platform Integrity Partner

we specialize in providing comprehensive engineering and integrity services for offshore platforms and marine structures. With deep domain expertise, state-of-the-art tools, and experienced personnel, we support the full life cycle of offshore assets, from inspection and assessment through structural maintenance, repair, strengthening, and life extension. Our mission is to maximize safety, reliability, uptime, and economic value for our clients, while ensuring compliance with all relevant industry standards and regulatory requirements.



ABAN MARINE CO.
Engineering & Marine Solution



1.What is offshore SIM?

SIMs as General term is a subset of asset integrity management which purpose is keeping the asset unimpaired and in sound condition throughout the lifecycle, whilst protecting health, safety, and the environment. Fixed offshore structures, by virtue of their location in harsh and dynamic marine environments, are subject to a wide range of degradation mechanisms that significantly threaten their safety, operational integrity, and production performance. These threats grow over time unless proactively managed, repaired, or upgraded. The Basis of Repair management of Such repairs called Offshore SIMS. Actually, SIMS is a management System which ensure the Structure safety & Durability through Their production Life Cycle where as it literally is Called **Fitness for Purpose**.



2. Offshore Platform Inspection Services:

ABAN Marine Co, provides comprehensive Offshore Platform Inspection Services aimed at thoroughly assessing the structural integrity and overall condition of your offshore platforms. By leveraging advanced technology and highly trained expertise, we deliver precise, trustworthy evaluations, helping you maintain the safety and longevity of your platform. Whether it's routine inspections or in-depth structural assessments, our services are tailored to meet the highest standards. Such Inspections Services comprise of:

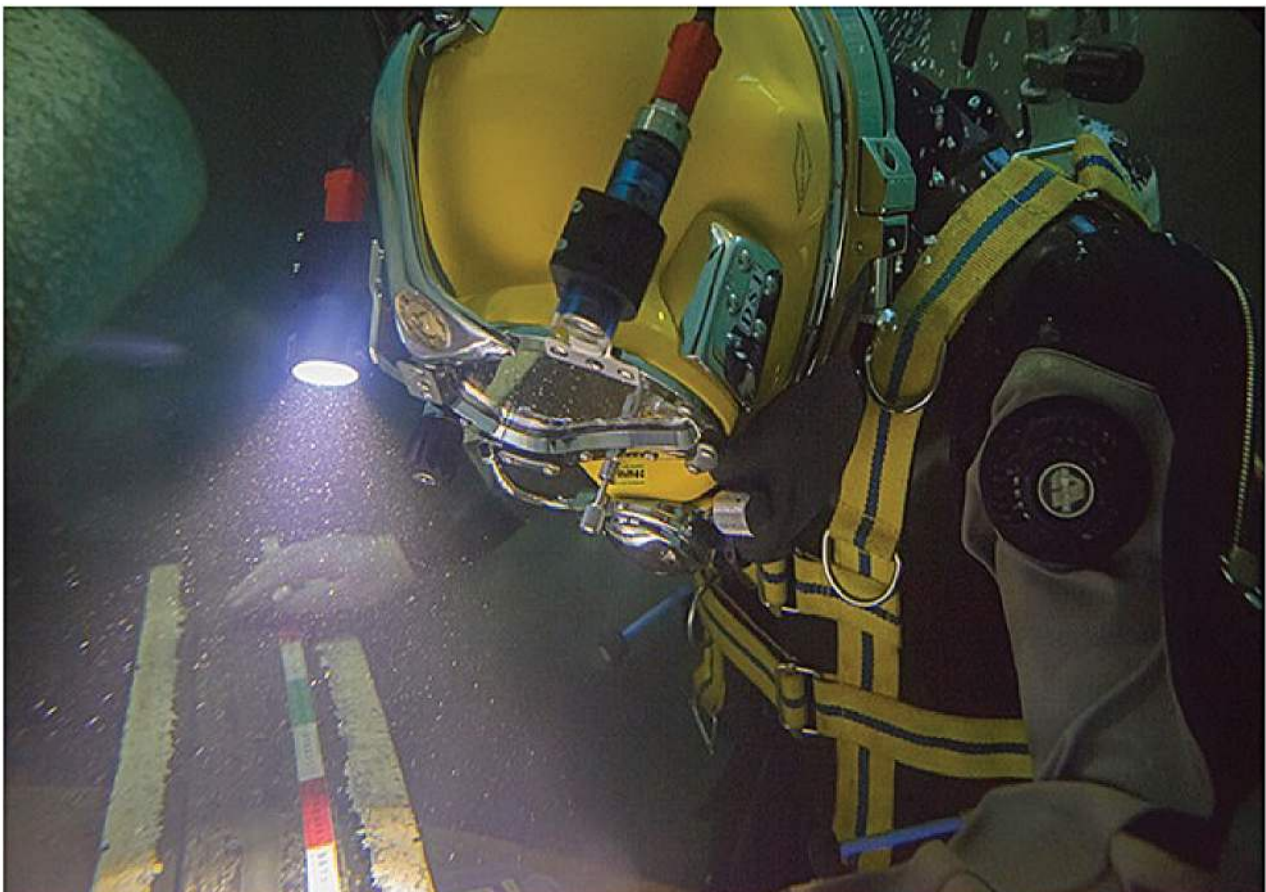
1**General Visual Inspection****2****Close Visual Inspection (VI)****3****Positioning, Physical Measurement & Sampling****4****Subsea Photography****5****Subsea 3d Scanning****6****Thickness Measurement****7****Inspection in lieu of Drydocking**

2.1. General Visual Inspection

General visual inspection (GVI) is a commonly applied inspection method used to detect large scale anomalies and to confirm the general condition and configuration of the structure. Underwater GVI is normally performed using a remote operated vehicle (ROV) without removal of marine growth. A benefit of the method is that it is possible to inspect large parts of the structure in a short time period.

2.2. Close Visual Inspection (VI):

We provide thorough visual inspections of platform structures, assessing all critical components, including topsides, substructures, and risers. Our inspections are conducted using ROVs (Remotely Operated Vehicles) or diver-assisted techniques to ensure that all external surfaces are examined in detail. These inspections check for damage from corrosion, marine growth, and other underwater hazards. For above water and internally inside dry compartments in floating structures should be performed by a qualified inspector. Dye penetration can be used to enhance the presence of cracks under dry conditions. A benefit of the method is that a certain level of detailed inspection can be achieved in a reasonable time and for a reasonable cost.



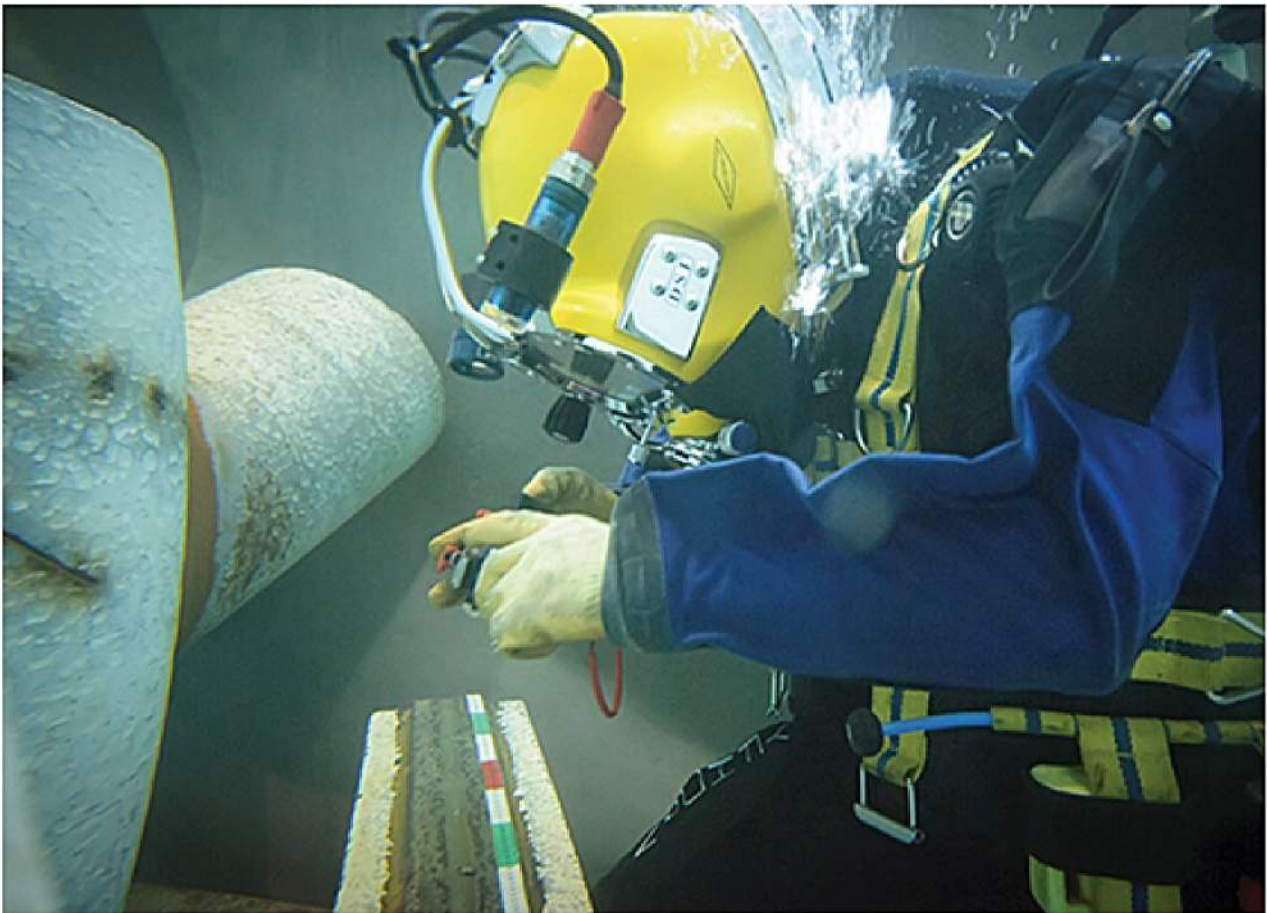
2.3. Positioning, Physical Measurement & Sampling:

When inspecting a subsea asset, while performing visual inspection and CP measurement, it is also important to record the position of item of interest. ROV shall be equipped with survey beacon and myriad of other sensors such as multibeam profiler, and cameras on boom arm will fly on top of the Asset. Any item of Measurement and sampling are also part of the subsea inspection works. Whether from the simplest way of using measuring tape, taking gas sampling using container to calculate rate of gas leak/discharge, using inclinometer for angle measurement or to more advance 3D modelling using laser or photogrammetry that scan and recreate an area in digital form for assessment in computer, for example anchor chain links.



2.4. Subsea Photography:

Subsea photography plays a critical role in documenting the condition of underwater structures, marine growth, damage areas, and inspection activities. High-resolution still images and video footage are captured by ROVs or divers using specialized underwater cameras. These visuals provide valuable support for engineering assessments, maintenance planning, and regulatory reporting, ensuring a clear visual record of subsea environments and asset conditions.



2.5. Subsea 3d Scanning:

Our Sophisticated highly accurate underwater 3D scanner tailored for professionals in marine inspection, civil infrastructure, and offshore environments. It offers versatile deployment options (ROV, pole, handheld), delivers real-time feedback during scanning, and produces millimeter-precise, photorealistic 3D models via a streamlined cloud-based workflow.



2.6. Thickness Measurement:

Thickness measurement is performed to determine the remaining wall thickness of pipelines, risers, and structural components, providing key insights into corrosion rates and structural integrity. Ultrasonic methods are commonly used, both topside and subsea, with diver-held or ROV-mounted probes delivering accurate readings. This data supports fitness-for-service evaluations and helps prioritize maintenance or replacement planning.

2.7. Inspection in lieu of Drydocking:

It refers to an underwater survey or inspection of a vessel's submerged hull (and associated underwater parts) while afloat, as a partial or full alternative to putting the vessel in dry dock just for inspection. The goal is to reduce downtime, cost, and operational interruption, while still assuring structural integrity, corrosion, damage, and other risks are identified. Many class societies and flag administrations permit this under conditions, often guided by IMO resolutions, classification society rules, or national regulations (e.g. USCG regulations)





3. Non-Destructive Testing (NDT):

01

Alternating
Current Field
Measurement
(ACFM) Inspection

02

Flooded Member
Detection (FMD)

03

Cathodic
Protection (CP)
Measurement

04

Magnetic Particle
Inspection (MPI)

05

Underwater Dye
Penetrant Testing
(DPT)

06

Alternating
Current Potential
Drop

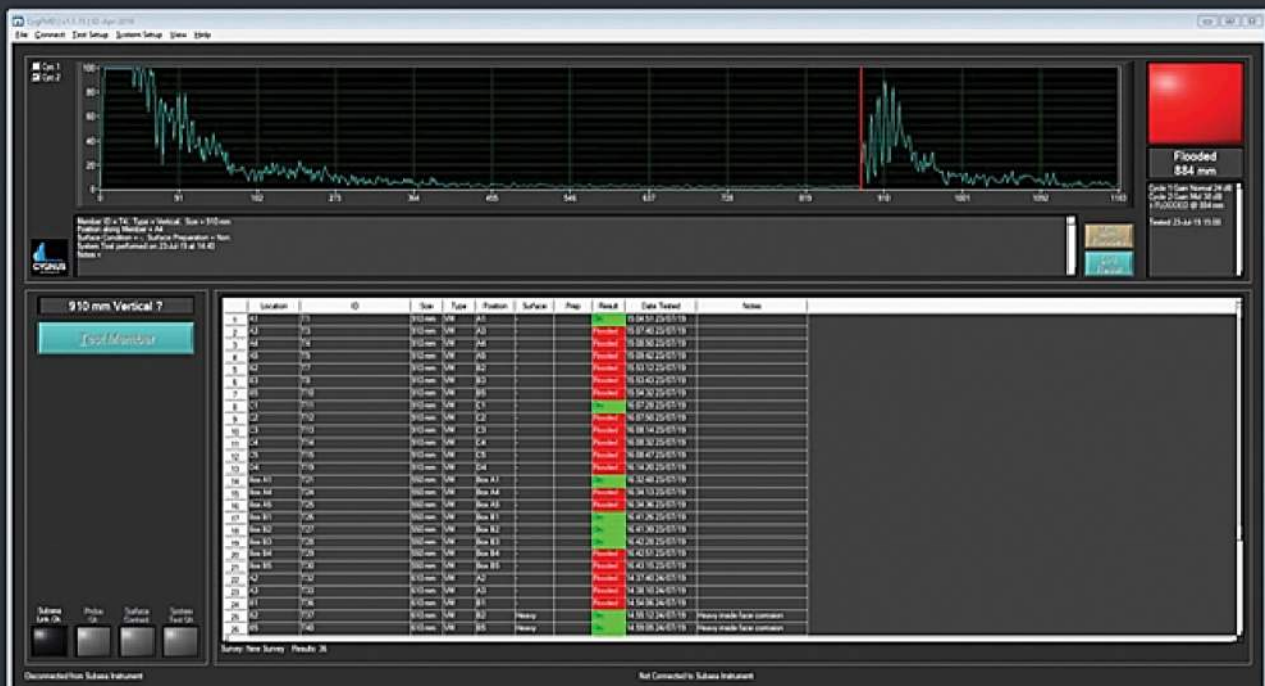
3.1. Alternating Current Field Measurement (ACFM) Inspection:

ACFM is a powerful non-destructive testing technique used for detecting surface and near-surface cracks. This method is particularly effective for inspecting welds, joints, and critical load-bearing areas of offshore platform structures. It allows for real-time detection of potential faults, ensuring that safety and structural integrity are maintained.



3.2. Flooded Member Detection (FMD):

FMD is an advanced technology used to identify members or structural components that have been flooded or compromised due to water ingress. This method helps detect the internal flooding of critical structural components, such as legs or other submerged areas of the platform, allowing early intervention before more extensive damage occurs.



3.3. Cathodic Protection (CP) Measurement:

We assess the effectiveness of cathodic protection systems that prevent corrosion of submerged or exposed steel elements in offshore platforms. The Procedure can be Performed by R.O.V or diver assisted Techniques.



3.4. Magnetic Particle Inspection (MPI):

Magnetic Particle Inspection is performed to detect surface and near-surface discontinuities in ferromagnetic materials. By magnetizing the test area and applying iron particles, indications of cracks or defects become visible under appropriate lighting conditions. Widely used on structural components and welds, MPI provides a quick and effective way to evaluate the integrity of offshore steel assets.



3.5. Underwater Dye Penetrant Testing (DPT):

Underwater Dye Penetrant Testing offers a reliable method for identifying surface-breaking defects in non-ferromagnetic materials and weld joints. A colored or fluorescent dye is applied to the test surface, followed by a developer that reveals any flaws through capillary action. Adapted for subsea use by divers, DPT is especially effective for detecting cracks, porosity, and welding imperfections in shallow to mid-depth offshore environments.



3.6. Alternating Current Potential Drop

The alternating current potential drop (ACPD) technique is where an electric current is passed between two probes placed on the component. The presence of a surface breaking defect between the probes increases the electrical resistance locally. This change is used to detect and size defects.

4. Offshore Platform SMR (Structural Maintenance and Repair) Services

01

Structural Repair and Maintenance

02

Corrosion Protection and Repair

03

Anode Removal & Installation

04

Structural & Grouted Clamp Installation

05

Skirt Pile Driving

06

Asset Decommissioning & removal



4.1. Structural Repair and Maintenance

Our SMR (Structural Maintenance and Repair) services are designed to restore, maintain, and enhance the structural integrity of aged offshore platforms. These services ensure continued safety, performance, and compliance with industry standards.



4.1.1. Platform Strengthening and Reinforcement

structural reinforcement is Provided to enhance the load-bearing capacity and extend the service life of platforms. This includes the installation of bracing systems, Structural Clamps, (T K Y) Clamps or additional supports, and other reinforcements as needed.



4.1.2. Structural joint fatigue Reset:

The main purpose of this technique is to improve fatigue life and provide no assistance in the improvement in static strength. Fatigue lives are generally improved by the removal of the welding imperfection, local improvement of the weld profile, and introduction of compressive residual stresses in the surface layer, thus replacing tensile residual stresses and changing the orientation and the shape of the welding and other defects. The two most popular types of weld improvement techniques used are toe grinding and peening.



4.2. Corrosion Protection and Repair

Applying anti-corrosion coatings, epoxy finishes, and sacrificial anodes to prevent further degradation of platform surfaces and components, extending the asset's operational life is One of Our activities the we can serve



4.3. Anode Removal & Installation

We provide specialized anode removal and installation services to ensure the continued effectiveness of cathodic protection systems on subsea structures and pipelines. Using divers or ROV-assisted methods, we safely remove depleted sacrificial anodes and install new units with minimal disruption to operations. Our team follows strict procedures to guarantee secure attachment, optimal electrical continuity, and long-term corrosion protection, extending asset service life in harsh offshore environments.



4.4. Structural & Grouted Clamp Installation:

Whether for emergency repairs or planned modifications, we fabricate and install high-performance clamps using diver or ROV intervention. Each clamp is engineered for compatibility with existing structures, ensuring Load Bearing Capacity and structural stability in dynamic marine conditions.

4.5. Skirt Pile Driving

Skirt pile driving is an operation which is performed to anchor jackets, subsea templates, and conductor guides securely into the seabed. Our experienced marine crews and specialized subsea equipment ensure precise alignment, controlled driving forces, and safe operations in varying soil conditions.



4.6. Asset Decommissioning & removal

Our asset decommissioning and removal services offer safe, environmentally responsible solutions for the end-of-life phase of offshore installations. From subsea pipelines and structures to topside modules and jackets, we manage the entire process including cutting, lifting, and disposal, in compliance with local regulations and international best practices. Our goal is to minimize environmental impact while maximizing material recovery and site clearance efficiency.



5. Offshore Platform's integrity Assessment & Life Extension Services

01

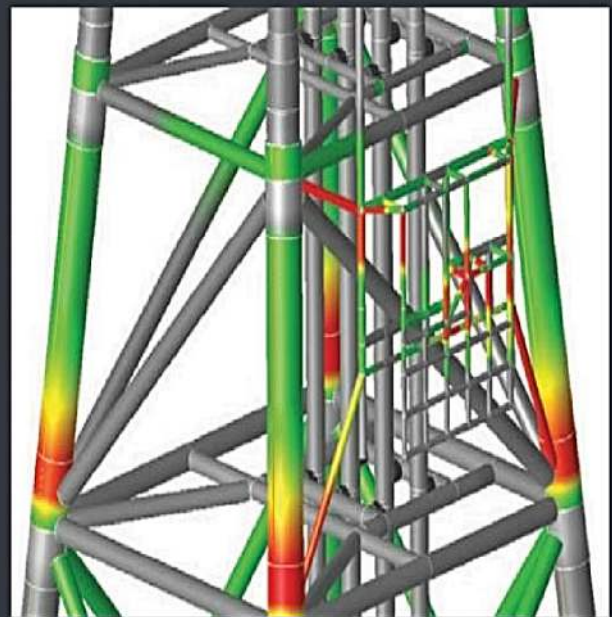
5.1. Structural Assessment and Risk Evaluation

5.2. Restoring Structure strength and Reinforcement

02

5.1. Structural Assessment and Risk Evaluation

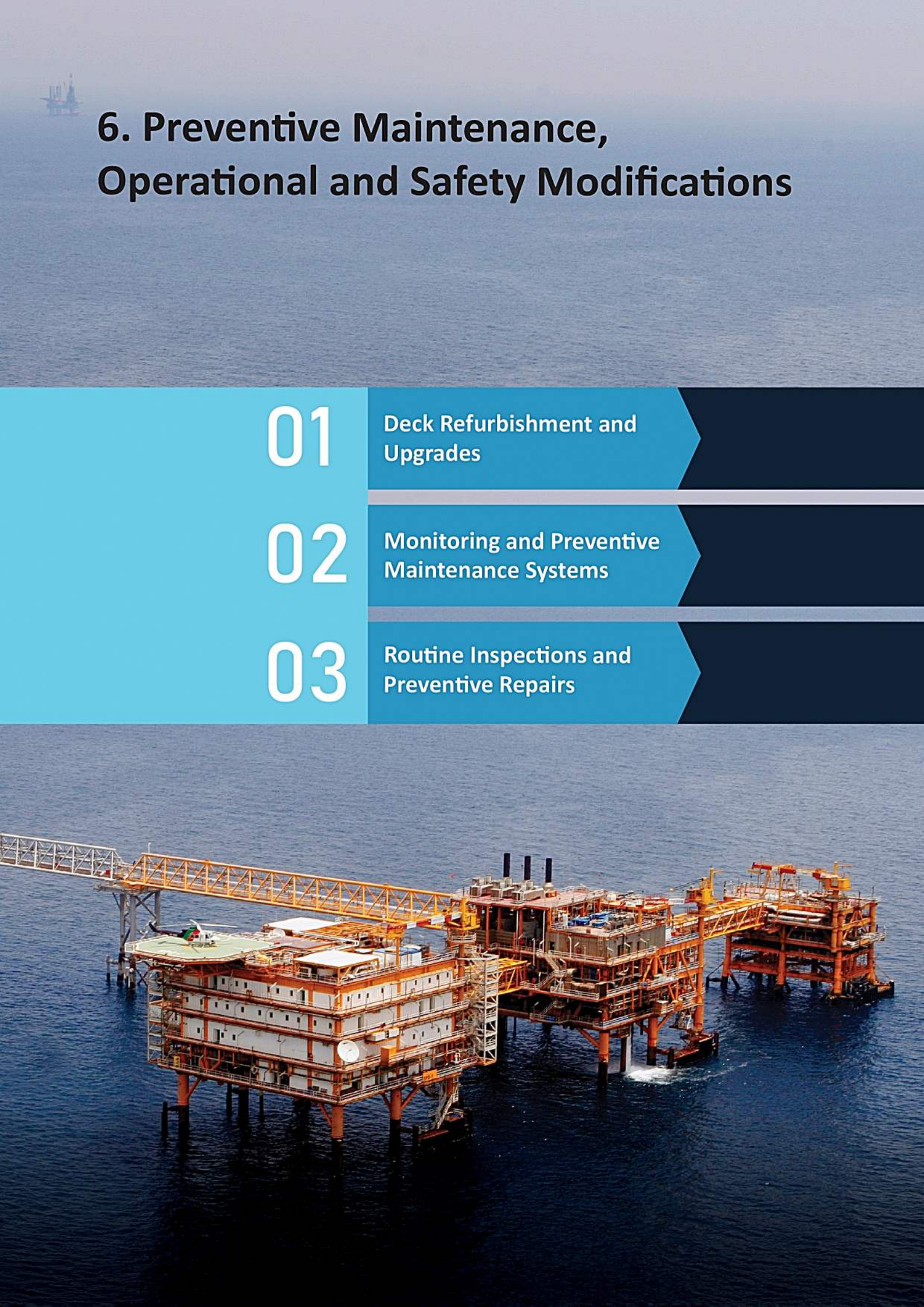
We conduct structural evaluations of existing offshore platforms to determine the current condition and any areas of concern. Based on these assessments, we design tailored solutions to reinforce and extend the lifespan of the structure. We carry out fatigue analysis to assess the impact of repeated loading and environmental stresses on platform structures. Our risk assessments ensure that any potential failure is identified and addressed before they affect the platform's operation.



5.2. Restoring Structure strength and Reinforcement

For platforms nearing the end of their original design life, we provide reinforcements and modifications to restore or enhance the structure's strength, ensuring that it can continue to operate safely and effectively.





6. Preventive Maintenance, Operational and Safety Modifications

01

Deck Refurbishment and
Upgrades

02

Monitoring and Preventive
Maintenance Systems

03

Routine Inspections and
Preventive Repairs



7CH

CM D25

- D 25/125
- F 665
- DFT 665

CM D25

- D 25/125
- F 665
- DFT 718.8

NACE D25

- D 25/125
- F 665
- DFT 718.8

CM

- D 25/125
- F 665
- DFT 823.5

LOC 1

D/T OF		L		C/P		DD	
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L	R1	R2	R3	R4	S-1		
1.101	7.5	1.42	7.5	50			

R4/R5
1.101/1.42

We offer modifications to platform systems to ensure compliance with current safety regulations and operational requirements. This includes upgrades to safety systems, additional accommodation units, and more.

6.1. Deck Refurbishment and Upgrades

ABAN Marine Co offers deck refurbishment services, including the replacement of worn components, the installation of new safety equipment, and the re-coating of deck surfaces to improve safety, durability, and functionality.

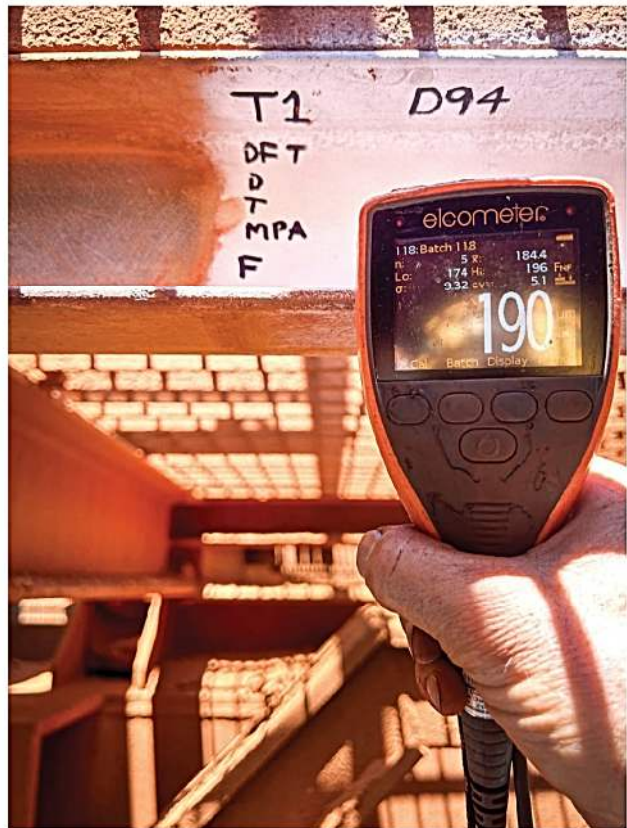


6.2. Monitoring and Preventive Maintenance Systems

We install condition monitoring systems to continuously track the health of the platform's structural and mechanical components, enabling real-time detection of potential issues and extending the life of the platform.

6.3. Routine Inspections and Preventive Repairs

We conduct Ongoing inspections and preventive repairs to detect minor issues early, averting them becoming major failures, ensuring the ongoing safe operation of offshore platforms.



Why Choose ABAN Marine Co?

01

Comprehensive Solutions

We provide an all-encompassing suite of services, including inspection, structural maintenance, and life extension for offshore platforms.

02

Advanced Technology

Our services leverage the latest technologies, including ROVs, NDT methods, ACFM, and advanced monitoring systems, ensuring precise and reliable results.

03

Experienced Team

Our team consists of highly skilled engineers, divers, and technicians with extensive experience in offshore platform inspections, repairs and life extension.

04

Safety and Compliance

We prioritize safety and ensure full compliance with international industry standards and regulations, guaranteeing the longevity and operational efficiency of your platform.

05

24/7 Emergency Response

We offer rapid response services for emergency repairs, ensuring minimal downtime for your offshore platform. **Cost-Effective Solutions:** We offer cost-effective solutions without compromising on quality, safety, or reliability.

Get in Touch with Us



ABAN MARINE CO.
Engineering & Marine Solution

Contact us today to learn more about our comprehensive offshore platform inspection, SMR, and life extension services. Our experienced team is ready to support you in maximizing the operational lifespan of your offshore assets.

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