

## **COURSE OVERVIEW 0E0090**

# Inspection, Repair and Rehabilitation of Marine Structures

#### **Course Title**

Inspection, Repair and Rehabilitation of Marine Structures

#### **Course Date/Venue**

Session 1: January 20-24, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Session 2: August 17-21, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE



OE0090

#### **Course Duration/Credits**

Five days/3.0 CEUs/30 PDHs

## **Course Description**







This practical and highly-interactive course includes real-life studies and exercises case where participants will be engaged in a series of interactive small groups and class workshops.

This course is designed to provide participants with a detailed and up-to-date overview of Marine Inspector. It covers the role and responsibilities of a marine inspector including ship types and terminology; the regulatory framework for marine inspection covering IMO, SOLAS, MARPOL and STCW; the standard tools used in marine inspection; the pre-inspection documentation review and communicating with ship crew and management; and creating an inspection checklist and implementing the safety protocols during inspections covering risk identification, assessment, hazard emergency procedures and handling dangerous goods and confined spaces.

Further, the course will also discuss the hull integrity and components; the proper deck superstructure inspections, ballast and bilge system inspections, tank inspections and inspection of ship welding and repairs; recording and reporting structural finding; the components of marine engines; inspecting engine rooms and machinery spaces, signs of wear and overheating and performing maintenance records and performance logs; and the electrical systems, power generation, steering and propulsion systems, cargo handling, mooring equipment and fire safety systems.

















During this interactive course, participants will learn the lifeboats and life rafts inspection procedures; identifying the functionality of emergency communication equipment and ensuring proper stowage and accessibility; the pollution prevention systems and navigational equipment; inspecting radars, ECDIS, and communication system; evaluating the bridge layout and ergonomics; verifying the STCW compliance for crew, safety training and drills; evaluating the crew competence in emergency situations; the port state and flag state requirements; the cargo and tanker operations including waste management and environmental protection; and the accident and investigation, advanced inspection techniques and specialized vessels inspections.

#### **Course Objectives**

Upon the successful completion of the course, each participant will be able to:-

- Get certified as a "Certified Marine Inspector"
- Discuss the role and responsibilities of a marine inspector including ship types and terminology
- Review regulatory framework for marine inspection covering IMO, SOLAS, MARPOL and STCW
- Identify the standard tools used in marine inspections, apply pre-inspection documentation review, communicate with ship crew and management and create an inspection checklist
- Implement safety protocols during inspections covering risk assessment, hazard identification, emergency procedures and handling dangerous goods and confined spaces
- Recognize hull integrity and structural components and employ proper deck and superstructure inspections, ballast and bilge system inspections, tank inspections and inspection of ship welding and repairs
- Record and report structural finding as well as identify the components of marine engines, inspect engine rooms and machinery spaces, recognize signs of wear and overheating and perform maintenance records and performance logs
- Determine electrical systems, power generation, steering and propulsion systems, cargo handling, mooring equipment and fire safety systems
- Apply lifeboats and life rafts inspection procedures, check life jackets and immersion suits, identify the functionality of emergency communication equipment and ensure proper stowage and accessibility
- Recognize pollution prevention systems and navigational equipment, inspect radars, ECDIS and communication system and evaluate bridge layout and ergonomics
- Verify STCW compliance for crew, review safety training and drills and evaluate crew competence in emergency situations
- Discuss port state and flag state requirements and apply cargo and tanker operations including waste management and environmental protection
- Carryout accident and investigation, advanced inspection techniques and specialized vessels inspections







## **Exclusive Smart Training Kit - H-STK®**



Participants of this course will receive the exclusive "Haward Smart Training Kit" (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes electronic version of the course materials conveniently saved in a Tablet PC.

#### **Who Should Attend**

This course provides an overview of all significant aspects and considerations of marine inspection for marine surveyors, shipping industry professionals, port authority officials, regulatory and compliance officers, maritime engineers and technicians, environmental safety officers, insurance inspectors, ship owners and operators, ship officers and crew, safety and training coordinators and maritime safety auditors.

#### **Training Methodology**

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures

20% Practical Workshops & Work Presentations

30% Hands-on Practical Exercises & Case Studies

20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

#### **Course Fee**

**US\$ 8,000** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

#### Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.







## **Course Certificate(s)**

(1) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Successful candidate will be certified as a "Certified Marine Inspector". Certificates are valid for 5 years.

#### Recertification is FOC for a Lifetime.

#### Sample of Certificates

The following are samples of the certificates that will be awarded to course participants:-













(2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course.









#### **Course Certificate(s)**

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

#### **Certificate Accreditations**

Certificates are accredited by the following international accreditation organizations:-



## **British Accreditation Council (BAC)**

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC



The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.



### **Course Instructor(s)**

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Captain Mohamed Ghanem, MSc, BSc, is a Senior Jack-up Barge Captain with extensive experience in Drilling Rigs, Jackup Barge Operations and MODU within the Oil & Gas industry. His expertise widely covers in the areas of Jack-up Barges, Rig Safety Protocols, Drilling Rigs & Jack-up Barges Maintenance & Servicing, Drilling Rig Components, Naval & Marine Engineering, Marine Planning & MODU Stability, Rig Move Operation, UWILD, Stability Reports,

Draft Surveys, Rig Reactivation & Under Water Surveys, Damage Survey & Cost Estimation, Tanker Vetting for Terminals, Loading Master Certification for Oil & Gas Terminals, Marine Terminal Operation, Liquefied Gas Tankers & Jetty Operation, Global Maritime Distress Safety System (GMDSS), International Maritime Conventions & Codes, International Ship and Port Facility Security Code (ISPS) Code, Buoyage System & International Code of Signals, Oil & Gas Marine Terminals, Port Terminals Crisis Management & Major Emergency Response, Marine Hazards Prevention & Control, Single Buoy Mooring System (SBM), Emergency Response Procedure, Oil Spill Management & Recovery, Oil Spill Prevention & Control, Oil Spill Combating Operations, Oil & Gas Marine Terminals, Offshore Marine Operation Management, Vessel Hull & Machinery Survey, Oil & Gas Fields Offshore Survey, Oil & Gas Terminals Loading & Discharging, Terminal Operations, Seamanship, Shipping Overview, Marine Fire Fighting Equipment, Hull Damage Control, Vessel Rescue, Life Saving, Safety Process, Major Emergency Management & Control, Crisis Management during Oil Spill and Firefighting. He is currently the Jack Up Barge Captain & Marine Planner wherein he oversee all the operations onboard the vessel including navigation, maintenance and compliance with local regulations.

During his life career, Captain Mohamed has gained his practical and field experience through his various significant positions and dedication as the Barge Engineer & Marine Planner Onboard, Trainee Barge Engineer Onboard, Assistant Barge Master II Onboard, Assistant Barge Master Onboard, Design Engineer, Ship Yard Site Engineer/QC Engineer, Marine Draft Surveyor, Ship Repair Engineer, Vessel Repairing Engineer, Metal Cutting & Welding Planner, Marine Engineer Onboard, Technical Manager, Maintenance Mechanical Engineer and Reserve Marine Officer from the Shelf Drilling Co, Marine & Engineering Consulting, ADMARINE III (X-GSF 103) at ADES, Oceandro Large Yacht Builder, International Inspection Company, Synchrony-Lift Works and B-Tech Company.

Captain Mohamed has **Bachelor's** degree in **Naval Architecture & Marine Engineering** and currently enrolled in **Master's** degree in **Naval Architecture & Marine Engineering**. Further, he is a **Certified Instructor/Trainer**, a **Certified Trainer**, **Assessor & Internal Verifier** by the **Institute of Leadership of Management (ILM)** and holds a certificate in **Marine III Engineer** and OIM & Mobile Offshore Drilling Unit (**MODU**). He is an **active member** of The International Transport Workers' Federation (**ITF**), UK and has delivered numerous courses, workshops, trainings and conferences worldwide.





## **Course Program**

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1

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0730 - 0800	Registration & Coffee
0800 - 0815	Welcome & Introduction
0815 - 0830	PRE-TEST
0815 – 0900	Role & Responsibilities of a Marine Inspector  Overview of Marine Inspector Duties • Importance of Inspections in Maritime Safety • Key Attributes of a Marine Inspector • Ethical Considerations & Professional Conduct
0900 - 0930	Understanding Ship Types & Terminology Classification of Vessels (Cargo, Tankers, Passenger Ships, Etc.) • Common Maritime Terminology • Basics of Ship Design & Functionality • Familiarization with Ship Plans & Schematics
0930 - 0945	Break
0945 - 1045	Regulatory Framework for Marine Inspection International Maritime Organization (IMO) Conventions • Overview of SOLAS, MARPOL, & STCW • Flag State & Port State Control • Key Regional & National Regulations
1045 – 1215	Inspection Tools & Equipment Standard Tools Used in Marine Inspections • Modern Inspection Technologies (Drones, ROVS, etc.) • Personal Protective Equipment (PPE) for Inspectors • Maintenance & Calibration of Inspection Tools
1215 - 1230	Break
1230 - 1330	Preparing for an Inspection  Pre-Inspection Documentation Review • Communicating with Ship Crew & Management • Creating an Inspection Checklist • Understanding Inspection Objectives
1330 - 1420	Safety Protocols During Inspections Risk Assessment & Hazard Identification • Emergency Procedures Aboard Ships • Ensuring Personal Safety During Inspections• Handling Dangerous Goods & Confined Spaces
1420 - 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day One

Day 2

Day 2	
0730 - 0830	Hull Integrity & Structural Components
	Identifying Common Hull Materials • Recognizing Structural Defects & Damage
	• Signs of Corrosion & Wear • Assessing Hull Coating Systems
0830 - 0930	Deck & Superstructure Inspections
	Inspecting Deck Machinery & Equipment • Evaluating Structural Integrity of
	Superstructures • Safety Railings, Ladders, & Access Points • Inspection of
	Cargo Handling Systems
0930 - 0945	Break







0945 – 1125	Ballast & Bilge System Inspections Functionality of Ballast Water Management Systems • Checking Bilge Pumps & Drainage Systems • Identifying Pollution Risks from Ballast & Bilge Systems • Compliance with MARPOL Annex IV
1125 – 1215	Tank Inspections Types of Tanks (Fuel, Cargo, Water, Etc.) • Inspecting Tank Interiors for Cracks & Leaks • Ensuring Proper Venting Systems are in Place • Tank Cleaning & Safety Protocols
1215 - 1230	Break
1230 - 1330	Inspection of Ship Welding & Repairs Recognizing Quality Welding Techniques • Identifying Poor Repairs or Weld Failures • Standards for Shipboard Repairs • Documentation and Reporting of Structural Repairs
1330 - 1420	Recording & Reporting Structural Findings Photographing & Documenting Structural Issues • Writing Clear & Detailed Inspection Reports • Prioritizing Findings Based on Severity • Communicating Recommendations to Stakeholders
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Twere Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Two

Day 3	
0730 - 0830	Main Engine & Auxiliary Machinery Components of Marine Engines • Inspecting Engine Rooms & Machinery Spaces • Recognizing Signs of Wear & Overheating • Maintenance Records & Performance Logs
0830 - 0930	Electrical Systems & Power Generation Inspection of Ship Generators & Alternators • Evaluating Emergency Power Systems • Assessing Electrical Panel Integrity • Identifying Wiring & Insulation Issues
0930 - 0945	Break
0945 – 1125	Steering & Propulsion Systems Inspecting Rudder & Steering Mechanisms • Propeller Shaft Alignment & Wear • Thruster Functionality & Inspection Points • Evaluating Propulsion System Performance
1125 – 1215	Cargo Handling & Mooring Equipment Inspecting Cranes, Winches, & Derricks • Evaluating Mooring Lines & Winches • Testing Load-Handling Equipment • Compliance with Cargo-Handling Safety Regulations
1215 – 1230	Break
1230 - 1330	Fire Safety Systems Fire Detection & Suppression Systems • Testing Fixed & Portable Firefighting Equipment • Ensuring Compliance with SOLAS Fire Safety Requirements • Evaluating Fire Drills & Crew Preparedness







1330 - 1420	Inspection of Lifesaving Appliances Lifeboats & Life Rafts Inspection Procedures • Checking Life Jackets & Immersion Suits • Functionality of Emergency Communication Equipment • Ensuring Proper Stowage & Accessibility
1420 - 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Twere Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Three

Day 4	Day 4	
0730 - 0830	Pollution Prevention Systems	
	MARPOL Compliance for Oil, Garbage & Sewage • Operation of Oily Water	
	Separators & Sludge Tanks • Garbage Management Plans & Records •	
	Preventing Air Pollution (SOx, NOx Compliance)	
	Navigational Equipment & Bridge Inspections	
0830 - 0930	Inspecting Radars, ECDIS, & Communication Systems • Evaluating Bridge	
	Layout & Ergonomics • Checking Navigation Charts & Voyage Planning •	
0930 - 0945	Compliance with SOLAS Chapter V  Break	
0930 - 0943	21000	
	<i>Crew Certification &amp; Safety Training</i> Verifying STCW Compliance for Crew • Reviewing Safety Training & Drills •	
0945 - 1125	Evaluating Crew Competence in Emergency Situations • Documentation of	
	Training & Certifications	
	Port State & Flag State Requirements	
	Differences Between Port State & Flag State Inspections • Common Deficiencies	
1125 – 1215	Noted by Authorities • Understanding Detention Procedures • Handling	
	Disputes or Challenges During Inspections	
1215 - 1230	Break	
	Cargo & Tanker Operations	
1230 - 1330	Inspecting Cargo Tanks & Pipelines • Ensuring Safe Cargo Handling Procedures	
1230 1330	Hazardous Cargo Inspection Protocols    Tanker Operational Standards	
	(ISGOTT Compliance	
	Waste Management & Environmental Protection	
1330 - 1420	Inspecting Waste Disposal Records • Evaluating Compliance with Ballast Water	
	Management • Ensuring Proper Disposal of Hazardous Materials • Promoting	
	Sustainable Practices Aboard Ships	
	Recap	
1420 – 1430	Using this Course Overview, the Instructor(s) will Brief Participants about the	
	Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow	
1/20		
1430	Lunch & End of Day Four	

Day 5

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0730 – 0830	Accident & Incident Investigation Role of Marine Inspectors in Investigations • Collecting Evidence & Interviewing Witnesses • Common Causes of Marine Accidents • Preparing Investigation Reports
0830 - 0930	Advanced Inspection Techniques Use of Drones & Remote Sensing Technologies • Ultrasonic Testing & Thickness Measurements • Non-Destructive Testing (NDT) Methods • Using Simulation Tools for Training & Analysis
0930 - 0945	Break





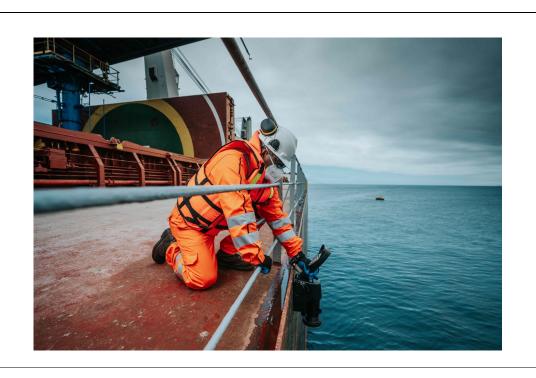






	Inspection of Specialized Vessels
0945 - 1125	Submarines & Offshore Vessels • Passenger Ships & Ro-Ro Ferries • LNG &
	Chemical Tankers • Fishing Vessels & Small Craft
	Case Studies & Practical Exercises
1125 – 1215	Reviewing Real-World Inspection Cases • Role-Playing Inspection Scenarios •
1123 - 1213	Identifying Deficiencies in Simulated Environments • Developing Corrective
	Action Plans
1215 - 1230	Break
	Certification & Professional Development
1230 - 1300	Pathways to Certification as a Marine Inspector • Professional Development
	Opportunities • Key Industry Organizations & Resources • Continuing
	Education & Skill Enhancement
1300 - 1315	Course Conclusion
	Using this Course Overview, the Instructor(s) will Brief Participants about the
	Course Topics that were Covered During the Course
1315- 1415	COMPETENCY EXAM
1415 - 1430	Presentation of Course Certificates
1430	Lunch & End of Course

<u>Practical Sessions</u>
This practical and highly-interactive course includes real-life case studies and exercises:-



# **Course Coordinator**

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