



Skills for Employment Investment Program (SEIP)

ASSESSMENT TOOL

FOR

SHIP PAINTING

(SHIPBUILDING SECTOR)

**Finance Division, Ministry of Finance
Government of the People's Republic of Bangladesh**

Table of Contents

PART A – THE ASSESSOR	3
Instructions to Assessor.....	3
Assessment Evidence Guide	7
Assessment Evidence Plan	8
PART B – THE CANDIDATE	18
Instructions to Candidate	18
Self-Assessment Guide	20
PART C – THE ASSESSMENT	27
Assessment Agreement – Ship Painting	27
PART D – ASSESSMENT TOOLS	30
Specific Instructions to Assessor	30
Specific Instructions to Candidate	32
Written Test.....	33
Written Test - Answers.....	36
Set A: Practical Demonstration 1	38
Set A: Practical Demonstration 1 – Observation Checklist.....	41
Set A: Practical Demonstration 2	44
Set A: Practical Demonstration 2 – Observation Checklist.....	47
Set B: Practical Demonstration 1	50
Set B: Practical Demonstration 1 – Observation Checklist.....	53
Set B: Practical Demonstration 2	56
Set B: Practical Demonstration 2– Observation Checklist.....	60
Set C: Practical Demonstration 1	63
Set C: Practical Demonstration 1 – Observation Checklist	66
Set C: Practical Demonstration 2.....	69
Set C: Practical Demonstration 2 – Observation Checklist	72
Oral Questions (Optional)	75
Oral Questioning Guideline.....	78
Oral Questions (Optional) - Answers	79
Assessment Evidence Summary Sheet.....	84
Assessment Validation Map	86

PART A – THE ASSESSOR

Instructions to Assessor

Assessment is the process of identifying a candidate's skills and knowledge set against the industry established standards in the workplace. It requires the candidate to consistently and over time demonstrate skills, knowledge and attitude that enable confident completion of workplace tasks in a variety of situations.

In judging assessment evidence, the assessor must ensure that the evidence is:

- authentic (the candidate's own work)
- valid (directly related to the current version of the endorsed competency standard)
- reliable (show that the candidate consistently meets the endorsed unit of competency)
- current (reflects the candidate's current capacity to perform the aspect of work covered by the endorsed unit of competency)
- sufficient (covers the full range of elements in the relevant unit of competency)

There are a number of assessment methods that may be employed including but not limited to:

- written examination
- oral questioning
- practical demonstration

A single unit of competency may be assessed or a group of units of competency may be assessed, either in an actual workplace or a simulated workplace environment.

Conducting Assessment

Prior to commencement of assessment, candidates must have the tasks clearly explained to them. Also, the assessor should provide candidates with clear advice and information about the:

- date, time and place for assessment
- structure of assessment
- number of times performance must be demonstrated or observed
- amount or type of assistance candidates can expect
- assessment environment
- resources required for assessment
- performance standards or benchmarks relevant to the qualification

As well as informing the candidate of what they will be required to do during the assessment, the assessor will also need to explain what evidence they will need to provide in response to the various assessment tasks.

If a candidate is required to submit evidence, any explanation must include specific guidance on:

- what to include as evidence
- how to present the evidence
- how to submit the evidence and to whom

Assessing Competence

Competency-based assessment does not award grades, but simply identifies if the candidate has the skills, knowledge and attitudes to undertake the required task to the specified standard.

Therefore, when assessing competency an assessor has two possible results (assessment decisions) that can be awarded:

- Competent (C)
- Not Yet Competent (NYC)

Competent (C)

If the candidate is able to successfully answer and demonstrate what is required to the expected standard of the assessment criteria, they will be deemed as 'Competent'.

The assessor will award 'Competent' if they feel the candidate has the necessary skills, knowledge and attitudes in all assessment tasks for a given package.

Not Yet Competent (NYC)

If the candidate is unable to answer and demonstrate competency to the expected standard, they will be deemed to be 'Not Yet Competent'.

This does not mean the candidate will need to complete all the assessment tasks again. When applying for reassessment, the focus will be on the specific assessment tasks that were not performed to the required standard.

The candidate may be required to:

- (a) undertake further training or instruction
- (b) undertake the specific assessment task again until they are deemed to be competent

Recording Assessment Information

When all assessment tasks are concluded, the evidence summary sheet should be completed, signed by all parties, and any outstanding activities or issues actioned.

The assessor should ensure that all appropriate forms are completed and signed by all parties.

CHECKLIST FOR ASSESSOR		
Prior to the assessment I have:	Tick (✓)	Remarks
Ensured the candidate is informed about the venue and schedule of assessment.		
Received current copies of the assessment criteria to be assessed, assessment plan and evidence plan.		
Reviewed the assessment criteria and evidence plan to ensure I clearly understood the instructions and the requirements of the assessment process.		
Identified and accommodated any special needs of the candidate.		
Checked the set-up and resources for the assessment.		
During the assessment I have:		
Introduced myself and confirmed identities of candidates.		
Collected the admission slips.		
Put candidates at ease by being friendly and helpful.		
Checked completed self-assessment guide.		
Explained to candidates the purpose, context and benefits of the assessment.		
Ensured candidates understood the assessment process and the assessment procedure.		
Provided candidates with an overview of the assessment criteria to be used.		
Gave specific and clear instructions to the candidates.		
Observed carefully the specified time limits provided in the assessment package.		
Stayed at the assessment area during the entire duration of the assessment activity.		
Ensured notes are made on unusual conditions or situations during the assessment and include these in the report.		
Did not provide any assistance during the assessment or indicated in any way whether the candidate is or is not performing the activity correctly (intervened only for health and safety reasons).		

Implemented the evidence gathering process and ensured its validity, reliability, fairness and flexibility.		
Collected appropriate evidence and matched relevance to the elements, performance criteria, range of variables and evidence guide in the relevant units of competency.		
Explained the results reporting procedure to the candidate.		
Encouraged candidates to seek clarifications if in doubt about the pre- and post-assessment activity procedures.		
Asked candidates for feedback on the assessment.		
Explained legal, health and safety, and ethical issues, if applicable.		
After the assessment I have:		
<p>Provided feedback on the assessment decision. This includes the following:</p> <ul style="list-style-type: none"> ▪ clear and constructive feedback on the assessment decision ▪ information on ways of addressing any identified gaps in competency revealed by the assessment ▪ opportunity to discuss the assessment process and outcome ▪ information on reassessment process (if necessary) ▪ information on appeal (if necessary) 		
<p>Prepared the necessary assessment reports. This includes the following:</p> <ul style="list-style-type: none"> ▪ record the assessment decision using the prescribed rating sheet ▪ maintain records of the assessment procedures, evidence collected and assessment decision ▪ endorse assessment decision to BTEB ▪ prepare recommendations for the issuance of certificate 		
Thanked candidate for participating in the assessment.		

Assessment Evidence Guide

The purpose of assessment is to confirm that an individual can perform to the standards expected by in the workplace, as expressed in the competency standards.

To attain the certificate of **Ship Painting**, a candidate must demonstrate competent skill and knowledge in all the units of competency listed below. Upon successful completion of all assessment activities, a candidate shall be awarded with a certificate.

CODE	UNIT OF COMPETENCY
Generic Competencies	
SEIP-SBD-SP-01-G	Use basic mathematical concepts
SEIP-SBD-SP-02-G	Apply occupational health and safety (OHS) practice in the workplace
SEIP-SBD-SP-03-G	Carry out workplace interaction
SEIP-SBD-SP-04-G	Operate in a team environment
Sector-specific Competencies	
SEIP-SBD-SP-01-S	Work effectively in the shipbuilding sector
SEIP-SBD-SP-02-S	Use hand and power tools
Occupation-specific Competencies	
SEIP-SBD-SP-01-O	Identify basic ship painting works
SEIP-SBD-SP-02-O	Carry out surface cleaning
SEIP-SBD-SP-03-O	Apply primer coat to structure
SEIP-SBD-SP-04-O	Perform tie and antifouling coat to underwater hull
SEIP-SBD-SP-05-O	Perform top coat to above water hull, superstructure and other areas

Assessment Evidence Plan

An assessment evidence plan is a document that assists in establishing what evidence needs to be collected by the assessor to ensure that the candidate meets all the appropriate requirements of the competency standard. It usually contains a record of:

- evidence requirements as set out in the competency standard
- who will collect the evidence?
- time period needed to collect the evidence

Occupation:	Ship Painting					
Unit Name:	Use basic mathematical concepts					
Unit Code:	SEIP-SBD-SP-01-G					
Assessment Method:	P	O	W			
	Performance <i>(including demonstration and observation)</i>	Oral questioning	Written examination <i>(including short-answer, multiple choice, and true or false questions)</i>			
Element	Performance Criteria			P	O	W
1. Identify calculation requirements in the workplace	1.1. Calculation requirements are identified from workplace information.			✓		✓
	1.2. Mathematical problems are constructed from workplace information.			✓	✓	
2. Select appropriate mathematical methods/concepts for the calculation	2.1. Appropriate method is selected to carry out the calculation requirement.			✓		✓
	2.2. Constructed mathematical problems are solved with appropriate method.			✓		✓
3. Use tools and instruments to perform calculations	3.1. Tools and instruments required for computation are identified.			✓		✓
	3.2. Calculation is performed using appropriate tools and instruments accurately.			✓		✓

Occupation:	Ship Painting					
Unit Name:	Apply occupational health and safety (OSH) practice at workplace					
Unit Code:	SEIP-SBD-SP-02-G					
Assessment Method:	P	O	W			
	Performance <i>(including demonstration and observation)</i>	Oral questioning	Written examination <i>(including short-answer, multiple choice, and true or false questions)</i>			
Element	Performance Criteria			P	O	W
1. Identify OHS policies and procedures	1.1. OSH policies and safe operating procedures are interpreted.			✓	✓	
	1.2. Safety signs and symbols are identified and followed.			✓		

	1.3. Response, evacuation procedures and other contingency measures are interpreted correctly		√	
2. Apply personal health and safety practices	2.1. OHS policies and procedures are applied in the workplace including personal protective equipment(PPE)	√		
	2.2. Common health issues are recognised.		√	
	2.3. Common safety issues are identified.	√	√	
3. Report hazards and risks	3.1. Hazards and risks are identified.	√	√	
	3.2. Hazards and risks assessment and controls are interpreted.	√		√
4. Respond to emergencies	4.1. Responded to alarms and warning devices.		√	
	4.2. Emergency response plans and procedures are responded to.		√	√
	4.3. First aid procedures during emergency situations are identified.		√	

Occupation:	Ship Painting					
Unit Name:	Carry out workplace interaction					
Unit Code:	SEIP-SBD-SP-03-G					
Assessment Method:	P	O	W			
	Performance (including demonstration and observation)	Oral questioning	Written examination (including short-answer, multiple choice, and true or false questions)			
Element	Performance Criteria			P	O	W
1. Interpret workplace communication and etiquette	1.1. Workplace codes of conduct are interpreted as per organisational guidelines.			√		
	1.2. Appropriate lines of communication are maintained with supervisors and colleagues.			√		
	1.3. Workplace interactions are conducted in a courteous manner to gather and convey information.			√		
	1.4. Workplace procedures and matters are comprehended.					√
2. Read and understand workplace documents	2.1. Workplace documents are interpreted correctly.			√		
	2.2. Visual information/symbols/signage are understood correctly and followed.			√		
	2.3. Specific and relevant information are accessed from appropriate sources.			√		
	2.4. Appropriate medium is used to transfer information and ideas.			√		

3. Participate in workplace meetings and discussions	3.1. Team meetings are attended on time.		√	
	3.2. Meeting procedures and etiquette are followed.		√	
	3.3. Active participation is ensured, opinions are expressed and heard.			√
	3.4. Inputs are provided and interpreted in line with the meeting purpose.		√	
4. Practice professional ethics at work	4.1. Responsibilities as a team member are performed.	√		
	4.2. Tasks are performed in accordance with workplace procedures.	√		
	4.3. Confidentiality is maintained.		√	
	4.4. Inappropriate and conflicting situations are avoided.		√	

Occupation:	Ship Painting					
Unit Name:	Operate in a team environment					
Unit Code:	SEIP-SBD-SP-04-G					
Assessment Method:	P	O	W			
	Performance (including demonstration and observation)	Oral questioning	Written examination (including short-answer, multiple choice, and true or false questions)			
Element	Performance Criteria			P	O	W
1. Identify team goals and processes	1.1. Roles and objectives of the team are identified and interpreted.					√
	1.2. Roles and responsibilities of team members are identified and interpreted.					√
2. Identify own role and responsibilities within team	2.1. Personal role and responsibilities are identified within the team environment.			√		
	2.2. Reporting relationships are interpreted within team and external to team.					√
3. Communicate and cooperate with team members	3.1. Other teammates' tasks are identified and support provided when requested.	√		√		
	3.2. The team is encouraged through sharing information or expertise, working together to solve problems, and putting team success first.	√				
	3.3. Views and opinions of other team members are interpreted and respected.	√				
4. Practice problem solving within the team	4.1. Problems faced at the individual and team level are identified and showed insight into the root-causes of the problems.					√

	4.2. A range of solutions and courses of action are identified together with benefits, costs, and risks associated with each.		√	
	4.3. The good ideas of others to help develop solutions are recognised and advice sought from those who have solved similar problems.		√	
	4.4. It is looked beyond the obvious and not stopped at the first answers.	√		

Occupation:	Ship Painting					
Unit Name:	Work effectively in the shipbuilding sector					
Unit Code:	SEIP-SBD-SP-01-S					
Assessment Method:	P	O	W			
	Performance (including demonstration and observation)	Oral questioning	Written examination (including short-answer, multiple choice, and true or false questions)			
Element	Performance Criteria			P	O	W
1. Understand basics of shipbuilding	1.1. Ship construction terminology and GA plan is interpreted.			√		
	1.2. Key areas of ship are identified from general drawing or model ship.			√		
	1.3. Electrical devices, components and equipment are identified and described.			√	√	
	1.4. Classification of society and ISO rules are explained.					√
2. Obtain information about the industry	2.1. Sources of information about industry are identified.			√		
	2.2. Industry information is collected from multiple sources.			√		
	2.3. Information is interpreted and applied to day-to-day work activities.			√		
3. Identify key machines installed on a ship	3.1. Key machines installed on a ship are identified.			√		
	3.2. Identified machines are located on ship.			√		

Occupation:	Ship Painting				
Unit Name:	Use hand and power tools				
Unit Code:	SEIP-SBD-SP-02-S				
Assessment Method:	P	O	W		
	Performance	Oral questioning	Written examination (including short-answer,		

	<i>(including demonstration and observation)</i>		<i>multiple choice, and true or false questions)</i>		
Element	Performance Criteria		P	O	W
1. Identify and inspect hand and power tools	1.1.	Appropriate hand and power tools are identified.	✓		
	1.2.	Application of hand and power tools is recognised.	✓		
	1.3.	Usability of hand and power tools is checked and verified.	✓		
2. Use hand tools properly and safely	2.1.	Appropriate hand tools are selected.	✓		
	2.2.	Safety precautions are ensured before using hand tools.	✓		
	2.3.	Unsafe or faulty tools are identified and marked for repair.	✓		
	2.4.	Measuring tools are checked and calibrated before use.	✓		
	2.5.	Use hand tools properly and safely to perform work activity.	✓		
3. Operate power tools properly and safely	3.1.	Appropriate power tools are selected.	✓		
	3.2.	Power supply outlet and electrical cord are inspected and confirmed safe for use in accordance with established workplace safety requirements.	✓		
	3.3.	Safety precautions are ensured before using power tools in accordance with manufacturer's operating specification.	✓		
	3.4.	Proper sequence of operation is applied using power tools.	✓		
	3.5.	Unsafe or faulty power tools are identified and marked for repair.	✓		
	3.6.	Operate power tools properly and safely to perform work activity.	✓		
4. Clean and maintain hand tools and power tools	4.1.	Dust and foreign matters are removed from power tools in accordance to workplace standard.	✓		
	4.2.	Condition of tools is checked after use and reported.	✓		
	4.3.	Appropriate lubricant is applied after use and prior to storage.	✓		
	4.4.	Measuring tools are checked and calibrated after use.	✓		
	4.5.	Defective hand and power tools are inspected and repaired or replaced.	✓		
	4.6.	Hand and power tools are stored and secured in accordance with workplace requirements.	✓		

Occupation:	Ship Painting					
Unit Name:	Identify basic ship painting works					
Unit Code:	SEIP-SBD-SP-01-O					
Assessment Method:	P	O	W			
	Performance (including demonstration and observation)	Oral questioning	Written examination (including short-answer, multiple choice, and true or false questions)			
Element	Performance Criteria			P	O	W
1. Identify basic painting requirements	1.1. Principles of ship painting are identified and described.				√	
	1.2. Class rules and environmental requirements are identified.			√	√	
	1.3. Common ship painting terminology is identified and interpreted.			√		
2. Identify surface areas for cleaning and painting	2.1. Ship surface for painting is identified.			√	√	
	2.2. Methods for preparing surface are identified.			√		
	2.3. Confined spaces requiring painting are identified.			√		
3. Identify types of paint and painting processes	3.1. Types of paint are identified.			√	√	
	3.2. Painting procedure and precautions are identified.			√		
	3.3. Painting application methods are identified.			√	√	

Occupation:	Ship Painting					
Unit Name:	Carry out surface cleaning					
Unit Code:	SEIP-SBD-SP-02-O					
Assessment Method:	P	O	W			
	Performance (including demonstration and observation)	Oral questioning	Written examination (including short-answer, multiple choice, and true or false questions)			
Element	Performance Criteria			P	O	W
1. Prepare for work	1.1. Job specifications and instructions are read and interpreted.			√		
	1.2. Appropriate personal protective equipment (PPE) is identified and selected.			√		
	1.3. Appropriate tools and equipment are identified and selected.			√		
	1.4. Appropriate materials are identified and selected.			√		
	1.5. Selected tools, equipment and materials are prepared as per job requirement.			√		

2. Perform surface cleaning	2.1. Shop cleaning and priming for new shipbuilding is performed as per job requirements.	√		
	2.2. Hull cleaning is performed using high pressure water jet.	√		
	2.3. Surface preparation of external hull areas is carried out using abrasive blasting.	√		
	2.4. Hull cleaning is performed using air pressure prior to paint application.	√		
	2.5. Internal hull areas are cleaned.	√		
	2.6. Confined spaces are cleaned as per job requirement.	√		
3. Clean and maintain workplace	3.1. Tools and equipment are cleaned and maintained as per standard operating procedure.	√		
	3.2. Tools and equipment are safely and securely stored.	√		
	3.3. Workplace is cleaned and waste material disposed of.	√		

Occupation:	Ship Painting					
Unit Name:	Apply primer coat to ship structure					
Unit Code:	SEIP-SBD-SP-03-O					
Assessment Method:	P	O	W			
	Performance (including demonstration and observation)	Oral questioning	Written examination (including short-answer, multiple choice, and true or false questions)			
Element	Performance Criteria			P	O	W
1. Prepare for work	1.1. Job specifications and instructions are read and interpreted.	√				
	1.2. Appropriate personal protective equipment (PPE) is identified and selected.	√				
	1.3. Appropriate tools and equipment are identified and selected.	√				
	1.4. Appropriate materials are identified and selected.	√				
	1.5. Selected tools, equipment and materials are prepared as per job requirement.	√				
2. Perform primer coat application	2.1. Work area is set-up as per job requirement.	√				
	2.2. Types of coating are identified and selected as per technical data sheet.	√				
	2.3. Surface is cleaned and dried to remove grease, oil and salt contamination.	√				

	2.4. Adequate ventilation is established as per standard operating procedure.	√		
	2.5. Humidity, temperature and dew point are identified and ensured as per job requirement.	√		
	2.6. Primer coat on internal and external areas is applied as per job specification.	√		
	2.7. Overcoating and wet film thickness (WFT) are checked as per technical data sheet.	√		
3. Clean and maintain workplace	3.1. Tools and equipment are cleaned and maintained as per standard operating procedure.	√		
	3.2. Tools and equipment are safely and securely stored.	√		
	3.3. Workplace is cleaned and waste material disposed of.	√		

Occupation:	Ship Painting					
Unit Name:	Perform tie and anti-fouling coat to underwater hull					
Unit Code:	SEIP-SBD-SP-04-O					
Assessment Method:	P	O	W			
	Performance (including demonstration and observation)	Oral questioning	Written examination (including short-answer, multiple choice, and true or false questions)			
Element	Performance Criteria			P	O	W
1. Prepare for work	1.1. Specifications and instructions are read and interpreted.			√		
	1.2. Appropriate personal protective equipment (PPE) is identified and selected.			√		
	1.3. Appropriate tools and equipment are identified and selected.			√		
	1.4. Appropriate materials are identified and selected.			√		
	1.5. Selected tools, equipment and materials are prepared as per job requirement.			√		
2. Perform tie-coat works	2.1. Underwater hull surface is cleaned and prepared for tie coating application.			√		
	2.2. Tie-coat works are carried out for bonding with primer and anti-fouling paint.			√		
	2.3. Clean tie coat and check surface before applying anti-fouling paint.			√		
3. Apply anti-fouling coat	3.1. Anti-fouling coat is applied as per technical data sheet.			√		

	3.2. Overcoating time, humidity and temperature are monitored and maintained as per standard operating procedure.	√		
	3.3. Standard curing time and temperature are monitored and maintained to ensure required paint hardness and bonding.	√		
	3.4. Works are performed at optimum condition according to standard operating procedure.	√		
4. Carry out rectification work	4.1. Paint defects are identified properly to ensure correct method of rectification.	√		
	4.2. Paint rectification is performed as per standard operating procedure.	√		
	4.3. Rectified anti-fouling surface is inspected to ensure quality assurance compliance.	√		
5. Clean and maintain workplace	5.1. Tools and equipment are cleaned and maintained as per standard operating procedure.	√		
	5.2. Tools and equipment are safely and securely stored.	√		
	5.3. Workplace is cleaned and waste materials disposed of.	√		

Occupation:	Ship Painting						
Unit Name:	Perform top coat for above-water hull, superstructure and other areas						
Unit Code:	SEIP-SBD-SP-05-O						
Assessment Method:	P	O	W				
	Performance (including demonstration and observation)	Oral questioning	Written examination (including short-answer, multiple choice, and true or false questions)				
Element	Performance Criteria			P	O	W	
1. Prepare for work	1.1. Specifications and instructions are read and interpreted.				√		
	1.2. Appropriate personal protective equipment (PPE) is identified and selected.				√		
	1.3. Appropriate tools and equipment are identified and selected.				√		
	1.4. Appropriate materials are identified and selected.				√		
	1.5. Selected tools, equipment and materials are prepared as per job requirement.				√		
2. Apply top coat	2.1. Surface is cleaned and prepared for top coat application to above water hull, superstructure, and other areas.				√		
	2.2. Top coat works are carried out for bonding with primer coat as per technical data sheet.				√		

	2.3. Overcoating time, humidity and temperature are monitored and maintained as per standard operating procedure.	√		
	2.4. Standard curing time and temperature are monitored and maintained to ensure required paint hardness and bonding.	√		
	2.5. Works are performed at optimal condition according to standard operating procedure.	√		
	2.6. Precautionary measures are undertaken for work in confined spaces as per standard operating procedure.	√		
3. Carry out rectification work	3.1. Paint defects are identified properly to ensure correct method of rectification.	√		
	3.2. Paint rectification is performed as per standard operating procedure.	√		
	3.3. Rectified anti-fouling surface is inspected to ensure quality assurance compliance.	√		
4. Clean and maintain workplace	4.1. Tools and equipment are cleaned and maintained as per standard operating procedure.	√		
	4.2. Tools and equipment are safely and securely stored.	√		
	4.3. Workplace is cleaned and waste materials disposed of.	√		

PART B – THE CANDIDATE

Instructions to Candidate

To be assessed as competent, you must provide evidence which demonstrates that you can perform to the necessary standard the various elements of these units of competency that comprise of the Certificate in Ship Painting. Assessment of competency requires you to consistently demonstrate skill, knowledge and aptitude (through a variety of assessment tools such as multiple choice, short-answer questions, oral questioning, workplace observation, and practical demonstration) that enables confident completion of workplace tasks in a variety of situations.

In judging the evidence, your assessor must ensure that the evidence is:

- authentic (your own work)
- valid (directly related to the current version of the units of competency)
- reliable (consistently demonstrates of your knowledge and skill)
- current (shows your current capacity to perform the work)
- sufficient (covers the full range of elements comprised within the units of competency)

Furthermore, the assessment process must:

- provide for valid, reliable, flexible and fair assessment
- provide for judgment to be made on the basis of sufficient evidence
- offer valid, authentic and current evidence
- include workplace requirements

There are two types of assessment:

1. Knowledge Assessment - is designed to enable assessment against the various *elements* contained within the units of competency through a variety of activities such as multiple choice, short-answer questions, oral questioning. It is essentially examining your theoretical knowledge.

This provides the assessor with substantial evidence of your knowledge and aptitude to perform the work relating to the specific unit of competency, in conjunction with other assessment tools such as workplace observation.

You should complete the knowledge assessment as directed by the assessor and follow all instructions as and when given. If you are unable to complete the knowledge assessment, please speak to the assessor about alternative assessment solutions.

2. Skill Assessment - is designed to enable assessment against the various *performance criteria* contained within the units of competency through, for example, demonstration of skill in a simulated or actual work environment. In essence, it is an examination of your practical ability.

This provides the assessor with substantial evidence of your ability to perform the work relating to the specific unit of competency to the standard expected by industry (the benchmark).

You should complete the skill assessment as directed by the assessor and follow all instructions as and when given, ensuring your own health and safety.

Once you have been assessed as competent against all of the units of competency comprising of the qualification being undertaken, you will be awarded your certificate.

Your assessor will discuss in more detail the requirements for assessment for each unit of competency at the appropriate time.

And please do not panic if you are not assessed as competent on any part of your qualification at your first attempt. Your assessor will discuss with you any identified skill and knowledge gaps, work through those with you and assist you as much as possible in attaining competency.

Self-Assessment Guide

Before undertaking any assessment, you should review the list of skills, knowledge and aptitudes relating to the assessment (drawn from the units of competency, its various elements and performance criteria) to determine whether you have current competency in these areas.

If you believe you can demonstrate the skills and knowledge required and can successfully complete the various assessment activities, you should then proceed to discuss your assessment with the assessor and complete Assessment Agreement.

However, should you not believe, for whatever reason, that you are not able to successfully complete the various assessment activities, then speak with the assessor. The assessor will assist you in identifying any skill and knowledge gaps, work through those with you and assist you as much as possible in attaining competency.

Please complete the self-assessment checklist below and discuss with the assessor.

Qualification:	Ship Painting	
Units of competency:	<p>Generic units:</p> <p>Use basic mathematical concepts</p> <p>Apply occupational safety and health (OSH) practice in the workplace</p> <p>Carry out workplace interaction</p> <p>Operate in a team environment</p> <p>Sector-specific units:</p> <p>Apply basic knowledge of ship and shipbuilding</p> <p>Use hand and power tools</p> <p>Occupation-specific units:</p> <p>Identify basic ship painting works</p> <p>Carry out surface cleaning</p> <p>Apply primer coat to structure</p> <p>Perform tie and anti-fouling coat to underwater hull</p> <p>Perform top coat to above water hull, superstructure and other areas</p>	
Instructions:		
<ul style="list-style-type: none"> ▪ Read each of the questions in the left-hand column of the chart ▪ Place a tick (√) in the appropriate box opposite each question to indicate your answer 		
Can I?	YES	NO
▪ Identify calculation requirements from workplace information		
▪ Select appropriate mathematical method to carry out calculation		
▪ Determine system and units of measurement to be followed		
▪ Complete calculations using appropriate methods such as addition, subtraction, multiplication and division		
▪ Apply to workplace calculation systems and units of measurement for the task		

▪ Access and interpret instructions		
▪ Ask questions to clarify understanding or gain more information		
▪ Record information/instruction properly		
▪ Interpret written instructions		
▪ Respond to work signage		
▪ Follow routine written instructions in sequence		
▪ Give feedback to the workplace supervisor		
▪ Use relevant communication methods to transmit instructions		
▪ Use appropriate non-verbal communication		
▪ Identify and follow channels of communication		
▪ Operate communication tools and equipment and identify and report faults		
▪ Convey information using appropriate forms		
▪ Complete all required documentation accurately and on time		
▪ Record workplace data using approved formats or templates		
▪ Pass written information/instruction to appropriate personnel		
▪ Attend meetings regularly and on time following well-disseminated agenda		
▪ Ensure meeting inputs are consistent with meeting purpose and established protocols		
▪ Express opinions without interruption		
▪ Process and implement meeting outputs		
▪ Interpret OHS policies and safe operating procedures		
▪ Identify and use personal protective equipment (PPE)		
▪ Identify and follow safety signs and symbols		
▪ Interpret response, evacuation procedures and other contingency as per standard		
▪ Apply OSH policies and procedures in the workplace		
▪ Recognise common health issues		
▪ Identify and follow common safety issues		
▪ Identify hazards and risks		
▪ Interpret hazards and risks assessment and controls		
▪ Respond to alarms and warning devices		
▪ Follow emergency response plans and procedures as appropriate to the nature of the emergency and according to workplace procedures		
▪ Follow first aid procedures for dealing with accidents, fires and emergencies whenever necessary within scope of responsibilities		
▪ Identify team goals and processes		
▪ Identify roles and responsibilities of team members		

▪ Identify relationships within team and with other work areas		
▪ Used effective interpersonal skills to interact with team members and to contribute to activities and objectives		
▪ Use formal and informal forms of communication effectively to support team achievement		
▪ Respect and value diversity in team functioning		
▪ Understand views and opinions of other team members and reflect accurately		
▪ Use workplace staff regulation correctly to assist communication		
▪ Identify and clarify duties, responsibilities, authorities, objectives and task requirements with team		
▪ Perform task in accordance with organizational and team requirements, specifications and workplace procedures		
▪ Support other members as required to ensure team achieves goals and requirements		
▪ Follow agreed reporting lines using standard operating procedures		
▪ Identify current and potential problems faced by team		
▪ Identify procedures for avoiding and managing problems		
▪ Solve problems effectively and in a manner that supports the team		
▪ Identify and access appropriate manuals		
▪ Check version and date of manual to ensure up-to-date specifications of tools, equipment, materials and procedures		
▪ Identify relevant drawings and specifications		
▪ Identify terms and abbreviations		
▪ Identify signs and symbols		
▪ Interpret drawings and specifications		
▪ Interpret schedules, dimensions and specifications contained in the drawings		
▪ Collect and pack manuals and documents		
▪ Store manuals and documents appropriately to prevent damage, ready access and updating of information where required		
▪ Identify hand tools		
▪ Interpret application of tools to job requirements		
▪ Check and verify usability of tools		
▪ Prepare hand tools and power tools		
▪ Identify sources of power supply for power tools		
▪ Use appropriate hand tools for the job		
▪ Apply proper and safe use and operation of hand tools		
▪ Observe safety precaution when using hand tools		
▪ Identify unsafe or faulty tools and mark for repair		

▪ Inspect power supply outlet and electrical cord and confirm safe for use in accordance with established workplace safety requirements		
▪ Apply proper sequence of operation in using power tools		
▪ Use power tools safely in accordance to manufacturer's operating specification		
▪ Remove dust and foreign matters from power tools in accordance to workplace standard		
▪ Check condition of tools after use		
▪ Apply appropriate lubricant after use and prior to storage		
▪ Check and calibrate measuring tools		
▪ Inspect and correct or replace defective tools, instruments, power tools and accessories		
▪ Comprehend scope, nature and major fields of shipbuilding sector in the industry		
▪ Comprehend profile of shipbuilding sector/ industry in relation to Bangladesh employment condition		
▪ Outline trends and technologies relevant to the sector		
▪ Identify and interpret relevant policies and guidelines		
▪ Obtain and clarify instructions as to procedures in achieving quality		
▪ Identify job roles and responsibilities of ship painter for shipbuilding sector		
▪ Identify employee relationships within the shipbuilding sector		
▪ Identify common goals, objectives and tasks and clarify with appropriate persons		
▪ Determine individual tasks and agree on according to workplace environment		
▪ Identify and clarify workplace requirements		
▪ Interpret workplace practices		
▪ Use problem-solving strategies to address bottlenecks, inconsistencies and other concerns		
▪ Plan own work activities and communicate progress of work to relevant staff		
▪ Complete work activities based on workplace standards		
▪ Identify difficulties and bottlenecks and put forward solutions		
▪ Monitor own work against workplace standards and identify and act on areas for improvement		
▪ Apply effective interpersonal skills to interact with others and to contribute activities and objectives		
▪ Perform assigned tasks in accordance with job requirements, specifications and workplace environment		
▪ Confirm work requirements with colleagues		
▪ Understand basics of ship, shipbuilding and shipyard		

<ul style="list-style-type: none"> ▪ Understand ships are build according to National and International rules such as Class Rule /ISO/IMO/SOLAS/MARPOL etc. 		
<ul style="list-style-type: none"> ▪ Understand General Arrangement plan (GA plan) 		
<ul style="list-style-type: none"> ▪ Introduce and identify shipbuilding terminology 		
<ul style="list-style-type: none"> ▪ Understand and identify different parts of a ship 		
<ul style="list-style-type: none"> ▪ Identify different location-wise name of a ship 		
<ul style="list-style-type: none"> ▪ Introduce and identify ship painting works 		
<ul style="list-style-type: none"> ▪ Understand and Identify key task of a ship painter 		
<ul style="list-style-type: none"> ▪ Identify and describe. principles of ship painting works 		
<ul style="list-style-type: none"> ▪ Identify Class rules and environmental requirements 		
<ul style="list-style-type: none"> ▪ Identify and interpret common ship painting terminology 		
<ul style="list-style-type: none"> ▪ Identify ship surface for painting. 		
<ul style="list-style-type: none"> ▪ Identify methods for preparing surface areas for cleaning and painting 		
<ul style="list-style-type: none"> ▪ Identify confined spaces requiring painting 		
<ul style="list-style-type: none"> ▪ Identify types of paints 		
<ul style="list-style-type: none"> ▪ Identify painting procedure and precautions 		
<ul style="list-style-type: none"> ▪ Identify painting application methods 		
<ul style="list-style-type: none"> ▪ Read and interpret job specifications and instructions for surface cleaning 		
<ul style="list-style-type: none"> ▪ Identify and select appropriate personal protective equipment (PPE) for surface cleaning 		
<ul style="list-style-type: none"> ▪ Identify and select appropriate tools and equipment 		
<ul style="list-style-type: none"> ▪ Identify and select appropriate materials 		
<ul style="list-style-type: none"> ▪ Prepare selected tools, equipment and materials as per job requirement. 		
<ul style="list-style-type: none"> ▪ Perform shop cleaning and priming for new shipbuilding is as per job requirements 		
<ul style="list-style-type: none"> ▪ Perform hull cleaning using high pressure water jet 		
<ul style="list-style-type: none"> ▪ Carry out surface preparation of external hull areas using abrasive blasting 		
<ul style="list-style-type: none"> ▪ Perform hull cleaning using air pressure prior to paint application 		
<ul style="list-style-type: none"> ▪ Clean internal hull areas 		
<ul style="list-style-type: none"> ▪ Clean confined spaces as per job requirement 		
<ul style="list-style-type: none"> ▪ Clean and maintain tools and equipment as per standard operating procedure 		
<ul style="list-style-type: none"> ▪ Store tools and equipment are safely and securely 		
<ul style="list-style-type: none"> ▪ Clean workplace and waste material disposed of 		

▪ Read and interpret job specifications and instructions for primer coat to structure		
▪ Identify and select appropriate personal protective equipment (PPE) for primer coat		
▪ Identify and select appropriate tools and equipment		
▪ Identify and select appropriate materials		
▪ Prepare selected tools, equipment and materials as per job requirement		
▪ Set-up work area as per job requirement		
▪ Identify and select types of primer coating as per technical data sheet		
▪ Clean and dry surface is to remove grease, oil and salt contamination		
▪ Establish adequate ventilation as per standard operating procedure		
▪ Identify and ensure humidity, temperature and dew point as per job requirement		
▪ Apply primer coat on internal and external areas as per job specification		
▪ Check overcoating and wet film thickness (WFT) as per technical data sheet		
▪ Clean and maintain tools and equipment as per standard operating procedure		
▪ Store tools and equipment are safely and securely		
▪ Clean workplace and waste material disposed of.		
▪ Read and Interpret job specifications and instructions for tie and anti-fouling coat to underwater hull		
▪ Identify and select appropriate personal protective equipment (PPE) for tie coat		
▪ Identify and select appropriate tools and equipment		
▪ Identify and select appropriate materials		
▪ Prepare selected tools, equipment and materials as per job requirement		
▪ Clean and prepare underwater hull surface for tie coating application		
▪ Carry out tie-coat works for bonding with primer and anti-fouling paint		
▪ Clean tie coat and check surface before applying anti-fouling paint		
▪ Apply anti-fouling coat as per technical data sheet		
▪ Monitor and maintain overcoating time, humidity and temperature are as per standard operating procedure		
▪ Monitor and maintain standard curing time and temperature to ensure required paint hardness and bonding		
▪ Perform works at optimum condition according to standard operating procedure		

▪ Identify paint defects properly to ensure correct method of rectification		
▪ Perform paint rectification as per standard operating procedure		
▪ Inspect rectified anti-fouling surface to ensure quality assurance compliance		
▪ Clean and maintain tools and equipment as per standard operating procedure		
▪ Store tools and equipment safely and securely		
▪ Clean workplace and dispose of waste material		
▪ Read and interpret Job specifications and instructions to perform top coat to above water hull, superstructure and other areas		
▪ Identify and select appropriate personal protective equipment (PPE)		
▪ Identify and select appropriate tools and equipment		
▪ Identify and select appropriate materials		
▪ Prepare selected tools, equipment and materials as per job requirement		
▪ Clean and prepare surface for top coat application to above water hull, superstructure, and other areas		
▪ Carry out top coat works for bonding with primer coat as per technical data sheet		
▪ Monitor and maintain overcoating time, humidity and temperature are as per standard operating procedure		
▪ Monitor and maintain standard curing time and temperature to ensure required paint hardness and bonding		
▪ Perform works at optimal condition according to standard operating procedure		
▪ Undertake precautionary measures for work in confined spaces as per standard operating procedure		
▪ Identify paint defects properly to ensure correct method of rectification		
▪ Perform paint rectification as per standard operating procedure		
▪ Rectify anti-fouling surface is inspected to ensure quality assurance compliance		
▪ Clean and maintain tools and equipment as per standard operating procedure		
▪ Store tools and equipment safely and securely		
▪ Clean workplace and dispose waste materials		
▪ Report to supervisor		
I agree to undertake assessment in the knowledge that the information gathered will only be used for educational and professional development purposes, and can only be accessed by concerned assessment personnel and my manager/supervisor.		
Candidate's signature:		Date:

PART C – THE ASSESSMENT

Assessment Agreement – Ship Painting

The purpose of assessment is to confirm that you can perform to the standards expected in the workplace of an occupation, as expressed in the competency standards (after completion of self-assessment and in agreement with assessor).

To help achieve this, an assessment agreement is required to navigate both you and the assessor through the assessment process.

The assessment agreement is designed to provide a clear understanding of what and how you will be assessed and to nominate the tools that may be used to collect the assessment evidence.

You, the assessor and/or workplace supervisor should agree on the assessment requirements, dates and deadlines.

Therefore, to attain the Certificate of Ship Painting you must demonstrate competence in the following units, as established in the assessment agreement:

CODE	UNIT OF COMPETENCY
Generic Competencies	
SEIP-SBD-SP-01-G	Use basic mathematical concepts
SEIP-SBD-SP-02-G	Apply occupational health and safety (OHS) practice in the workplace
SEIP-SBD-SP-03-G	Carry out workplace interaction
SEIP-SBD-SP-04-G	Operate in a team environment
Sector-specific Competencies	
SEIP-SBD-SP-01-S	Work effectively in the shipbuilding sector
SEIP-SBD-SP-02-S	Use hand and power tools
Occupation-specific Competencies	
SEIP-SBD-SP-01-O	Identify basic ship painting works
SEIP-SBD-SP-02-O	Carry out surface cleaning
SEIP-SBD-SP-03-O	Apply primer coat to structure
SEIP-SBD-SP-04-O	Perform tie and antifouling coat to underwater hull
SEIP-SBD-SP-05-O	Perform top coat to above water hull, superstructure and other areas

After successful completion of learning and assessment, you shall be awarded with a certificate.

Assessment Agreement	
Occupation:	Ship Painting
Assessment Centre:	
Candidate Name:	
Assessor Name:	
Unit of Competency	
Generic Competencies	
SEIP-SBD-SP-01-G	Use basic mathematical concepts
SEIP-SBD-SP-02-G	Apply occupational health and safety (OHS) practice in the workplace
SEIP-SBD-SP-03-G	Carry out workplace interaction
SEIP-SBD-SP-04-G	Operate in a team environment
Sector-specific Competencies	
SEIP-SBD-SP-01-S	Apply basic knowledge of ship and shipbuilding
SEIP-SBD-SP-02-S	Use hand and power tools
Occupation-specific Competencies	
SEIP-SBD-SP-01-O	Identify basic ship painting works
SEIP-SBD-SP-02-O	Carry out surface cleaning
SEIP-SBD-SP-03-O	Apply primer coat to structure
SEIP-SBD-SP-04-O	Perform tie and antifouling coat to underwater hull
SEIP-SBD-SP-05-O	Perform top coat to above water hull, superstructure and other areas
Resources Required for Assessment	
<p>Candidates must have access to the following:</p> <ul style="list-style-type: none"> ▪ copies of activities, questions, projects nominated by the assessor ▪ relevant organisational policies, protocols and procedural documents (if required) ▪ devices or tools to record answers ▪ appropriate actual or simulated workplace ▪ all necessary tools and equipment used in performance of the work-based task ▪ any other resources normally used in the workplace 	
Assessment Instructions	
<p>Candidates should respond to the formative and summative assessments either verbally or in writing as agreed with the assessor. Written responses can be recorded in the spaces provided (if more space is required attach additional pages) or submitted in a word-processed document.</p> <p>If candidates answer verbally, the assessor should record their answers in detail.</p> <p>Candidates should also undertake observable tasks that provide evidence of performance. The assessor must provide instruction to candidates on what is expected during observation, and arrange a suitable time and location for demonstration of these skills.</p> <p>Candidates must fully understand what they are required to do to complete these assessment tasks successfully, then sign the declaration.</p>	
Performance Standards	

To receive a **satisfactory** result for the assessments, candidates must complete all activities, questions, projects, and tasks nominated by the assessor, to the required standard.

Completion of all tasks for a unit of competency, to a satisfactory level, will contribute to an assessment of competence for that specific individual unit (or units if holistic assessment approach is taken).

Successful completion of all the units of competency that comprise of the qualification Ship Painting will result in the candidate being issued with the relevant, nationally recognised certificate.

Assessors must clearly explain the required performance standards.

Declaration

I declare that:

- the assessment requirements have been clearly explained to me
- all the work completed towards assessment will be my own
- cheating and plagiarism are unacceptable

Candidate Signature:		Date:	
Assessor Signature:		Date:	

PART D – ASSESSMENT TOOLS

Specific Instructions to Assessor

Please read carefully and prepare as necessary:

1. The assessor shall (practical demonstration assessment activities):
 - provide the candidate with the necessary tools, equipment, machinery and materials for completion of one (1) set of the following practical demonstration activities:
 - Set A:
 - Carry out surface preparation and painting of external hull (underwater)
 - Carry out surface preparation and painting of internal hull (middle cargo hold) and confined space (DB tank)
 - Set B:
 - Carry out surface preparation and painting of external hull (boot top zone)
 - Carry out surface preparation and painting of internal hull (forward cargo hold) and confined space (chain locker)
 - Set C:
 - Carry out surface preparation and painting of external hull (freeboard)
 - Carry out surface preparation and painting of internal hull (engine room) and confined space (deep tank)
 - provide the candidate with the copy of the specific instruction to candidate
 - allow practical demonstration to be performed within **five (5)** hours including preparation of the materials
 - ensure that the candidate **FULLY** understands the instructions before proceeding to the performance of the assessment activity
 - allow fifteen (15) minutes for the candidate to familiarise themselves with the resources to be used during the practical demonstrations
 - ensure that the candidate is wearing appropriate personal protective equipment (PPE) before allowing them to proceed with the assessment activity.
 - Ensure gas freeing to enter cleaning and painting confined areas.
2. Assessment shall be based on the performance criteria in each of the units of competency. The evidence gathering method shall be comprised of:
 - (a) Written Test (1 hour) – **knowledge evidence**
 - (b) Practical Demonstration (**5** hours) – **performance evidence**The practical demonstration activities will be divided into two (2) tasks (contained in one set):
 - (i) Practical Demonstration 1 (**2** hours)
 - (ii) Practical Demonstration 2 (**3** hours)
3. At the conclusion of each assessment activity, you will provide feedback to the candidate of the assessment result. The feedback will indicate whether the candidate is:

COMPETENT

NOT YET COMPETENT

4. The list of tools, equipment, machinery and materials to be provided for completion of the practical demonstration assessment activities can be found at:
- Set A – Practical Demonstration 1: page 39
 - Set A – Practical Demonstration 2: page 45
 - Set B – Practical Demonstration 1: page 51
 - Set B – Practical Demonstration 2: page 58
 - Set C – Practical Demonstration 1: page 64
 - Set C – Practical Demonstration 2: page 70

Specific Instructions to Candidate

You should respond to the assessment either in writing or verbally as agreed with the assessor. Written responses can be recorded in the spaces provided; if more space is required attach additional pages or submit a word-processed document.

If you answer verbally, the assessor should record your answers in detail. Please check your recorded answers carefully and thoroughly to ensure that they are accurate.

You may also be undertaking observable activities (i.e. practical demonstration) that provide evidence of performance. The assessor must provide you with clear instructions on what is expected during this type of assessment, and arrange a suitable time and location for demonstration of these skills.

To receive a satisfactory result for the assessments, you must complete all of the assessment activities; including questions, projects and tasks nominated by the assessor, to the required standard.

This assessment is based upon the units of competency in Ship Painting.

Using the performance criteria as a benchmark, evidence will be gathered through:

1. Written Test (1 hour) – a variety of multiple-choice, true or false and short answer theory questions to support your competence with regard to the required knowledge (**knowledge evidence**).
2. Practical Demonstration (5 hours) – observable tasks outlined in the elements and performance criteria of the units of competency, completed to support a judgement of satisfactory performance to the required standard (**performance evidence**).

There will be one (1) set of practical demonstration activities to complete. The assessor will direct you as to which 'set' you will be required to complete out of the following:

- Set A:
 - Carry out surface preparation and painting of external hull (under water hull)
 - Carry out surface preparation and painting of internal hull (middle cargo hold) and confined space (DB tank)
 - Set B:
 - Carry out surface preparation and painting of external hull (boot top zone)
 - Carry out surface preparation and painting of internal hull (forward cargo hold) and confined space (chain locker)
 - Set C:
 - Carry out surface preparation and painting of external hull (freeboard)
 - Carry out surface preparation and painting of internal hull (engine room) and confined space (deep tank)
3. The assessor will provide all necessary tools, equipment, machinery and materials required to complete each assessment activity.
 4. These assessments cover all units of competency for Ship Painting.
 5. The assessor will provide you with feedback of your performance after completion of each assessment activity. This feedback shall indicate whether you are:

COMPETENT

NOT YET COMPETENT

6. Complete of all assessment activities, to a satisfactory level, will contribute to a final assessment of competence.

Written Test

WRITTEN TEST - INSTRUCTIONS	
Candidate Name:	
Assessor Name:	
Qualification:	Certificate in Ship Painting
Unit of Competency	
Generic Competencies	
SEIP-SBD-SP-01-G	Use basic mathematical concepts
SEIP-SBD-SP-02-G	Apply occupational health and safety (OHS) practice in the workplace
SEIP-SBD-SP-03-G	Carry out workplace interaction
SEIP-SBD-SP-04-G	Operate in a team environment
Sector-specific Competencies	
SEIP-SBD-SP-01-S	Apply basic knowledge of ship and shipbuilding
SEIP-SBD-SP-02-S	Use hand and power tools
Occupation-specific Competencies	
SEIP-SBD-SP-01-O	Identify basic ship painting works
SEIP-SBD-SP-02-O	Carry out surface cleaning
SEIP-SBD-SP-03-O	Apply primer coat to structure
SEIP-SBD-SP-04-O	Perform tie and antifouling coat to underwater hull
SEIP-SBD-SP-05-O	Perform top coat to above water hull, superstructure and other areas
Assessment Centre:	
Date of Assessment:	
Time of Assessment:	
Instructions:	
<p>Read and understand the directions carefully:</p> <ul style="list-style-type: none"> ▪ this written examination is based on the performance criteria from all the units of competency in Ship Painting ▪ this assessment activity will be used to measure your underpinning knowledge ▪ write your answers on the paper provided ▪ answer all the questions as best as possible ▪ you have 1 (one) hour to complete this test 	

WRITTEN TEST

Multiple Choice

This is a **multiple-choice** test. Choose the appropriate answer and circle the letter that corresponds with your answer.

1.	What is 50 % of 250?	a. 50 b. 75 c. 125 d. 150
2.	The thickness of paint is measured in?	a. micron(μ) b. miles c. mms d. None of the above
3.	Which is not used as a measuring tool?	a. Ammeter b. Grinders c. Multi meter d. Megger
4.	Where can you find starboard on a ship?	a. Forward part of the ship b. Back part of the ship c. Right side of the ship d. Left side of the ship
5.	What tool is used to measure paint thickness?	a. Bristle blaster b. Coat thickness gauge c. Needle Gun d. Hydrometer
6.	Which is not an external part of a ships surface?	a. underwater b. Boot top zone c. Superstructure d. Engine room
7.	DFT stands for?	a, Dry Film Test b. Wet Film Test c. Dry Film Thickness d. None of the above
8.	A common confined space on a ship is called?	a. Deck b. Chain locker c. Mast d. Derrick

True or False Quiz

Tick (✓) the box corresponding to the correct answer.

9.	Right side of the ship is called port.	True <input type="checkbox"/> False <input type="checkbox"/>
10.	Primer coat is applied on a ship before tie coat.	True <input type="checkbox"/> False <input type="checkbox"/>

Fill in the Missing Blanks

Write the word or group of words needed to complete the following sentences.

11.	_____ is used to catch a person so as to avoid falling while working at height.
12.	A hand tool which is used to clean the surface of the hull is known as a _____.

Short Answer

Write a short answer in the space provided (not to exceed more than approximately twenty-five (25) words).

13.	Why ship painting is important ?	
14.	Name five types of paint used in ship painting.	
15.	List five methods of hull surface preparation?	
16.	What is the boot top zone?	

Feedback to candidate:

Assessment decision for this assessment activity:

Competent

Not Yet Competent

Candidate Signature:		Date:	
Assessor Signature:		Date:	

Written Test - Answers

Answers are highlighted in **bold** and *italics*.

Multiple Choice	
This is a multiple-choice of test. Choose the appropriate answer and circle the letter that corresponds with your answer.	
1.	<p>What is 50 % of 250?</p> <p>a. 50 b. 75 c. 125 d. 150</p>
2.	<p>The thickness of paint is measured in?</p> <p>a. micron (μ) b. miles c. mms d. None of the above</p>
3.	<p>Which is not used as a measuring tool?</p> <p>a. Ammeter b. Grinders c. Multi meter d. Megger</p>
4.	<p>Where can you find starboard on a ship?</p> <p>a. Forward part of the ship b. Back part of the ship c. Right side of the ship d. Left side of the ship</p>
5.	<p>What tool is used to measure paint thickness?</p> <p>a. Bristle blaster b. Coat thickness gauge c. Needle Gun d. Scrappers and blades</p>
6.	<p>Which is not an external part of a ships surface?</p> <p>a. Underwater hull b. Boot top zone c. Superstructure d. Engine room</p>
7.	<p>DFT sands for?</p> <p>a, Dry Film Test b. Wet Film Test c. Dry Film Thickness d. None of the above</p>

8.	A common confined space on a ship is called?	a. Deck b. Chain locker c. Mast d. Derrick
True or False Quiz		
Tick (√) the box corresponding to the correct answer.		
9.	Right side of the ship is called port.	True <input type="checkbox"/> False <input checked="" type="checkbox"/>
10.	Primer coat is applied on a ship before tie coat.	True <input checked="" type="checkbox"/> False <input type="checkbox"/>
Fill in the Missing Blanks		
Write the word or group of words needed to complete the following sentences.		
11.	Safety harness is used to catch a person so as to avoid falling while working at height.	
12.	A hand tool which is used to clean the surface of the is known as a chipping hammer .	
Short Answer		
Write a short answer in the space provided (not to exceed more than approximately twenty-five (25) words).		
13.	Why ship painting is important?	To prevent corrosion and biocides/marine growth in ship structure.
14.	Name five types of paint used in ship painting.	<ol style="list-style-type: none"> 1. Primer (epoxy, non-epoxy) 2. Acrylic and epoxy paints 3. Abrasive resistant paints 4. Anti-fouling paints 5. Polyurethane paints
15.	List five methods of hull surface preparation?	<ol style="list-style-type: none"> 1. Hand scraping 2. Wire scraping 3. Abrasive blasting 4. Mechanical descaling 5. High pressure water jet using
16.	What is the boot top zone?	Space between light ship and loaded ship is considered as boot top zone.

Set A: Practical Demonstration 1

PRACTICAL DEMONSTRATION 1	
Candidate Name:	
Assessor Name:	
Qualification:	Certificate in Ship Painting
Task:	Carry out surface preparation and painting of external hull (underwater)
Assessment Centre:	
Date of Assessment:	
Time of Assessment:	
Instructions:	
<p>Read and understand the directions carefully:</p> <ul style="list-style-type: none"> ▪ this practical demonstration is based on the performance criteria from all or some of the units of competency in Ship Painting ▪ this assessment activity will be used to measure your underpinning skills ▪ you will have fifteen (15) minutes to familiarise yourself with the resources to be used ▪ you have two (2) hours to complete this demonstration 	
Procedure:	
<ul style="list-style-type: none"> ▪ observe and wear personal protective equipment (PPE) as required for the task to be performed ▪ read the specification information provided ▪ collect all materials needed to complete the task ▪ perform the task within the given time ▪ observe and follow operational safety and health (OSH) requirements at all times 	
Job Specification Information:	
<ol style="list-style-type: none"> 1. Identify, read and interpret job specifications, drawings and other workplace documents. 2. Identify surface areas for cleaning and painting as per job specification. 3. Identify and collect required tools, equipment, machinery and materials required for task. 4. Inspect and check tools, equipment, machinery and materials as per job specification. 5. Identify and collect appropriate PPE. 6. Inspect worksite for hazards and implement appropriate controls (if necessary). 7. Confirm work instructions with supervisor (if necessary). 8. Prepare for work on external hull. 9. Perform surface cleaning using appropriate method. 10. Apply primer coat. 11. Apply tie and anti-fouling coat maintaining standard curing time. 12. Check overcoating and measured paint thickness. 13. Inspect completed tie and anti-fouling work for defects. 14. Rectify defects where possible. 15. Record and report defects to supervisor. 16. Apply top coat maintaining standard curing time. 17. Check overcoating and measured paint thickness. 18. Inspect completed top coat work for defects. 	

19. Rectify defects where possible.
20. Record and report defects to supervisor.
21. Clean, maintain and store tools and equipment.
22. Clean work area and dispose of waste materials.

Drawing, Plan, Diagram or Sketch:

The drawing below is a 2D view of the bow related to the task to be performed. During surface preparation and painting, you are to ensure:

- Proper use of tools and equipment
- Correct application of primer, tie and anti-fouling/topcoat
- Standard times are maintained
- Protection of environment
- Paint defects are recorded and reported

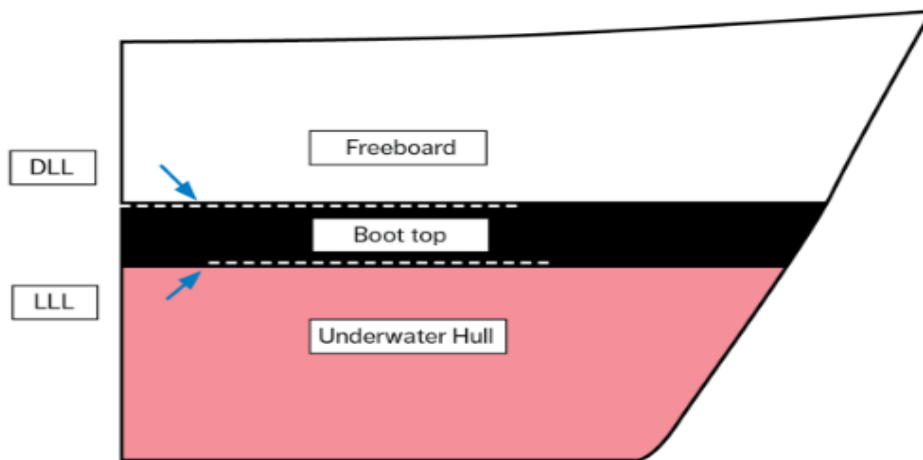


Figure 1: Perform preparation and painting for external hull (under water hull)

Painting Instructions:

The underwater hull is to be coated with two layers (red, then gray) of an anticorrosive (AC) polyamide/polyamidoamine-cured epoxy at 4 to 8 mils DFT followed by three layers (red, black, then red) of an antifouling (AF) polyamide cuprous oxide coating at 4 to 6 mils DFT.

Resources Required:

Tools and equipment:	<p><u>Tools</u></p> <ul style="list-style-type: none"> Chipping hammer Chisel Wire brush Picker Scrappers and blades Scrubbing brushes Extension poles Grinder Needle gun Sand blaster Rotary wire brush Rotary discs Bristle blaster Air duster Air blower Coat thickness gauge
----------------------	--

	<p>Wet film thickness gauge Surface profile gauge Holiday detector Salt contamination meter Pull-off test machine Surface temperature gauge Hygrometer <u>Equipment</u> Airless sprayer Spray hoses Spray gun Spray tips Spray tip guards Spray nozzles Stirrers Air dusters Scaffold</p>
Machinery:	<p>Shot blasting machine Airless spray-painting machine Oil-free air compressor Vacuum cleaner High-pressure water jet</p>
Materials:	<p>Primer Base paint Curing agent Paint thinner Cleaning solvents Emery paper Cotton wastage</p>
PPE:	<p>Safety helmet Safety harness Safety goggles Ear plugs Gloves Apron (with respiratory air-fed blast hood) Chemical resistant gas mask with torch light Safety shoes External air feed</p>

Set A: Practical Demonstration 1 – Observation Checklist

PRACTICAL DEMONSTRATION 1 – OBSERVATION CHECKLIST		
Candidate Name:		
Assessor Name:		
Qualification:	Certificate in Ship Painting	
Task:	Carry out surface preparation and painting of external hull (underwater)	
Assessment Centre:		
Date of Assessment:		
Instructions:	<p>The tasks listed on the observation checklist of the practical demonstration will provide performance evidence of the candidate.</p> <p>Performance can be observed in an actual workplace or in a simulated working environment.</p> <p>If performance of particular tasks cannot be observed, you may ask the candidate to explain a procedure or enter into a discussion on the subject.</p> <p>The assessment activity (practical demonstration) should:</p> <ul style="list-style-type: none"> ▪ fit industry requirements in which the assessment will be conducted ▪ adhere, where possible, to reasonable adjustment practices ▪ ensure that suitable performance benchmarks are applied and explained to the candidate 	
OBSERVATION RECORD		
Performance Criteria	Place a ✓ to show if evidence has been demonstrated competently	
	Yes	No
Identified and interpreted relevant policies, guidelines and workplace documents.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and interpreted relevant drawings and specifications.	<input type="checkbox"/>	<input type="checkbox"/>
Collected information about industry from multiple sources (as required).	<input type="checkbox"/>	<input type="checkbox"/>
Interpreted and applied information to day-to-day work activities.	<input type="checkbox"/>	<input type="checkbox"/>
Applied OSH policies and procedures in the workplace.	<input type="checkbox"/>	<input type="checkbox"/>
Identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Implemented controls for identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and used personal protective equipment (PPE).	<input type="checkbox"/>	<input type="checkbox"/>
Identified and followed safety signs and symbols.	<input type="checkbox"/>	<input type="checkbox"/>
Identified tools, equipment and machinery required for installation.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and checked tools, equipment and machinery as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>

Identified class rules and environmental requirements.	<input type="checkbox"/>	<input type="checkbox"/>
Identified difficulties and bottlenecks and developed solutions.	<input type="checkbox"/>	<input type="checkbox"/>
Confirmed work requirements with supervisor.	<input type="checkbox"/>	<input type="checkbox"/>
Identified ship surface for painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified methods for preparing surface.	<input type="checkbox"/>	<input type="checkbox"/>
Identified confined spaces requiring painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified types of paint and appropriate painting procedure and application methods.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out surface preparation.	<input type="checkbox"/>	<input type="checkbox"/>
Performed hull cleaning using appropriate method, tools and equipment.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned confined spaces (if required).	<input type="checkbox"/>	<input type="checkbox"/>
Set-up and prepared for painting work.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and dried surface to remove grease, oil and salt contamination.	<input type="checkbox"/>	<input type="checkbox"/>
Established adequate ventilation as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and ensured humidity, temperature and dew point as per job requirement.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and selected primer coating as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Applied primer coat on internal and external areas as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Checked overcoating and wet film thickness (WFT).	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared external hull surface for tie coating application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out tie coating for bonding with primer and anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned tie coat and checked surface before applying anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Applied anti-fouling coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected rectified anti-fouling surface to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared surface for top coat application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out top coat works for bonding with primer coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>

Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed paint rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Rectified anti-fouling surface is inspected to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Tools and equipment are cleaned, maintained and stored.	<input type="checkbox"/>	<input type="checkbox"/>
Defective or faulty tools and equipment are detected and reported according to standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace is cleaned and waste material disposed of.	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate lines of communication are maintained with supervisors and colleagues.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace interactions are conducted in courteous manner to gather and convey information.	<input type="checkbox"/>	<input type="checkbox"/>
Used appropriate medium to transfer information and ideas.	<input type="checkbox"/>	<input type="checkbox"/>
Responsibilities as a team member are performed.	<input type="checkbox"/>	<input type="checkbox"/>
Tasks are performed in accordance with workplace procedures.	<input type="checkbox"/>	<input type="checkbox"/>
Other teammates' tasks are identified and provided support.	<input type="checkbox"/>	<input type="checkbox"/>
Looked beyond the obvious and did not stop at the first answers.	<input type="checkbox"/>	<input type="checkbox"/>
The team is encouraged through sharing information or expertise, working together to solve problems, and putting team success first.	<input type="checkbox"/>	<input type="checkbox"/>
Views and opinions of other team members are interpreted and respected.	<input type="checkbox"/>	<input type="checkbox"/>
Feedback to candidate:		
Assessment decision for this assessment activity: <input type="checkbox"/> Competent <input type="checkbox"/> Not Yet Competent		
Candidate Signature:		Date:
Assessor Signature:		Date:

Set A: Practical Demonstration 2

PRACTICAL DEMONSTRATION 2	
Candidate Name:	
Assessor Name:	
Qualification:	Certificate in Ship Painting
Task:	Carry out surface preparation and painting of internal hull (middle cargo hold) and confined space (DB tank)
Assessment Centre:	
Date of Assessment:	
Time of Assessment:	
Instructions:	
<p>Read and understand the directions carefully:</p> <ul style="list-style-type: none"> ▪ this practical demonstration is based on the performance criteria from all or some of the units of competency in Ship Painting ▪ this assessment activity will be used to measure your underpinning skills ▪ you will have fifteen (15) minutes to familiarise yourself with the resources to be used ▪ you have three (3) hours to complete this demonstration 	
Procedure:	
<ul style="list-style-type: none"> ▪ observe and wear personal protective equipment (PPE) as required for the task to be performed ▪ read the specification information provided ▪ collect all materials needed to complete the task ▪ perform the task within the given time ▪ observe and follow operational safety and health (OSH) requirements at all times 	
Job Specification Information:	
<ol style="list-style-type: none"> 1. Identify, read and interpret job specifications, drawings and other workplace documents. 2. Identify surface areas for cleaning and painting as per job specification. 3. Identify and collect required tools, equipment, machinery and materials required for task. 4. Inspect and check tools, equipment, machinery and materials as per job specification. 5. Identify and collect appropriate PPE. 6. Inspect worksite for hazards and implement appropriate controls (if necessary). 7. Confirm work instructions with supervisor (if necessary). 8. Prepare for work on internal hull and confined space. 9. Perform surface cleaning using abrasive blasting. 10. Apply primer coat. 11. Apply tie and anti-fouling coat maintaining standard curing time. 12. Check overcoating and measured paint thickness. 13. Inspect completed tie and anti-fouling work for defects. 14. Rectify defects where possible. 15. Record and report defects to supervisor. 16. Apply top coat maintaining standard curing time. 17. Check overcoating and measured paint thickness. 18. Inspect completed top coat work for defects. 	

19. Rectify defects where possible.
20. Record and report defects to supervisor.
21. Clean, maintain and store tools and equipment.
22. Clean work area and dispose of waste materials.

Drawing, Plan, Diagram or Sketch:

The drawing below is a 3D view of the bow related to the task to be performed. During surface preparation and painting, you are to ensure:

- Proper use of tools and equipment
- Correct application of primer, tie and anti-fouling/top coat
- Standard times are maintained
- Protection of environment
- Paint defects are recorded and reported

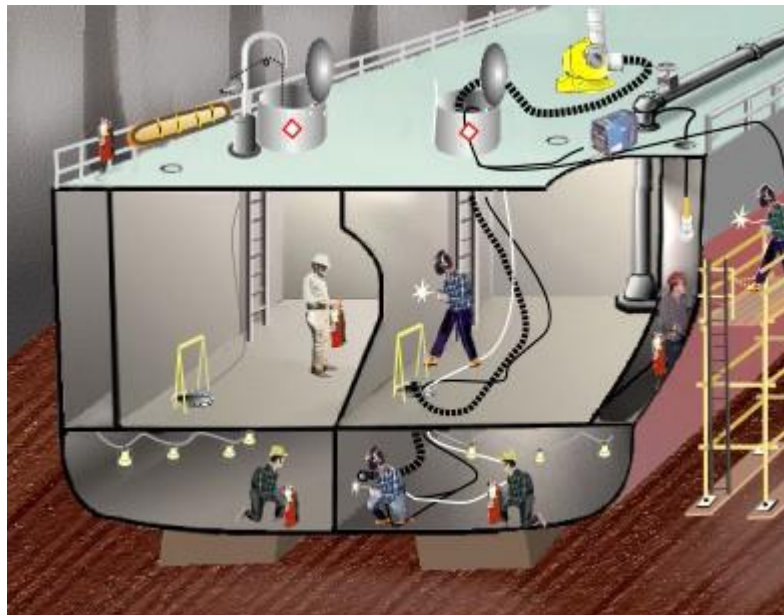


Figure 1: Perform surface preparation and painting internal hull (middle cargo hold) and confined space (DB tank)

Resources Required:

Tools and equipment:

- Tools
- Chipping hammer
 - Chisel
 - Wire brush
 - Picker
 - Scrappers and blades
 - Scrubbing brushes
 - Extension poles
 - Grinder
 - Needle gun
 - Sand blaster
 - Rotary wire brush
 - Rotary discs
 - Bristle blaster
 - Air duster
 - Air blower
 - Coat thickness gauge

	<p>Wet film thickness gauge Surface profile gauge Holiday detector Salt contamination meter Pull-off test machine Surface temperature gauge Hygrometer <u>Equipment</u> Airless sprayer Spray hoses Spray gun Spray tips Spray tip guards Spray nozzles Stirrers Air dusters Scaffold</p>
Machinery:	<p>Shot blasting machine Airless spray-painting machine Oil-free air compressor Vacuum cleaner High-pressure water jet</p>
Materials:	<p>Primer Base paint Curing agent Paint thinner Cleaning solvents Emery paper Cotton wastage</p>
PPE:	<p>Safety helmet Safety harness Safety goggles Ear plugs Gloves Apron (with respiratory air-fed blast hood) Chemical resistant gas mask with torch light Safety shoes External air feed</p>

Set A: Practical Demonstration 2 – Observation Checklist

PRACTICAL DEMONSTRATION 2 – OBSERVATION CHECKLIST		
Candidate Name:		
Assessor Name:		
Qualification:	Certificate in Ship Painting	
Task:	Carry out surface preparation and painting of internal hull (middle cargo hold) and confined space (DB tank)	
Assessment Centre:		
Date of Assessment:		
Instructions:	<p>The tasks listed on the observation checklist of the practical demonstration will provide performance evidence of the candidate.</p> <p>Performance can be observed in an actual workplace or in a simulated working environment.</p> <p>If performance of particular tasks cannot be observed, you may ask the candidate to explain a procedure or enter into a discussion on the subject.</p> <p>The assessment activity (practical demonstration) should:</p> <ul style="list-style-type: none"> ▪ fit industry requirements in which the assessment will be conducted ▪ adhere, where possible, to reasonable adjustment practices ▪ ensure that suitable performance benchmarks are applied and explained to the candidate 	
OBSERVATION RECORD		
Performance Criteria	Place a ✓ to show if evidence has been demonstrated competently	
	Yes	No
Identified and interpreted relevant policies, guidelines and workplace documents.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and interpreted relevant drawings and specifications.	<input type="checkbox"/>	<input type="checkbox"/>
Collected information about industry from multiple sources (as required).	<input type="checkbox"/>	<input type="checkbox"/>
Interpreted and applied information to day-to-day work activities.	<input type="checkbox"/>	<input type="checkbox"/>
Applied OSH policies and procedures in the workplace.	<input type="checkbox"/>	<input type="checkbox"/>
Identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Implemented controls for identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and used personal protective equipment (PPE).	<input type="checkbox"/>	<input type="checkbox"/>
Identified and followed safety signs and symbols.	<input type="checkbox"/>	<input type="checkbox"/>
Identified tools, equipment and machinery required for installation.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and checked tools, equipment and machinery as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>

Identified class rules and environmental requirements.	<input type="checkbox"/>	<input type="checkbox"/>
Identified difficulties and bottlenecks and developed solutions.	<input type="checkbox"/>	<input type="checkbox"/>
Confirmed work requirements with supervisor.	<input type="checkbox"/>	<input type="checkbox"/>
Identified ship surface for painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified methods for preparing surface.	<input type="checkbox"/>	<input type="checkbox"/>
Identified confined spaces requiring painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified types of paint and appropriate painting procedure and application methods.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out surface preparation.	<input type="checkbox"/>	<input type="checkbox"/>
Performed hull cleaning using appropriate method, tools and equipment.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned confined spaces (if required).	<input type="checkbox"/>	<input type="checkbox"/>
Set-up and prepared for painting work.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and dried surface to remove grease, oil and salt contamination.	<input type="checkbox"/>	<input type="checkbox"/>
Established adequate ventilation as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and ensured humidity, temperature and dew point as per job requirement.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and selected primer coating as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Applied primer coat on internal and external areas as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Checked overcoating and wet film thickness (WFT).	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared internal hull and confined space surface for tie coating application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out tie coating for bonding with primer and anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned tie coat and checked surface before applying anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Applied anti-fouling coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected rectified anti-fouling surface to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared surface for top coat application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out top coat works for bonding with primer coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>

Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed paint rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Rectified anti-fouling surface is inspected to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Tools and equipment are cleaned, maintained and stored.	<input type="checkbox"/>	<input type="checkbox"/>
Defective or faulty tools and equipment are detected and reported according to standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace is cleaned and waste material disposed of.	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate lines of communication are maintained with supervisors and colleagues.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace interactions are conducted in courteous manner to gather and convey information.	<input type="checkbox"/>	<input type="checkbox"/>
Used appropriate medium to transfer information and ideas.	<input type="checkbox"/>	<input type="checkbox"/>
Responsibilities as a team member are performed.	<input type="checkbox"/>	<input type="checkbox"/>
Tasks are performed in accordance with workplace procedures.	<input type="checkbox"/>	<input type="checkbox"/>
Other teammates' tasks are identified and provided support.	<input type="checkbox"/>	<input type="checkbox"/>
Looked beyond the obvious and did not stop at the first answers.	<input type="checkbox"/>	<input type="checkbox"/>
The team is encouraged through sharing information or expertise, working together to solve problems, and putting team success first.	<input type="checkbox"/>	<input type="checkbox"/>
Views and opinions of other team members are interpreted and respected.	<input type="checkbox"/>	<input type="checkbox"/>
Feedback to candidate:		
Assessment decision for this assessment activity: <input type="checkbox"/> Competent <input type="checkbox"/> Not Yet Competent		
Candidate Signature:		Date:
Assessor Signature:		Date:

Set B: Practical Demonstration 1

PRACTICAL DEMONSTRATION 1	
Candidate Name:	
Assessor Name:	
Qualification:	Certificate in Ship Painting
Task:	Carry out surface preparation and painting of external hull (boot top zone)
Assessment Centre:	
Date of Assessment:	
Time of Assessment:	
Instructions:	
<p>Read and understand the directions carefully:</p> <ul style="list-style-type: none"> ▪ this practical demonstration is based on the performance criteria from all or some of the units of competency in Ship Painting ▪ this assessment activity will be used to measure your underpinning skills ▪ you will have fifteen (15) minutes to familiarise yourself with the resources to be used ▪ you have two (2) hours to complete this demonstration 	
Procedure:	
<ul style="list-style-type: none"> ▪ observe and wear personal protective equipment (PPE) as required for the task to be performed ▪ read the specification information provided ▪ collect all materials needed to complete the task ▪ perform the task within the given time ▪ observe and follow operational safety and health (OSH) requirements at all times 	
Job Specification Information:	
<ol style="list-style-type: none"> 1. Identify, read and interpret job specifications, drawings and other workplace documents. 2. Identify surface areas for cleaning and painting as per job specification. 3. Identify and collect required tools, equipment, machinery and materials required for task. 4. Inspect and check tools, equipment, machinery and materials as per job specification. 5. Identify and collect appropriate PPE. 6. Inspect worksite for hazards and implement appropriate controls (if necessary). 7. Confirm work instructions with supervisor (if necessary). 8. Prepare for work on external hull. 9. Perform surface cleaning using appropriate method. 10. Apply primer coat. 11. Apply tie and anti-fouling coat maintaining standard curing time. 12. Check overcoating and measured paint thickness. 13. Inspect completed tie and anti-fouling work for defects. 14. Rectify defects where possible. 15. Record and report defects to supervisor. 16. Apply top coat maintaining standard curing time. 17. Check overcoating and measured paint thickness. 18. Inspect completed top coat work for defects. 	

19. Rectify defects where possible.
20. Record and report defects to supervisor.
21. Clean, maintain and store tools and equipment.
22. Clean work area and dispose of waste materials.

Drawing, Plan, Diagram or Sketch:

The drawing below is a 2D view of the bow related to the task to be performed. During surface preparation and painting, you are to ensure:

- Proper use of tools and equipment
- Correct application of primer, tie and anti-fouling/top coat
- Standard times are maintained
- Protection of environment
- Paint defects are recorded and reported

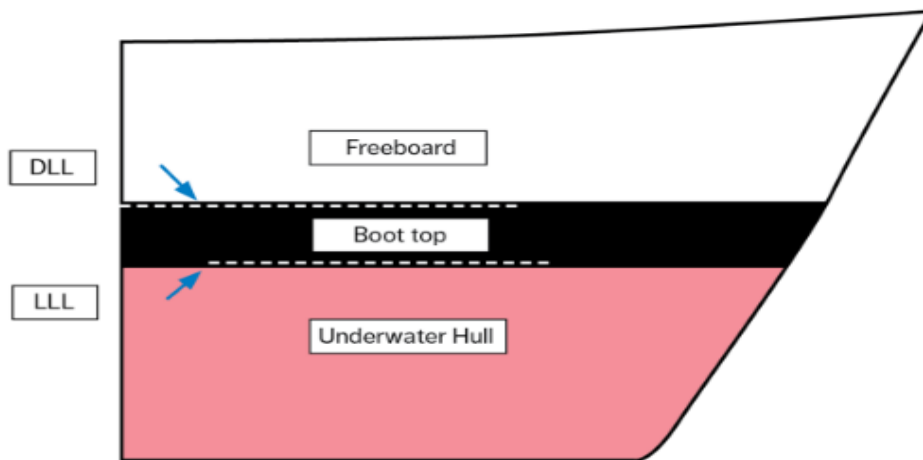


Figure 1: Surface preparation and painting for external hull (boot top zone) areas

Painting Instructions:

The boot top is to be coated with two layers (red, then gray) of the AC coating at 4 to 8 mils DFT followed by three layers of the AF coating (red, then two coats of black) at 4 to 6 mils DFT. This layer of the hull is sometimes above the waterline and sometimes underwater, depending on weight. The light-load line (LLL) is considered to be 6 inches above the underwater hull and the deep-load line (DLL) 6 inches below the freeboard.

Resources Required:

Tools and equipment:	<p><u>Tools</u></p> <ul style="list-style-type: none"> Chipping hammer Chisel Wire brush Picker Scrappers and blades Scrubbing brushes Extension poles Grinder Needle gun Sand blaster Rotary wire brush Rotary discs Bristle blaster Air duster
----------------------	--

	<p>Air blower Coat thickness gauge Wet film thickness gauge Surface profile gauge Holiday detector Salt contamination meter Pull-off test machine Surface temperature gauge Hygrometer <u>Equipment</u> Airless sprayer Spray hoses Spray gun Spray tips Spray tip guards Spray nozzles Stirrers Air dusters Scaffold</p>
Machinery:	<p>Shot blasting machine Airless spray-painting machine Oil-free air compressor Vacuum cleaner High-pressure water jet</p>
Materials:	<p>Primer Base paint Curing agent Paint thinner Cleaning solvents Emery paper Cotton wastage</p>
PPE:	<p>Safety helmet Safety harness Safety goggles Ear plugs Gloves Apron (with respiratory air-fed blast hood) Chemical resistant gas mask with torch light Safety shoes External air feed</p>

Set B: Practical Demonstration 1 – Observation Checklist

PRACTICAL DEMONSTRATION 1 – OBSERVATION CHECKLIST		
Candidate Name:		
Assessor Name:		
Qualification:	Certificate in Ship painting	
Task:	Carry out surface preparation and painting of external hull (boot top zone)	
Assessment Centre:		
Date of Assessment:		
Instructions:	<p>The tasks listed on the observation checklist of the practical demonstration will provide performance evidence of the candidate.</p> <p>Performance can be observed in an actual workplace or in a simulated working environment.</p> <p>If performance of particular tasks cannot be observed, you may ask the candidate to explain a procedure or enter into a discussion on the subject.</p> <p>The assessment activity (practical demonstration) should:</p> <ul style="list-style-type: none"> ▪ fit industry requirements in which the assessment will be conducted ▪ adhere, where possible, to reasonable adjustment practices ▪ ensure that suitable performance benchmarks are applied and explained to the candidate 	
OBSERVATION RECORD		
Performance Criteria	Place a ✓ to show if evidence has been demonstrated competently	
	Yes	No
Identified and interpreted relevant policies, guidelines and workplace documents.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and interpreted relevant drawings and specifications.	<input type="checkbox"/>	<input type="checkbox"/>
Collected information about industry from multiple sources (as required).	<input type="checkbox"/>	<input type="checkbox"/>
Interpreted and applied information to day-to-day work activities.	<input type="checkbox"/>	<input type="checkbox"/>
Applied OSH policies and procedures in the workplace.	<input type="checkbox"/>	<input type="checkbox"/>
Identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Implemented controls for identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and used personal protective equipment (PPE).	<input type="checkbox"/>	<input type="checkbox"/>
Identified and followed safety signs and symbols.	<input type="checkbox"/>	<input type="checkbox"/>
Identified tools, equipment and machinery required for installation.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and checked tools, equipment and machinery as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>

Identified class rules and environmental requirements.	<input type="checkbox"/>	<input type="checkbox"/>
Identified difficulties and bottlenecks and developed solutions.	<input type="checkbox"/>	<input type="checkbox"/>
Confirmed work requirements with supervisor.	<input type="checkbox"/>	<input type="checkbox"/>
Identified ship surface for painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified methods for preparing surface.	<input type="checkbox"/>	<input type="checkbox"/>
Identified confined spaces requiring painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified types of paint and appropriate painting procedure and application methods.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out surface preparation.	<input type="checkbox"/>	<input type="checkbox"/>
Performed hull cleaning using appropriate method, tools and equipment.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned confined spaces (if required).	<input type="checkbox"/>	<input type="checkbox"/>
Set-up and prepared for painting work.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and dried surface to remove grease, oil and salt contamination.	<input type="checkbox"/>	<input type="checkbox"/>
Established adequate ventilation as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and ensured humidity, temperature and dew point as per job requirement.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and selected primer coating as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Applied primer coat on internal and external areas as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Checked overcoating and wet film thickness (WFT).	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared external hull surface for tie coating application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out tie coating for bonding with primer and anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned tie coat and checked surface before applying anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Applied anti-fouling coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected rectified anti-fouling surface to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared surface for top coat application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out top coat works for bonding with primer coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>

Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed paint rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Rectified anti-fouling surface is inspected to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Tools and equipment are cleaned, maintained and stored.	<input type="checkbox"/>	<input type="checkbox"/>
Defective or faulty tools and equipment are detected and reported according to standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace is cleaned and waste material disposed of.	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate lines of communication are maintained with supervisors and colleagues.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace interactions are conducted in courteous manner to gather and convey information.	<input type="checkbox"/>	<input type="checkbox"/>
Used appropriate medium to transfer information and ideas.	<input type="checkbox"/>	<input type="checkbox"/>
Responsibilities as a team member are performed.	<input type="checkbox"/>	<input type="checkbox"/>
Tasks are performed in accordance with workplace procedures.	<input type="checkbox"/>	<input type="checkbox"/>
Other teammates' tasks are identified and provided support.	<input type="checkbox"/>	<input type="checkbox"/>
Looked beyond the obvious and did not stop at the first answers.	<input type="checkbox"/>	<input type="checkbox"/>
The team is encouraged through sharing information or expertise, working together to solve problems, and putting team success first.	<input type="checkbox"/>	<input type="checkbox"/>
Views and opinions of other team members are interpreted and respected.	<input type="checkbox"/>	<input type="checkbox"/>
Feedback to candidate:		
Assessment decision for this assessment activity: <input type="checkbox"/> Competent <input type="checkbox"/> Not Yet Competent		
Candidate Signature:		Date:
Assessor Signature:		Date:

Set B: Practical Demonstration 2

PRACTICAL DEMONSTRATION 2	
Candidate Name:	
Assessor Name:	
Qualification:	Certificate in Ship Painting
Task:	Carry out surface preparation and painting of internal hull (forward cargo hold) and confined space (chain locker)
Assessment Centre:	
Date of Assessment:	
Time of Assessment:	
Instructions:	
<p>Read and understand the directions carefully:</p> <ul style="list-style-type: none"> ▪ this practical demonstration is based on the performance criteria from all or some of the units of competency in Ship Painting ▪ this assessment activity will be used to measure your underpinning skills ▪ you will have fifteen (15) minutes to familiarise yourself with the resources to be used ▪ you have three (3) hours to complete this demonstration 	
Procedure:	
<ul style="list-style-type: none"> ▪ observe and wear personal protective equipment (PPE) as required for the task to be performed ▪ read the specification information provided ▪ collect all materials needed to complete the task ▪ perform the task within the given time ▪ observe and follow all safety and health and (OSH) requirements at all times 	
Job Specification Information:	
<ol style="list-style-type: none"> 1. Identify, read and interpret job specifications, drawings and other workplace documents. 2. Identify surface areas for cleaning and painting as per job specification. 3. Identify and collect required tools, equipment, machinery and materials required for task. 4. Inspect and check tools, equipment, machinery and materials as per job specification. 5. Identify and collect appropriate PPE. 6. Inspect worksite for hazards and implement appropriate controls (if necessary). 7. Confirm work instructions with supervisor (if necessary). 8. Prepare for work on internal hull and confined space. 9. Perform surface cleaning using abrasive blasting. 10. Apply primer coat. 11. Apply tie and anti-fouling coat maintaining standard curing time. 12. Check overcoating and measured paint thickness. 13. Inspect completed tie and anti-fouling work for defects. 14. Rectify defects where possible. 15. Record and report defects to supervisor. 16. Apply top coat maintaining standard curing time. 17. Check overcoating and measured paint thickness. 18. Inspect completed top coat work for defects. 	

19. Rectify defects where possible.
20. Record and report defects to supervisor.
21. Clean, maintain and store tools and equipment.
22. Clean work area and dispose of waste materials.

Drawing, Plan, Diagram or Sketch:

The drawing below is a 3D view of the bow related to the task to be performed. During surface preparation and painting, you are to ensure:

- Proper use of tools and equipment
- Correct application of primer, tie and anti-fouling/top coat
- Standard times are maintained
- Protection of environment
- Paint defects are recorded and reported

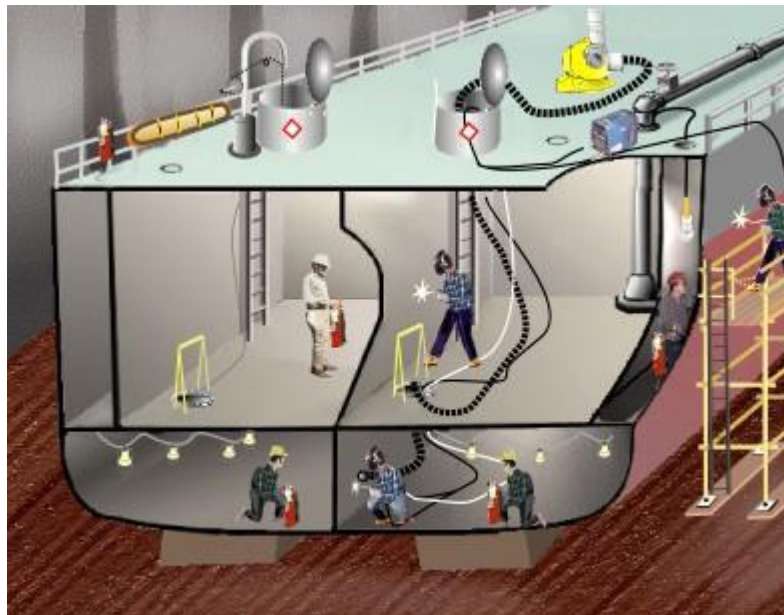


Figure 1: Surface preparation and painting internal hull (forward cargo hold) and confined space (chain locker)

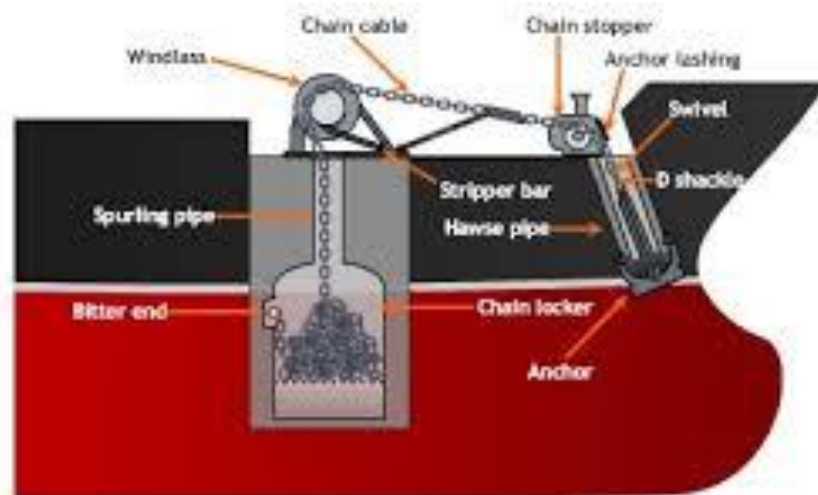


Figure 2: Chain locker

Resources Required:

Tools and equipment:	<u>Tools</u> Chipping hammer Chisel Wire brush Picker Scrappers and blades Scrubbing brushes Extension poles Grinder Needle gun Sand blaster Rotary wire brush Rotary discs Bristle blaster Air duster Air blower Coat thickness gauge Wet film thickness gauge Surface profile gauge Holiday detector Salt contamination meter Pull-off test machine Surface temperature gauge Hygrometer <u>Equipment</u> Airless sprayer Spray hoses Spray gun Spray tips Spray tip guards Spray nozzles Stirrers Air dusters Scaffold
Machinery:	Shot blasting machine Airless spray-painting machine Oil-free air compressor Vacuum cleaner High-pressure water jet
Materials:	Primer Base paint Curing agent Paint thinner Cleaning solvents Emery paper Cotton wastage

PPE:	Safety helmet Safety harness Safety goggles Ear plugs Gloves Apron (with respiratory air-fed blast hood) Chemical resistant gas mask with torch light Safety shoes External air feed
------	--

Set B: Practical Demonstration 2 – Observation Checklist

PRACTICAL DEMONSTRATION 2 – OBSERVATION CHECKLIST		
Candidate Name:		
Assessor Name:		
Qualification:	Certificate in Ship Painting	
Task:	Carry out surface preparation and painting of internal hull (forward cargo hold) and confined space (chain locker)	
Assessment Centre:		
Date of Assessment:		
Instructions:	<p>The tasks listed on the observation checklist of the practical demonstration will provide performance evidence of the candidate.</p> <p>Performance can be observed in an actual workplace or in a simulated working environment.</p> <p>If performance of particular tasks cannot be observed, you may ask the candidate to explain a procedure or enter into a discussion on the subject.</p> <p>The assessment activity (practical demonstration) should:</p> <ul style="list-style-type: none"> ▪ fit industry requirements in which the assessment will be conducted ▪ adhere, where possible, to reasonable adjustment practices ▪ ensure that suitable performance benchmarks are applied and explained to the candidate 	
OBSERVATION RECORD		
Performance Criteria	Place a ✓ to show if evidence has been demonstrated competently	
	Yes	No
Identified and interpreted relevant policies, guidelines and workplace documents.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and interpreted relevant drawings and specifications.	<input type="checkbox"/>	<input type="checkbox"/>
Collected information about industry from multiple sources (as required).	<input type="checkbox"/>	<input type="checkbox"/>
Interpreted and applied information to day-to-day work activities.	<input type="checkbox"/>	<input type="checkbox"/>
Applied OSH policies and procedures in the workplace.	<input type="checkbox"/>	<input type="checkbox"/>
Identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Implemented controls for identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and used personal protective equipment (PPE).	<input type="checkbox"/>	<input type="checkbox"/>
Identified and followed safety signs and symbols.	<input type="checkbox"/>	<input type="checkbox"/>
Identified tools, equipment and machinery required for installation.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and checked tools, equipment and machinery as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>

Identified class rules and environmental requirements.	<input type="checkbox"/>	<input type="checkbox"/>
Identified difficulties and bottlenecks and developed solutions.	<input type="checkbox"/>	<input type="checkbox"/>
Confirmed work requirements with supervisor.	<input type="checkbox"/>	<input type="checkbox"/>
Identified ship surface for painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified methods for preparing surface.	<input type="checkbox"/>	<input type="checkbox"/>
Identified confined spaces requiring painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified types of paint and appropriate painting procedure and application methods.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out surface preparation.	<input type="checkbox"/>	<input type="checkbox"/>
Performed hull cleaning using appropriate method, tools and equipment.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned confined spaces (if required).	<input type="checkbox"/>	<input type="checkbox"/>
Set-up and prepared for painting work.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and dried surface to remove grease, oil and salt contamination.	<input type="checkbox"/>	<input type="checkbox"/>
Established adequate ventilation as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and ensured humidity, temperature and dew point as per job requirement.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and selected primer coating as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Applied primer coat on internal and external areas as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Checked overcoating and wet film thickness (WFT).	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared internal hull and confined space surface for tie coating application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out tie coating for bonding with primer and anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned tie coat and checked surface before applying anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Applied anti-fouling coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected rectified anti-fouling surface to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared surface for top coat application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out top coat works for bonding with primer coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>

Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed paint rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Rectified anti-fouling surface is inspected to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Tools and equipment are cleaned, maintained and stored.	<input type="checkbox"/>	<input type="checkbox"/>
Defective or faulty tools and equipment are detected and reported according to standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace is cleaned and waste material disposed of.	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate lines of communication are maintained with supervisors and colleagues.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace interactions are conducted in courteous manner to gather and convey information.	<input type="checkbox"/>	<input type="checkbox"/>
Used appropriate medium to transfer information and ideas.	<input type="checkbox"/>	<input type="checkbox"/>
Responsibilities as a team member are performed.	<input type="checkbox"/>	<input type="checkbox"/>
Tasks are performed in accordance with workplace procedures.	<input type="checkbox"/>	<input type="checkbox"/>
Other teammates' tasks are identified and provided support.	<input type="checkbox"/>	<input type="checkbox"/>
Looked beyond the obvious and did not stop at the first answers.	<input type="checkbox"/>	<input type="checkbox"/>
The team is encouraged through sharing information or expertise, working together to solve problems, and putting team success first.	<input type="checkbox"/>	<input type="checkbox"/>
Views and opinions of other team members are interpreted and respected.	<input type="checkbox"/>	<input type="checkbox"/>
Feedback to candidate:		
Assessment decision for this assessment activity: <input type="checkbox"/> Competent <input type="checkbox"/> Not Yet Competent		
Candidate Signature:		Date:
Assessor Signature:		Date:

Set C: Practical Demonstration 1

PRACTICAL DEMONSTRATION 1	
Candidate Name:	
Assessor Name:	
Qualification:	Certificate in Ship Painting
Task:	Carry out surface preparation and painting of external hull (freeboard area)
Assessment Centre:	
Date of Assessment:	
Time of Assessment:	
Instructions:	
<p>Read and understand the directions carefully:</p> <ul style="list-style-type: none"> ▪ this practical demonstration is based on the performance criteria from all or some of the units of competency in Ship Painting ▪ this assessment activity will be used to measure your underpinning skills ▪ you will have fifteen (15) minutes to familiarise yourself with the resources to be used ▪ you have two (2) hours to complete this demonstration 	
Procedure:	
<ul style="list-style-type: none"> ▪ observe and wear personal protective equipment (PPE) as required for the task to be performed ▪ read the specification information provided ▪ collect all materials needed to complete the task ▪ perform the task within the given time ▪ observe and follow operational safety and health (OSH) requirements at all times 	
Job Specification Information:	
<ol style="list-style-type: none"> 1. Identify, read and interpret job specifications, drawings and other workplace documents. 2. Identify surface areas for cleaning and painting as per job specification. 3. Identify and collect required tools, equipment, machinery and materials required for task. 4. Inspect and check tools, equipment, machinery and materials as per job specification. 5. Identify and collect appropriate PPE. 6. Inspect worksite for hazards and implement appropriate controls (if necessary). 7. Confirm work instructions with supervisor (if necessary). 8. Prepare for work on external hull. 9. Perform surface cleaning using appropriate method. 10. Apply primer coat. 11. Apply tie and anti-fouling coat maintaining standard curing time. 12. Check overcoating and measured paint thickness. 13. Inspect completed tie and anti-fouling work for defects. 14. Rectify defects where possible. 15. Record and report defects to supervisor. 16. Apply top coat maintaining standard curing time. 17. Check overcoating and measured paint thickness. 18. Inspect completed top coat work for defects. 	

19. Rectify defects where possible.
20. Record and report defects to supervisor.
21. Clean, maintain and store tools and equipment.
22. Clean work area and dispose of waste materials.

Drawing, Plan, Diagram or Sketch:

The drawing below is a 2D view of the bow related to the task to be performed. During surface preparation and painting, you are to ensure:

- Proper use of tools and equipment
- Correct application of primer, tie and anti-fouling/top coat
- Standard times are maintained
- Protection of environment
- Paint defects are recorded and reported

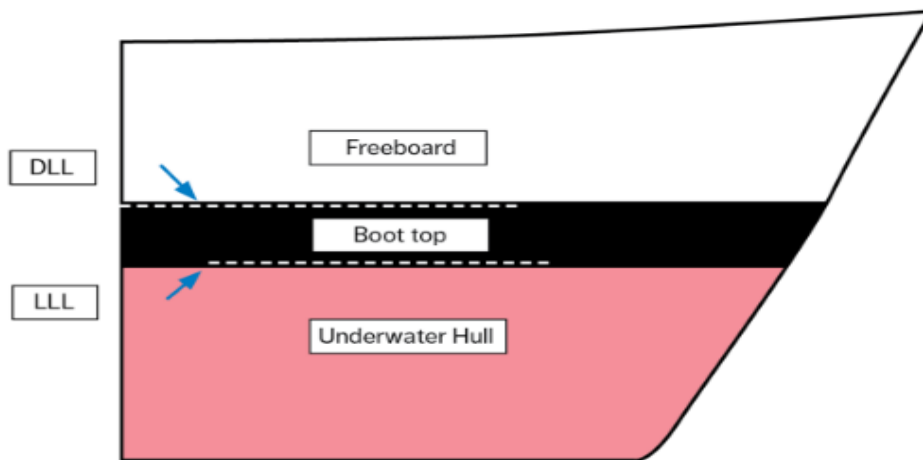


Figure 1: Surface preparation and painting for external hull (freeboard) areas

Painting Instructions:

The freeboard (above load waterline) is to be coated with two layers (red, then gray) of the AC coating at 4 to 8 mils DFT, followed by a topcoat of amine-cured polysiloxane (gray) at 5 to 8 mils DFT to provide UV resistance.

Resources Required:

Tools and equipment:	<u>Tools</u> Chipping hammer Chisel Wire brush Picker Scrappers and blades Scrubbing brushes Extension poles Grinder Needle gun Sand blaster Rotary wire brush Rotary discs Bristle blaster Air duster Air blower
----------------------	--

	<p>Coat thickness gauge Wet film thickness gauge Surface profile gauge Holiday detector Salt contamination meter Pull-off test machine Surface temperature gauge Hygrometer <u>Equipment</u> Airless sprayer Spray hoses Spray gun Spray tips Spray tip guards Spray nozzles Stirrers Air dusters Scaffold</p>
Machinery:	<p>Shot blasting machine Airless spray-painting machine Oil-free air compressor Vacuum cleaner High-pressure water jet</p>
Materials:	<p>Primer Base paint Curing agent Paint thinner Cleaning solvents Emery paper Cotton wastage</p>
PPE:	<p>Safety helmet Safety harness Safety goggles Ear plugs Gloves Apron (with respiratory air-fed blast hood) Chemical resistant gas mask with torch light Safety shoes External air feed</p>

Set C: Practical Demonstration 1 – Observation Checklist

PRACTICAL DEMONSTRATION 1 – OBSERVATION CHECKLIST		
Candidate Name:		
Assessor Name:		
Qualification:	Certificate in Ship Painting	
Task:	Carry out surface preparation and painting of external hull (freeboard area)	
Assessment Centre:		
Date of Assessment:		
Instructions:	<p>The tasks listed on the observation checklist of the practical demonstration will provide performance evidence of the candidate.</p> <p>Performance can be observed in an actual workplace or in a simulated working environment.</p> <p>If performance of particular tasks cannot be observed, you may ask the candidate to explain a procedure or enter into a discussion on the subject.</p> <p>The assessment activity (practical demonstration) should:</p> <ul style="list-style-type: none"> ▪ fit industry requirements in which the assessment will be conducted ▪ adhere, where possible, to reasonable adjustment practices ▪ ensure that suitable performance benchmarks are applied and explained to the candidate 	
OBSERVATION RECORD		
Performance Criteria	Place a ✓ to show if evidence has been demonstrated competently	
	Yes	No
Identified and interpreted relevant policies, guidelines and workplace documents.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and interpreted relevant drawings and specifications.	<input type="checkbox"/>	<input type="checkbox"/>
Collected information about industry from multiple sources (as required).	<input type="checkbox"/>	<input type="checkbox"/>
Interpreted and applied information to day-to-day work activities.	<input type="checkbox"/>	<input type="checkbox"/>
Applied OSH policies and procedures in the workplace.	<input type="checkbox"/>	<input type="checkbox"/>
Identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Implemented controls for identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and used personal protective equipment (PPE).	<input type="checkbox"/>	<input type="checkbox"/>
Identified and followed safety signs and symbols.	<input type="checkbox"/>	<input type="checkbox"/>
Identified tools, equipment and machinery required for installation.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and checked tools, equipment and machinery as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>

Identified class rules and environmental requirements.	<input type="checkbox"/>	<input type="checkbox"/>
Identified difficulties and bottlenecks and developed solutions.	<input type="checkbox"/>	<input type="checkbox"/>
Confirmed work requirements with supervisor.	<input type="checkbox"/>	<input type="checkbox"/>
Identified ship surface for painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified methods for preparing surface.	<input type="checkbox"/>	<input type="checkbox"/>
Identified confined spaces requiring painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified types of paint and appropriate painting procedure and application methods.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out surface preparation.	<input type="checkbox"/>	<input type="checkbox"/>
Performed hull cleaning using appropriate method, tools and equipment.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned confined spaces (if required).	<input type="checkbox"/>	<input type="checkbox"/>
Set-up and prepared for painting work.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and dried surface to remove grease, oil and salt contamination.	<input type="checkbox"/>	<input type="checkbox"/>
Established adequate ventilation as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and ensured humidity, temperature and dew point as per job requirement.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and selected primer coating as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Applied primer coat on internal and external areas as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Checked overcoating and wet film thickness (WFT).	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared external hull surface for tie coating application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out tie coating for bonding with primer and anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned tie coat and checked surface before applying anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Applied anti-fouling coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected rectified anti-fouling surface to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared surface for top coat application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out top coat works for bonding with primer coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>

Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed paint rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Rectified anti-fouling surface is inspected to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Tools and equipment are cleaned, maintained and stored.	<input type="checkbox"/>	<input type="checkbox"/>
Defective or faulty tools and equipment are detected and reported according to standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace is cleaned and waste material disposed of.	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate lines of communication are maintained with supervisors and colleagues.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace interactions are conducted in courteous manner to gather and convey information.	<input type="checkbox"/>	<input type="checkbox"/>
Used appropriate medium to transfer information and ideas.	<input type="checkbox"/>	<input type="checkbox"/>
Responsibilities as a team member are performed.	<input type="checkbox"/>	<input type="checkbox"/>
Tasks are performed in accordance with workplace procedures.	<input type="checkbox"/>	<input type="checkbox"/>
Other teammates' tasks are identified and provided support.	<input type="checkbox"/>	<input type="checkbox"/>
Looked beyond the obvious and did not stop at the first answers.	<input type="checkbox"/>	<input type="checkbox"/>
The team is encouraged through sharing information or expertise, working together to solve problems, and putting team success first.	<input type="checkbox"/>	<input type="checkbox"/>
Views and opinions of other team members are interpreted and respected.	<input type="checkbox"/>	<input type="checkbox"/>
Feedback to candidate:		
Assessment decision for this assessment activity:		
<input type="checkbox"/> Competent <input type="checkbox"/> Not Yet Competent		
Candidate Signature:		Date:
Assessor Signature:		Date:

Set C: Practical Demonstration 2

PRACTICAL DEMONSTRATION 2	
Candidate Name:	
Assessor Name:	
Qualification:	Certificate in Ship Painting
Task:	Carry out surface preparation and painting of internal hull (engine room) and confined space (deep tank)
Assessment Centre:	
Date of Assessment:	
Time of Assessment:	
Instructions:	
<p>Read and understand the directions carefully:</p> <ul style="list-style-type: none"> ▪ this practical demonstration is based on the performance criteria from all or some of the units of competency in Ship Painting ▪ this assessment activity will be used to measure your underpinning skills ▪ you will have fifteen (15) minutes to familiarise yourself with the resources to be used ▪ you have three (3) hours to complete this demonstration 	
Procedure:	
<ul style="list-style-type: none"> ▪ observe and wear personal protective equipment (PPE) as required for the task to be performed ▪ read the specification information provided ▪ collect all materials needed to complete the task ▪ perform the task within the given time ▪ observe and follow operational safety and health (OSH) requirements at all times 	
Job Specification Information:	
<ol style="list-style-type: none"> 1. Identify, read and interpret job specifications, drawings and other workplace documents. 2. Identify surface areas for cleaning and painting as per job specification. 3. Identify and collect required tools, equipment, machinery and materials required for task. 4. Inspect and check tools, equipment, machinery and materials as per job specification. 5. Identify and collect appropriate PPE. 6. Inspect worksite for hazards and implement appropriate controls (if necessary). 7. Confirm work instructions with supervisor (if necessary). 8. Prepare for work on internal hull and confined space. 9. Perform surface cleaning using abrasive blasting. 10. Apply primer coat. 11. Apply tie and anti-fouling coat maintaining standard curing time. 12. Check overcoating and measured paint thickness. 13. Inspect completed tie and anti-fouling work for defects. 14. Rectify defects where possible. 15. Record and report defects to supervisor. 16. Apply top coat maintaining standard curing time. 17. Check overcoating and measured paint thickness. 18. Inspect completed top coat work for defects. 	

19. Rectify defects where possible.
20. Record and report defects to supervisor.
21. Clean, maintain and store tools and equipment.
22. Clean work area and dispose of waste materials.

Drawing, Plan, Diagram or Sketch:

The drawing below is a 3D view of the bow related to the task to be performed. During surface preparation and painting, you are to ensure:

- Proper use of tools and equipment
- Correct application of primer, tie and anti-fouling/top coat
- Standard times are maintained
- Protection of environment
- Paint defects are recorded and reported



Figure 1: Perform surface preparation and painting internal hull (engine room) and confined space (deep tank)



Figure 2: Deep tank

Resources Required:

Tools and equipment:

- Tools
- Chipping hammer
 - Chisel
 - Wire brush
 - Picker
 - Scrappers and blades
 - Scrubbing brushes
 - Extension poles
 - Grinder
 - Needle gun
 - Sand blaster
 - Rotary wire brush
 - Rotary discs
 - Bristle blaster

	<p> Air duster Air blower Coat thickness gauge Wet film thickness gauge Surface profile gauge Holiday detector Salt contamination meter Pull-off test machine Surface temperature gauge Hygrometer <u>Equipment</u> Airless sprayer Spray hoses Spray gun Spray tips Spray tip guards Spray nozzles Stirrers Air dusters Scaffold </p>
Machinery:	<p> Shot blasting machine Airless spray-painting machine Oil-free air compressor Vacuum cleaner High-pressure water jet </p>
Materials:	<p> Primer Base paint Curing agent Paint thinner Cleaning solvents Emery paper Cotton wastage </p>
PPE:	<p> Safety helmet Safety harness Safety goggles Ear plugs Gloves Apron (with respiratory air-fed blast hood) Chemical resistant gas mask with torch light Safety shoes External air feed </p>

Set C: Practical Demonstration 2 – Observation Checklist

PRACTICAL DEMONSTRATION 2 – OBSERVATION CHECKLIST		
Candidate Name:		
Assessor Name:		
Qualification:	Certificate in Ship Painting	
Task:	Carry out surface preparation and painting of internal hull (engine room) and confined space (deep tank)	
Assessment Centre:		
Date of Assessment:		
Instructions:	<p>The tasks listed on the observation checklist of the practical demonstration will provide performance evidence of the candidate.</p> <p>Performance can be observed in an actual workplace or in a simulated working environment.</p> <p>If performance of particular tasks cannot be observed, you may ask the candidate to explain a procedure or enter into a discussion on the subject.</p> <p>The assessment activity (practical demonstration) should:</p> <ul style="list-style-type: none"> ▪ fit industry requirements in which the assessment will be conducted ▪ adhere, where possible, to reasonable adjustment practices ▪ ensure that suitable performance benchmarks are applied and explained to the candidate 	
OBSERVATION RECORD		
Performance Criteria	Place a ✓ to show if evidence has been demonstrated competently	
	Yes	No
Identified and interpreted relevant policies, guidelines and workplace documents.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and interpreted relevant drawings and specifications.	<input type="checkbox"/>	<input type="checkbox"/>
Collected information about industry from multiple sources (as required).	<input type="checkbox"/>	<input type="checkbox"/>
Interpreted and applied information to day-to-day work activities.	<input type="checkbox"/>	<input type="checkbox"/>
Applied OSH policies and procedures in the workplace.	<input type="checkbox"/>	<input type="checkbox"/>
Identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Implemented controls for identified hazards and risks.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and used personal protective equipment (PPE).	<input type="checkbox"/>	<input type="checkbox"/>
Identified and followed safety signs and symbols.	<input type="checkbox"/>	<input type="checkbox"/>
Identified tools, equipment and machinery required for installation.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and checked tools, equipment and machinery as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>

Identified class rules and environmental requirements.	<input type="checkbox"/>	<input type="checkbox"/>
Identified difficulties and bottlenecks and developed solutions.	<input type="checkbox"/>	<input type="checkbox"/>
Confirmed work requirements with supervisor.	<input type="checkbox"/>	<input type="checkbox"/>
Identified ship surface for painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified methods for preparing surface.	<input type="checkbox"/>	<input type="checkbox"/>
Identified confined spaces requiring painting.	<input type="checkbox"/>	<input type="checkbox"/>
Identified types of paint and appropriate painting procedure and application methods.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out surface preparation.	<input type="checkbox"/>	<input type="checkbox"/>
Performed hull cleaning using appropriate method, tools and equipment.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned confined spaces (if required).	<input type="checkbox"/>	<input type="checkbox"/>
Set-up and prepared for painting work.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and dried surface to remove grease, oil and salt contamination.	<input type="checkbox"/>	<input type="checkbox"/>
Established adequate ventilation as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and ensured humidity, temperature and dew point as per job requirement.	<input type="checkbox"/>	<input type="checkbox"/>
Identified and selected primer coating as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Applied primer coat on internal and external areas as per job specification.	<input type="checkbox"/>	<input type="checkbox"/>
Checked overcoating and wet film thickness (WFT).	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared internal hull and confined space surface for tie coating application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out tie coating for bonding with primer and anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned tie coat and checked surface before applying anti-fouling paint.	<input type="checkbox"/>	<input type="checkbox"/>
Applied anti-fouling coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Inspected rectified anti-fouling surface to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Cleaned and prepared surface for top coat application.	<input type="checkbox"/>	<input type="checkbox"/>
Carried out top coat works for bonding with primer coat.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained overcoating time, humidity and temperature as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Monitored and maintained standard curing time and temperature to ensure required paint hardness and bonding.	<input type="checkbox"/>	<input type="checkbox"/>

Inspected and identified paint defects.	<input type="checkbox"/>	<input type="checkbox"/>
Performed paint rectification work as per standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Rectified anti-fouling surface is inspected to ensure quality assurance.	<input type="checkbox"/>	<input type="checkbox"/>
Tools and equipment are cleaned, maintained and stored.	<input type="checkbox"/>	<input type="checkbox"/>
Defective or faulty tools and equipment are detected and reported according to standard operating procedure.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace is cleaned and waste material disposed of.	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate lines of communication are maintained with supervisors and colleagues.	<input type="checkbox"/>	<input type="checkbox"/>
Workplace interactions are conducted in courteous manner to gather and convey information.	<input type="checkbox"/>	<input type="checkbox"/>
Used appropriate medium to transfer information and ideas.	<input type="checkbox"/>	<input type="checkbox"/>
Responsibilities as a team member are performed.	<input type="checkbox"/>	<input type="checkbox"/>
Tasks are performed in accordance with workplace procedures.	<input type="checkbox"/>	<input type="checkbox"/>
Other teammates' tasks are identified and provided support.	<input type="checkbox"/>	<input type="checkbox"/>
Looked beyond the obvious and did not stop at the first answers.	<input type="checkbox"/>	<input type="checkbox"/>
The team is encouraged through sharing information or expertise, working together to solve problems, and putting team success first.	<input type="checkbox"/>	<input type="checkbox"/>
Views and opinions of other team members are interpreted and respected.	<input type="checkbox"/>	<input type="checkbox"/>
Feedback to candidate:		
Assessment decision for this assessment activity:		
<input type="checkbox"/> Competent <input type="checkbox"/> Not Yet Competent		
Candidate Signature:		Date:
Assessor Signature:		Date:

Oral Questions (Optional)

ORAL QUESTIONS - INSTRUCTIONS	
Candidate Name:	
Assessor Name:	
Qualification:	Certificate in Ship Painting
Unit of Competency	
Generic Competencies	
SEIP-SBD-SP-01-G	Use basic mathematical concepts
SEIP-SBD-SP-02-G	Apply occupational health and safety (OHS) practice in the workplace
SEIP-SBD-SP-03-G	Carry out workplace interaction
SEIP-SBD-SP-04-G	Operate in a team environment
Sector-specific Competencies	
SEIP-SBD-SP-01-S	Apply basic knowledge of ship and shipbuilding
SEIP-SBD-SP-02-S	Use hand and power tools
Occupation-specific Competencies	
SEIP-SBD-SP-01-O	Identify basic ship painting works
SEIP-SBD-SP-02-O	Carry out surface cleaning
SEIP-SBD-SP-03-O	Apply primer coat to structure
SEIP-SBD-SP-04-O	Perform tie and antifouling coat to underwater hull
SEIP-SBD-SP-05-O	Perform top coat to above water hull, superstructure and other areas
Assessment Centre:	
Date of Assessment:	
Time of Assessment:	
Instructions:	
<p>Read and understand the directions carefully:</p> <ul style="list-style-type: none"> ▪ these oral questions are based on the performance criteria from all the units of competency in Ship Painting ▪ oral questions are designed to enable additional assessment of your underpinning knowledge ▪ you should present your responses as directed by the assessor ▪ answer all the questions asked by the assessor as best as possible 	

ORAL QUESTIONS			
Question		Place a ✓ in the appropriate box to show if evidence has been demonstrated competently	
		Yes	No
1.	What is the percentage of female workers if there are 8 male workers and 2 female workers in a team?	<input type="checkbox"/>	<input type="checkbox"/>
2.	What are the different types of hazards in ship painting?	<input type="checkbox"/>	<input type="checkbox"/>
3.	Identify five pieces of terminology used in ship painting.	<input type="checkbox"/>	<input type="checkbox"/>
4.	What are your duties and responsibilities as a Ship Painter?	<input type="checkbox"/>	<input type="checkbox"/>
5.	Why is painting and coating needed for ship's structure?	<input type="checkbox"/>	<input type="checkbox"/>
6.	What is Volatile Organic Compound (VOC)?	<input type="checkbox"/>	<input type="checkbox"/>
7.	What is the difference between primer and tie coat?	<input type="checkbox"/>	<input type="checkbox"/>
8.	What is anti-fouling coat? In which parts of a ship is anti-fouling coat applied?	<input type="checkbox"/>	<input type="checkbox"/>
9.	What is top coat? Where it is applied?	<input type="checkbox"/>	<input type="checkbox"/>
10.	What is abrasive blasting?	<input type="checkbox"/>	<input type="checkbox"/>
11.	What is the difference between thinner and solvent?	<input type="checkbox"/>	<input type="checkbox"/>
12.	What types of precautions should be taken before entering a confined space?	<input type="checkbox"/>	<input type="checkbox"/>
13.	What unit is used to measure paint thickness?	<input type="checkbox"/>	<input type="checkbox"/>
14.	What is the difference between DFT and WFT?	<input type="checkbox"/>	<input type="checkbox"/>
15.	Why pollution prevention important in ship painting work?	<input type="checkbox"/>	<input type="checkbox"/>
16.	Name five hull preparation methods.	<input type="checkbox"/>	<input type="checkbox"/>
17.	Identify hull painting methods.	<input type="checkbox"/>	<input type="checkbox"/>
18.	What is corrosion?	<input type="checkbox"/>	<input type="checkbox"/>
19.	What is cathodic protection?	<input type="checkbox"/>	<input type="checkbox"/>
20.	What are the main constituents of paint?	<input type="checkbox"/>	<input type="checkbox"/>
21.	What is TBT and why was it banned?	<input type="checkbox"/>	<input type="checkbox"/>
22.	What is shop coating? Why is it important in shipbuilding?	<input type="checkbox"/>	<input type="checkbox"/>
Feedback to candidate:			

Assessment decision for this assessment activity:			
<input type="checkbox"/> Competent		<input type="checkbox"/> Not Yet Competent	
Candidate Signature:		Date:	
Assessor Signature:		Date:	

Oral Questioning Guideline

General Guidelines For Effective Questioning	
▪	Keep questions short and focused on one key concept
▪	Ensure that questions are structured
▪	Test the questions to check that they are not ambiguous
▪	Use `open-ended questions such as `what if...?' and `why...?' questions, rather than closed questions
▪	Keep questions clear and straight forward and ask one at a time
▪	Use words that the candidate is able to understand
▪	Look at the candidate when asking questions
▪	Check to ensure that the candidate fully understands the questions
▪	Ask the candidate to clarify or re-phrase their answer if the assessor does not understand the initial response
▪	Confirm the candidate's response by repeating the answer back in his/her own words
▪	Encourage a conversational approach with the candidate when appropriate, to put him or her at ease
▪	Use questions or statements as prompts for keeping focused on the purpose of the questions and the kind of evidence being collected
▪	Use language at a suitable level for the candidate
▪	Listen carefully to the answers for opportunities to find unexpected evidence
▪	Follow up responses with further questions, if useful, to draw out more evidence or to make links between knowledge areas
▪	Compile a list of acceptable responses to ensure reliability of assessments

Oral Questions (Optional) - Answers

Answers are highlighted in **bold** and *italics*.

ORAL QUESTIONS	
Question	Answer
1. What is the percentage of female workers if there are 8 male workers and 2 female workers in a team?	20%
2. What are the different types of hazards in ship painting?	<i>There are five types of hazards:</i> <ol style="list-style-type: none"> <i>1. Physical</i> <i>2. Chemical</i> <i>3. Biological</i> <i>4. Psychological</i> <i>5. Ergonomic</i>
3. Identify five pieces of terminology used in ship painting.	<ol style="list-style-type: none"> <i>1. Primer (epoxy)</i> <i>2. Tie coat</i> <i>3. Enamel (anti-fouling/top coat)</i> <i>4. Thinner</i> <i>5. Abrasive blasting</i>
4. What are your duties and responsibilities as a Ship Painter?	<i>Job duties for professional painters include removing old paint, priming surfaces, choosing materials, selecting and mixing colours and cleaning up job sites. Ship painter should also:</i> <ul style="list-style-type: none"> <i>▪ Read blueprints/instructions and examine surfaces to determine the kind and amount of work necessary</i> <i>▪ Make on-site preparations for cleaning and painting such as scaffolding, covering fixtures etc.</i> <i>▪ Mixes solvents according to formula and immerses parts in solution or washes surfaces to remove grease, rust, scale, and dirt</i> <i>▪ Prepare under water hull and other surfaces for painting by scraping, using sandpaper, removing old paint etc.</i>
5. Why is painting and coating needed for ship's structure?	<i>Painting and coating are used to protect ship's hull from corrosion and biocides arrestors/marine growth. Anti-fouling and anti-corrosive paints maintain smoothness of the hull ,hence maintain durability of steel hull, maintain desired speed during voyage at cost effective manner.</i>
6. What is Volatile Organic Compound (VOC)?	<i>VOC stands for volatile organic compound which is widely used in paints. VOC's are linked to a range of health problems including some very serious diseases. one of several VOCs that's known to cause cancer. Other health effects besides cancer include</i>

		<p>kidney damage, liver damage, damage to the central nervous system (including the brain), as well as minor complaints like headaches and eye, throat, and nose irritation.</p> <p>For environmental protection and health hazard, marine paint should be VOC free.</p>
7.	What is the difference between primer and tie coat?	<p>The primer is applied directly onto the cleaned steel surface. Its purpose is to wet the surface and to provide good adhesion for subsequently applied coats. In the case of primers for steel surfaces, these are also usually required to provide corrosion inhibition.</p>
8.	What is anti-fouling coat? In which parts of a ship is anti-fouling coat applied?	<p>Anti-fouling is the process of removing or preventing the accumulation of marine organisms from the surface of hull and the paint used for this application is called anti fouling paint.</p> <p>Normally anti fouling paint is used underwater hull including boot top zone.</p>
9.	What is top coat? Where it is applied?	<p>Top coat considered to be final or finishing coat. It is applied after exposure of tie coat in above water hull, deck, superstructure.</p>
10.	What is abrasive blasting?	<p>Abrasive blasting is the process by which an abrasive media is accelerated through a blasting nozzle by means of compressed air to clean the metal surface (ship's hull). Today, however, abrasive blast cleaning is a vital process used not only to remove rust, but to prepare surfaces for high performance coatings or to treat final products to give them the lustre and surface texture desired by the retail consumer.</p>
11.	What is the difference between thinner and solvent?	<p>A thinner is generally used to thin a liquid finish while a solvent is used to dissolve an existing finish that has been cured. A solvent is a material which dissolves another material called solute resulting in a solution.</p>
12.	What types of precautions should be taken before entering a confined space?	<p>Safety precautions to enter confined space in a ship, like DB tank or chain locker, include:</p> <ul style="list-style-type: none"> ▪ Free from gas ▪ Free from toxic chemicals ▪ Free from oil, grease and fat ▪ Adequate ventilation

13.	What unit is used to measure paint thickness?	Micron (μ)
14.	What is the difference between DFT and WFT?	<p>Dry film thickness or DFT is the measure of the thickness of paint when it is dried. The thickness of dry paint is kept 65% of the thickness of the wet paint, such that DFT is % volume solids of WFT.</p> <p>Wet film thickness, or WFT is the measured thickness of any applied wet paint that is liquid-based' Measuring the WFT of a coating enables the applicator to adjust the spray gun speed, number of spray passes and to make spray gun adjustments (when possible) or select other spray tips to apply the correct amount of coating to achieve the specified dry film thickness.</p>
15.	Why pollution prevention important in ship painting work?	Painting work is tedious, health hazardous job and dangerous for the marine environment. The ocean is the largest ecosystem on Earth, it is the planet's life support system. Oceans generate half of the oxygen we breathe and at any given moment, contains more than 97% of the worlds water. Oceans provide at least a sixth of the animal protein people eat. Living oceans absorb carbon dioxide from the atmosphere and reduce climate change impacts. The diversity and productivity of the worlds oceans is a vital interest for humankind. Our security, our economy, our very survival all requires healthy oceans.
16.	Name five hull preparation methods.	<ul style="list-style-type: none"> ▪ Hand scraping ▪ Hand grinding ▪ Rotary wire brushing ▪ Abrasive blasting ▪ Chemical cleaning ▪ High pressure water jet
17.	Identify hull painting methods.	<ul style="list-style-type: none"> ▪ Brushing ▪ Rolling ▪ Spraying
18.	What is corrosion?	Corrosion is the deterioration and loss of a material and its critical properties due to chemical, electrochemical and other reactions of the exposed material surface with the surrounding environment.
19.	What is cathodic protection?	Cathodic protection defines as the method of protection for iron and steel against electrochemical corrosion. Cathodic Protection (CP) is a technique used to control

		<i>the corrosion of a metal surface by making it the cathode of an electrochemical cell. A simple method of protection connects the metal to be protected to a more easily corroded "sacrificial metal" to act as the anode. The sacrificial metal then corrodes instead of the protected metallic hull.</i>
20.	What are the main constituents of paint?	<i>The main constituents of paint are the pigments, the binder, and the solvent.</i>
21.	What is TBT and why was it banned?	<p><i>Tributyltin or TBT is a biocide which came into being in the 1970's because of its brilliant anti fouling properties over ships hull as it prevents the growth of algae, barnacles and other marine organisms.</i></p> <p><i>However, TBT was phased out of use from 1st January 2008 by IMO due to following reasons:</i></p> <ul style="list-style-type: none"> ▪ <i>TBT's harmful effects causes disruption of endocrine system of marine shell fish which leads to the development of male sex characteristics in female snails.</i> ▪ <i>It also impairs the immune system of organisms and malformations of the shell of shellfish.</i>
22.	What is shop coating? Why is it important in shipbuilding?	<i>The main function of a prefabrication, preconstruction, or shop primer is to protect steel against corrosion and pollution during the building stage. It usually functions as a base for the final coating system. However, it sometimes is removed by blasting first, such as when the steel has corroded during construction or when the shop primer is too weathered to form a solid base for the coating systems. In cargo tanks for aggressive chemicals, a shop primer must be removed to ensure chemical resistance of the final coating system.</i>
23.	Briefly explain the purpose of alarm signals.	<p><i>The warning alarm and the evacuation alarm trigger several (simultaneous or successive) actions.</i></p> <ul style="list-style-type: none"> ▪ <i>The warning alarm:</i> <ul style="list-style-type: none"> ○ <i>consists of a three-second tone or an announcement</i> ○ <i>alerts occupants that a fire has been detected</i> ○ <i>alerts the First Intervention Team</i> ○ <i>does not equal an evacuation order</i>

		<ul style="list-style-type: none"> ▪ The evacuation alarm: <ul style="list-style-type: none"> ○ consists of a steady tone lasting 5 minutes or a direct announcement ○ instructs all occupants to leave the building (or a particular part of the building) immediately and proceed to the designated assembly points
24.	What factors should be considered when planning for a meeting?	<p>Following factors must be consider during planning a meeting:</p> <ul style="list-style-type: none"> ▪ Is this meeting necessary? ▪ What do I want to achieve? ▪ Who needs to be there to achieve it? ▪ Do I have the physical space and materials to run a meeting? ▪ Is the timing right?
25.	Why should a conflict be dealt with immediately?	So it may be resolved without escalating.

Assessment Evidence Summary Sheet

EVIDENCE SUMMARY SHEET			
Candidate Name:			
Assessor Name:			
Qualification:	Certificate in Ship Painting		
Assessment Centre:			
Date(s) of Assessment:			
The performance of the candidate in the following unit or units of competency and the methods engaged to assess performance are as follows:			
Unit of Competency	Assessment Method	Competent	Not Yet Competent
All units of competency comprising of the qualification	Written Test	<input type="checkbox"/>	<input type="checkbox"/>
	Practical Demonstration 1 (Set)	<input type="checkbox"/>	<input type="checkbox"/>
	Practical Demonstration 2 (Set)	<input type="checkbox"/>	<input type="checkbox"/>
	Oral Questioning (optional)	<input type="checkbox"/>	<input type="checkbox"/>
Note: Issuance of a certificate will only be given to a candidate who has successfully been assessed as competent for ALL units of competency.			
Recommendation			
<input type="checkbox"/> Issuance of Statement of Achievement (<i>indicate title of SOA, if full Certificate is not met</i>)	<input type="checkbox"/> Submission of additional documents Specify:	<input type="checkbox"/> Reassessment Specify:	
Did the candidate overall performance meet the required evidence/standard?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Overall Evaluation:	<input type="checkbox"/> Competent <input type="checkbox"/> Not Yet Competent		
General Comments:			
Candidate Signature:		Date:	
Assessor Signature:		Date:	
Institution Manager Signature:		Date:	

CANDIDATES COPY
(Please presents this form when you claim your Certificate)

ASSESSMENT RESULTS SUMMARY			
Qualification:	Certificate in Ship Painting		
Name of Candidate:		Date:	
Name at Assessment Centre:		Date:	
Assessment Results:	<input type="checkbox"/> Competent <input type="checkbox"/> Not Yet Competent		
Recommendation:	<input type="checkbox"/> Issuance of SOA (<i>indicate title of SOA, if full certificate is not met</i>)		
	<input type="checkbox"/> Submission of additional documents – specify:		
	<input type="checkbox"/> Reassessment - specify:		
Assessed by: (name and signature)		Date:	
Attested by: (name and signature):		Date	

Assessment Validation Map

This identifies how the assessment tools in this resource may assess:

- elements and performance criteria
- critical aspects of assessment
- skills and knowledge
- employability skills

Unit of Competency:	SEIP-SBD-SP-01-G – Use basic mathematical concepts		
Element	Assessment Method		
	Written	Practical	Oral
1. Identify calculation requirements in the workplace.	1, 2	A1, A2, B1, B2, C1, C2	1
2. Select appropriate mathematical methods/concepts for the calculation.	1	A1, A2, B1, B2, C1, C2	
3. Use tools and instruments to perform calculations.	1	A1, A2, B1, B2, C1, C2	13
Unit of Competency:	SEIP-SBD-SP-02-G – Apply occupational health and safety (OHS) practice in the workplace		
Element	Assessment Method		
	Written	Practical	Oral
1. Identify OHS policies and procedures.		A1, A2, B1, B2, C1, C2	12
2. Apply personal health and safety practices.	11	A1, A2, B1, B2, C1, C2	2
3. Report hazards and risks.		A1, A2, B1, B2, C1, C2	
4. Respond to emergencies.			23
Unit of Competency:	SEIP-SBD-SP-03-G – Carry out workplace interaction		
Element	Assessment Method		
	Written	Practical	Oral
1. Interpret workplace communication and etiquette.		A1, A2, B1, B2, C1, C2	

2. Read and understand workplace documents.		A1, A2, B1, B2, C1, C2	3, 14
3. Participate in workplace meetings and discussions.			24
4. Practice professional ethics at work.		A1, A2, B1, B2, C1, C2	
Unit of Competency:	SEIP-SBD-SP-04-G – Operate in a team environment		
Element	Assessment Method		
	Written	Practical	Oral
1. Identify team goals and work processes.			25
2. Identify own role and responsibilities within team.			4
3. Communicate and co-operate with team members.		A1, A2, B1, B2, C1, C2	
4. Practice problem solving within the team.		A1, A2, B1, B2, C1, C2	
Unit of Competency:	SEIP-SBD-SP-01-S – Work effectively in the shipbuilding sector		
Element	Assessment Method		
	Written	Practical	Oral
1. Understand basics of shipbuilding.	8, 9		20
2. Obtain information about the industry.	16		5, 6
3. Identify key machines installed on a ship.	4	A1, A2, B1, B2, C1, C2	
Unit of Competency:	SEIP-SBD-SP-02-S– Use hand and power tools		
Element	Assessment Method		
	Written	Practical	Oral
1. Identify and Inspect hand tools and power tools.	3, 5	A1, A2, B1, B2, C1, C2	
2. Use hand tools properly and safety.		A1, A2, B1, B2, C1, C2	
3. Operate power tools properly and safely.		A1, A2, B1, B2, C1, C2	

4. Clean and maintain hand and power tools.			A1, A2, B1, B2 , C1, C2	
Unit of Competency:	SEIP-SBD-SP-01-O – Identify basic ship painting work			
Element	Assessment Method			
	Written	Practical	Oral	
1. Identify basic painting requirements.	2, 13	A1, A2, B1, B2 , C1, C2	8	
2. Identify surface areas for cleaning and painting.	6	A1, A2, B1, B2 , C1, C2	15, 16	
3. Identify types of paint and painting processes.	7, 14, 15		7, 17 , 20	
Unit of Competency:	SEIP-SBD-SP-02-O – Carry out surface cleaning			
Element	Assessment Evidence Method			
	Written	Practical	Oral	
1. Prepare for work.		A1, A2, B1, B2 , C1, C2	18	
2. Perform surface cleaning.	12	A1, A2, B1, B2 , C1, C2	10	
3. Clean and maintain workplace.		A1, A2, B1, B2 , C1, C2		
Unit of Competency:	SEIP-SBD-SP-03-O – Apply primer coat to ship structure			
Element	Assessment Method			
	Written	Practical	Oral	
1. Prepare for work.		A1, A2, B1, B2 , C1, C2	11	
2. Perform primer coat application.	10	A1, A2, B1, B2 , C1, C2	19	
3. Clean and maintain workplace.		A1, A2, B1, B2 , C1, C2		
Unit of Competency:	SEIP-SBD-SP-04-O – Perform tie and anti-fouling coat to underwater hull			
Element	Assessment Method			

		Written	Practical	Oral
1. Prepare for work.			A1, B1, C1	
2. Perform tie coat works.			A1, B1, C1	
3. Apply anti-fouling coat.			A1, B1, C1	21
4. Carry out rectification work.			A1, B1, C1	
5. Clean and maintain workplace.			A1, B1, C1	
Unit of Competency:	SEIP-SBD-SP-05-O – Perform top coat for above water hull, superstructure and other areas			
Element	Assessment Method			
	Written	Practical	Oral	
1. Prepare for work.		A2, B2, C2		
2. Apply top coat.		A2, B2, C2	9	
3. Carry out rectification work.		A2, B2, C2		
4. Clean and maintain workplace.		A2, B2, C2		