

- Rudder : 2 X Suspended Spade Rudders
- Steering gear : Hasties 2 X Model 4.5 Steering Units on 4 ram system

1.2.7 Propeller and shafting

- Propeller : 2 X 4 Blade 2.54m dia X 2.2m pitch
- Shafting : 2 X Face Coupled 7.0m length X 0.33m dia each fitted with 2 in no bronze liners
- Tailshaft Bearings: 1 X Tufnol Sterntube Bearing and 1 x Tufnol A Frame Bearing (each shaft)
- Stern gland : 2 X Soft Packed Glands

1.2.8 SHIP'S DRAWINGS 2015

- ANNEX A - Quest Marine Drawings - Ship's Layout 2015

2 Keywords and Definitions

2.1 Definitions

- 2.1.1 The following list is not exhaustive and should not detract from any of the definitions contained within the Contract Terms and Conditions covering this refit. Wherever these words and phrases are used throughout this specification, the following definition, including technical details and procedures are to be inferred and acted upon without direct instruction unless the individual specification directs differently.

ADDITIONAL WORK That further work of a type that can normally be expected to be sought during an upkeep period, which is not definable when the original work specification is derived and is not EXTRA or EMERGENT work. ADDITIONAL WORK should only be considered if, not undertaken, it would result in an OPDEF or affect personnel or equipment safety. ADDITIONAL WORK may be included in the Upkeep Period Specification at the discretion of the Authority's Authorised Representative but no ADDITIONAL work is to be carried out without their authorisation.

ALLOW FOR Describes work that may be encountered by the Contractor, which is to be assumed for costing purposes. The work will normally be drawn upon after a test, inspection or survey. The Contractor is to include the cost of ALLOW FOR's in the tender. The Authority's Authorised Representative's approval is required to take up any ALLOW FOR.
e.g. ALLOW FOR the renewal of four in number pistons.

ALLOW TO Describes work that is to be done. ALLOW TO's are discrete procedures or stages of work which form an integral part of specified work. The Contractor is to include and carry out without further reference, the work and is to fully include the price of ALLOW TO's in the tender.
e.g. ALLOW TO remove/replace ten in number bulkhead panels.

ADJUST Compare operating parameters, performance or characteristics of an equipment or system with specified standards and make changes to variable features or controls so that the parameters, performance or characteristics are within the specified range of values. This will include multiple measurements and re-measurements and will include opening and closing cabinets and enclosures for access. These costs are to be fully incorporated.

AS REQUIRED Specify risk allowances, the cost of which will be required as extra.

ASSEMBLY Build an equipment or system from components or sub-assemblies into fully functional equipment in accordance with instructions and best practice. Include costs of calibration, adjusting, lining up, etc, where appropriate to ensure functionality.

CALIBRATION The process of adjustment, comparison with one accepted standard or known value, and re-adjustment until acceptable and agreed performance standards are achieved. Costs are to include removal/replacement, system isolation, transport, opening/closing enclosures and disassembly/assembly as appropriate to the instrument or system concerned. Also, to be included is the cost of labels showing the calibration date and calibration period.

CLEAN With reference to and in context with the individual specification as appropriate, remove all foreign matter and arisings to an appropriate standard for the process, equipment under consideration, and without damage to surrounding areas, equipment or surfaces. Costs are to include collection,

storage and disposal of all fluids and arisings.

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| CONSUMABLE PARTS | e.g., seals, joints, bushes, bearings, brushes, springs, contacts, fasteners, nuts and bolts, etc, which, supplied singly or in kits, it is necessary or normal practice to replace on each occasion an overhaul or service procedure of the type specified is carried out. |
| DISMANTLE | Break an equipment or assembly down to component parts commensurate with completing an overhaul, service procedure, adjustment, calibration or repair as specified. |
| EMERGENT WORK | Work arising during the project as a direct consequence of survey, inspection, maintenance and other tasks in the Upkeep Period Specification, including any anticipated or ALLOW FOR work in the Specification. EMERGENT WORK may be included in the Upkeep Period Specification at the discretion of the Authority's Authorised Representative but no EMERGENT WORK is to be carried out without the Authority's authorisation. |
| EXTRA WORK | Work not encompassed by the original contract but required by the MOD, e.g. introduction of Alterations and Additions (A&A's) and Modifications, change to specified standards, or change of requirement. EXTRA WORK may be included in the contract at the discretion of the Authority's Authorised Representative, but no extra work is to be carried out without their authorisation. |
| FLUSH | Prime and cycle the normal working fluid or other acceptable cleaning medium through an equipment or system, according to a pre-planned scheme to prove it is unobstructed and remove contamination until a measured cleanliness standard is achieved which is appropriate to the equipment/system under consideration and provide certification. Include the cost of supply, storage and disposal of all fluids and arisings. Include the cost of supply, operation and maintenance of plant. |
| FUNCTIONAL TEST | Where an equipment or system is operated over the range of its normal parameters according to a pre-planned trial procedure or as specified. Include the costs of adjustment and calibration when appropriate to the equipment/system under consideration. Certification is to be provided for the outcome. |
| INSPECT | Visually and dimensionally examine, to a standard accuracy appropriate to the system/equipment under consideration, items or components for defects, provide a written report and recommendations for action. |
| INSTALL | Unpack, transport, secure in place, provide new consumables, re- preserve coatings, align, connect to interfaces, insulation and earth bonding/testing, etc, items to the positions required. Include the costs for adjustment, calibration and functional testing of the system/equipment as appropriate and provide test documentation. |
| ISOLATE | Removal from service to make safe for the purpose of carrying out work. LOTO procedures designed to ensure isolation are to be employed. |
| LOAD TEST | Test a system or equipment with a "test load" in accordance with recognised procedures. Provide certification, register in shipboard documentation, and supply and fit tallies as required. |
| LOCK OFF TAG OUT | The specified/agreed procedure for identifying and recording the isolation of systems, or parts of systems, to allow work to proceed safely. |

(LOTO)

OPERATIONAL TEST Test a system or equipment in accordance with a pre-planned and agreed procedure throughout the working range under operational conditions. Record results in a log and test form, provide certification, supply and fit tallies as required.

OVERHAUL Unless otherwise specified in the appropriate work package OVERHAUL is to include the following:

- Isolation
- Removal (e.g. to a remote workshop)
- Cleansing
- Dismantle
- Inspecting - Electrical and Mechanical aspects - Disassemble into components/sub-assemblies, measure fits and clearances where appropriate. Examine visually and by Non- Destructive Testing (NDT) where necessary for cracks/mechanical defects. Inspect wearing surfaces.

On conclusion of inspection a written report is to be produced and copied to the Authority Authorised representative with any defects/concerns highlighted. The report is to include recommendations for any corrective action and implications re cost and timescale of actions.

Renewal of consumable parts

- Assembly
- Flushing, adjusting, testing and calibration
- Re-preservation
- Installation
- Reconnection
- Setting to work and operational testing

PRESSURE TEST Test a system or equipment to a specific pressure in accordance with recognised procedure. Provide certification, register in shipboard documentation, supply and fit tallies as required.

PRESERVE For the duration of the refit. Protect inactive systems/equipment or spaces against degradation or damage during upkeep periods. Include costs to isolate, drain, cover and maintain in clean condition.

REFURBISH To examine for damage and cosmetic appearance. To make good specified defects and improve appearance to the general standard of the compartment in which the item is sited. REFURBISHment is to return the item to an acceptable standard without major RENEWal or material exchange. Any items considered beyond REFURBISHment are to be reported. REFURBISHment is not to be applied to machinery.

REMOVE To ISOLATE and detach an item from its fitted position, separating it at any specified terminal points. To protect the item, associated systems and remaining components from mechanical and environmental damage. To transport the item to the workstation or store, or to dispose of the item as instructed by the Authority's Authorised Representative.

RENEW Remove an item or equipment and install a replacement one as specified in the work list.

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| RENEW COATINGS | To remove existing coatings back to bare and apply full paint system. Both activities to be carried out in accordance with the Refit Period Specification (This definition applies where 100% of an area is to be treated). |
| REPORT | Provide a written report in a format specified by the work list or in accordance with associated documentation. |
| REPRESERVE COATINGS | Prepare damaged/corroded surfaces, apply coatings to bare material, overcoat existing coatings where specified in accordance with the Refit Paint Specification. (This definition applies where only a percentage of an area is to be treated with the Full Paint Scheme). |
| SERVICE | <p>A planned maintenance function aimed at serviceable equipment to preserve and restore normal levels of functionality, usually following a manufacturer's recommended process.</p> <p>Includes a comprehensive functional test in all modes and configurations; removal and replacement of inspection covers; basic level visual examination, inspection and fault finding; testing of safety devices, controls and interlocks; cleaning, removing arising from the equipment enclosures and lubrication as required; changing life expire consumables (e.g. oil, filters, seals, desiccants, etc); calibrating inputs and checking/adjusting outputs; setting to work and presenting to Inspecting Officer.</p> <p>The manufacture's recommended service schedule is to be adhered to where this can be obtained. Good engineering practice based on the above principles will substitute where it cannot. Manufacturer's recommended spares are to be included in the cost and are to be fitted when such a list can be obtained. The Vessel Repairer is to carry out services fully in accordance with manufacturer's recommendations and will be required to justify any chosen course which differs in scope or extent of supply.</p> |
| SET TO WORK (STW) | Bring equipment or system to operational standards in accordance with specifications. This process includes functional testing, adjusting, calibration and operational testing. All is to be carried out to an agreed pre-planned written procedure. |
| SURVEY | <p>Outwith the requirements of Class, which is normally stated separately, the survey of equipment or systems is to include the following: cleaning, inspection, production of reports, determining the condition of structures, etc.</p> <p>A process to be carried out by a competent person to include cleaning, inspection, adjustment and functional testing of an equipment/system or structure according to accepted standards or procedures as appropriate.</p> |
| UPKEEP BY EXCHANGE (UxE) | The removal and installation of replacement MOD supplied equipment. Disposal instructions and packing requirements will be advised. |
| WORK IN WAY | Work required for preparing, accessing and maintaining acceptable conditions to allow the completion of specified work. Rectification of any damage caused during this evolution is included here (e.g. Remove and re-install desktop in way of power supply type 12345). |
| WORK IN WAKE | Work required to restore normal access, working conditions and standards of preservation and finish following specified work. To include cleaning and removal of arising, dismantling and removing access equipment, de-isolation, replacing guards and floor plates and touching up paintwork including the restoration of signs and notices. Affix new test tallies and labels. |

3 Transfer and Berthing of Vessel

3.1 Transfer of Vessel

- 3.1.1 The Vessel will be formally handed over to the Contractor by the MOD following completion of the Handover Form at the permanent mooring position within PORTLAND harbour. On receipt of the Vessel the Contractor will be required to move the Vessel to an alongside harbour location for the duration of the Refit (The Contractor will be required to conduct a Wind Ship evolution partway through the Refit period to allow ship side re-preservation work to be conducted).
- 3.1.2 When it has been agreed that all the contracted work has been completed, i.e. at the pre-CAD meeting the Contractor is required to transfer the Vessel back to MOD custody. This will require the Vessel to be towed back to the permanent mooring position within PORTLAND harbour.
- 3.1.2 The Contractor will be required to supply all the towing arrangements and obtain the appropriate documentation to allow the Vessel to be towed.

3.2 Berthing Services

The contractor is required to supply all equipment, storage, transportation and services needed to complete the specified work. This includes, but is not limited to the following:

Safe and reliable gangway is to be provided during the whole period the Vessel is undergoing upkeep. No pipes or cables are to be fixed to the gangway.

- Include for transportation of all machinery parts and deck items to their repair locations and return of same where required.
- Include all transportation charges for work sub-contracted outside the repair yard.
- Engine skylights, tank lids, hatches, together with gangways and ladders to remove for access and replace in good order.
- Suitable storage ashore to be supplied for stowage of stores, upper deck equipment, etc, from spaces wherein work is to be carried out. Use of a lock-up lay-apart store to be provided.
- Craneage to be provided for all repairs, storing, de-storing spare gear loading and off-loading and movement of spare gear for all compartments.
- Shore power is to be provided for the Vessel Repairer's heating lamps, temporary lights and running of the Vessel Repairer's auxiliary equipment.
- Temporary lights are to be rigged and maintained for access and repairs at all places required.
- Adequate ventilation is to be provided prior to working in any enclosed spaces.
- Fire equipment, hoses, extinguishers, foam and nozzles are to be provided by the Vessel Repairer for firefighting purposes.
- The Vessel Repairer is to provide suitable fire detection and alarm system whilst the Vessel is in their custody.
- Wherever the contract calls for hot work or work in enclosed spaces the Contractor is to include costs for gas freeing, ventilation and cleaning to the appropriate standard. The Vessel Repairer is to include costs for entry/hot work certification throughout the period the work takes to complete.
- Keyboard to be manned by Shore Joiner or authorised equivalent (one shift only as required to suit Shipyard working) and keys are only to be released on signature, keys to be replaced on hooks in correct manner at end of refit

for handing over to the Authority's Authorised Representative.

- Include all wharf costs, including labour, for the storage and handling of Vessel's stores.

4 Security of the Vessel

4.1 Contractor Responsibility's for Security of the Vessel

- From Refit Period Start Date (RPSD) to CAD the Contractor will have full responsibility for the physical security of the Vessel and for the Security of Office Accommodation and Lay Apart Facilities provided by the Company for the use of MOD Staff.
- A Security Plan is to be submitted with the Tender Response.
- The Contractor is to ensure that all Offices and Lay Apart Stores provided by the Company to the MOD and Vessel's Staff are fitted with Security Locks on all doors.
- The Contractor will be required to control the entry and parking of vehicles to ensure that none are left unattended within 5 metres of the Vessel.
- The Contractor will be notified by MOD of any change in the Security State and will be required to comply with such additional measures as may be deemed necessary by MOD.

The Contractor is to consult the Authority's Authorised Representative if:

- The required standards cannot or have not been complied with.
- Specialist advice is required following a MOD promulgated change of threat level.
- In the event of a Restricted Access Compartment or Store being found open and unattended, the security patrol is not to enter but report the matter to the Authority's Authorised Representative.

5 Fire Precautions, Fire Fighting, Fire Orders and Confined Space Rescue

The Contractor is to publish Fire Orders which are to be to the satisfaction of the Local Port Authority. The Contractor is to ensure that they are fully understood and complied with by the Management, Workforce, Sub-Contractors, MOD Staff and Visitors. The Contractor shall be responsible for all fire detection and firefighting arrangements during the time they have custody of the vessel. All plans and emergency procedures should be in accordance with relevant statutory regulations and legislation.

The vessel has no fixed firefighting facilities and all portable firefighting equipment will be removed prior to vessel handover from the Authority. The Contractor shall supply all necessary firefighting equipment.

6 Tank Cleaning and Bilges