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RETOURNER LES SOUMISSIONS À:

Réception des soumissions - TPSGC / Bid

Receiving - PWGSC

1550, Avenue d'Estimauville

1550, D'Estimauville Avenue

Quebec

Quebec

G1K 4K1

INVITATION TO TENDER

APPEL D'OFFRES

**Tender To: Public Works and Government Services
Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

Soumission aux: Travaux Publics et Services Gouvernementaux Canada

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici et sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Vendor/Firm Name and Address

Raison sociale et adresse du

fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

TPSGC/PWGSC

1550 Avenue d'Estimauville

Quebec

Quebec

G1J 0C7

Title - Sujet CCGS Amundsen Refit - Spring 2019	
Solicitation No. - N° de l'invitation F3756-18N738/B	Date 2019-03-18
Client Reference No. - N° de référence du client F3756-18N738	GETS Ref. No. - N° de réf. de SEAG PW-\$QCV-004-17636
File No. - N° de dossier QCV-8-41270 (004)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-04-02	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: DeBlois, Vincent	Buyer Id - Id de l'acheteur qcv004
Telephone No. - N° de téléphone (418) 649-2712 ()	FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: NGCC Amundsen Pêches&Océans Garde Côtière 101 BLVD CHAMPLAIN QUEBEC Québec G1K7Y7 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée Voir Doc.	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

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Solicitation No – N° de l'invitation
F3756-18N738/A
Client Ref No. – N° de réf. du client
F3756-18N738

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Buyer ID – id de l'acheteur
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PART 1 – GENERAL INFORMATION

1.1 Introduction

The bid solicitation and resulting contract document is divided into seven parts plus annexes as follows:

- Part 1** General Information: provides a general description of the requirement;
- Part 2** Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation and states that the Bidder agrees to be bound by the clauses and conditions contained in all parts of the bid solicitation;
- Part 3** Bid Preparation Instructions: provides bidders with instructions on how to prepare their bid;
- Part 4** Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, if applicable, and the basis of selection;
- Part 5** Certifications: includes the certifications to be provided;
- Part 6** Security, Financial and Other Requirements: includes specific requirements that must be addressed by bidders; and
- Part 7** Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Requirement, the Basis of Payment and other annexes..

1.2 Summary

- (i) The requirement is:
 - a) To carry out the ship maintenance and refit of the Canadian Coast Guard Ships C.C.G.S. Amundsen from April 11th up to May 16th 2019 at section 97 of the Queen's Wharf, at the Canadian Coast Guard base, 101 boul. Champlain, Québec, Qc, G1K 7Y7, in accordance with the associated Technical Specifications detailed in the Requirement attached as Annex A of the call for tender.
 - b) To carry out any approved unscheduled work not covered in paragraph a) above.
- (ii) The requirement is exempt from the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), Annex 4 and the North American Free Trade Agreement (NAFTA), Chapter 10 Annex 1001.2b Paragraph 1, however, it is subject to the Canadian Free Trade Agreement (CFTA).

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 – BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2018-05-22) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

2.2 Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation. Bidders can also submit their bid by facsimile at (1) 418-648-2209, by the date, time and place indicated on page 1 of the bid solicitation.

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than **seven (7)** calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a "proprietary" nature must be clearly marked "proprietary" at each relevant item. Items identified as proprietary will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that the Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in the Province of Quebec.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidders.

2.5 Bidders' Conference – Vessel

A bidders' Conference chaired by the Contracting Authority will be convened on board vessel CCGS Amundsen at 1:30 pm, March 26th, 2019. The vessel will be moored at section 97 of the Queen's Wharf, at the Canadian Coast Guard base, 101 boul. Champlain, Québec, Qc, G1K 7Y7.

An attendance confirmation is required before 11:00 am, March 25th, 2019.

2.6 Viewing – Vessel

A vessel's viewing will be held immediately after the bidders' conference.

2.7 Proposed Work Period

Work is to commence and be completed as follows:

Start: Contract award date for a start by April 11th, 2019.
End: May 16th, 2019 or five (5) weeks after the ship is made available by CCG.

The Bidder agrees through submission of its response to the bid solicitation that the above time frame provides an adequate period to perform the subject work and absorb a reasonable amount of unscheduled work; and further, that they have sufficient material and human resources allocated or available to complete the subject work and a reasonable amount of unscheduled work within the Work period.

2.8 Docking Facility *(Not used)*

2.9 List of Proposed Sub-contractors

If the bid includes the use of subcontractors, the Bidder agrees, upon written request from the Contracting Authority, to provide a list of all subcontractors including a description of the things to be purchased, a description of the work to be performed by specification section and the location of the performance of that work. The list should not include the purchase of off-the-shelf items, software and such standard articles and materials as are ordinarily produced by manufacturers in the normal course of business, or the provision of such incidental services as might ordinarily be subcontracted in performing the Work, i.e. subcontract work valued at less than \$2000.00.

2.10 Quality Plan - Solicitation *(Not used)*

2.11 Inspection and Test Plan *(Not used)*

2.12 Vessel Refit, Repair or Docking - Cost

All charges, fees expenses and disbursements incidental to the carrying out of the Work, including all items described in Supplemental General Conditions 1029 (2010-08-16) Ship Repair, section (07), are included in the Evaluation Price (and in the Contract Price under the Contract), including, without limitation:

-
1. **Services** *(See section S.1.0 of the Statement Of Requirement)*
 2. **Docking and Undocking** *(Not used)*
 3. **Field Service Representatives/Supervisory Services:** include all costs for field service representatives/supervisory services including manufacturers' representatives, engineers, etc.
 4. **Removals:** include all costs for removals necessary to carry out the Work and will be the responsibility of the successful Bidder whether or not they are identified in the specifications, except those removals not apparent when viewing the vessel or examining the drawings. The successful Bidder will also be responsible for safe storage of removed items and reinstalling them on completion of the Work. The successful Bidder will be responsible for renewal of components damaged during removal.
 5. **Sheltering, Staging, Cranage and Transportation:** include the cost of all sheltering, staging including handrails, cranage and transportation to carry out the Work as specified.

The successful Bidder will be responsible for the cost of any necessary modification of these facilities to meet applicable safety regulations.

PART 3 – BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

3.1.1 Canada requests that bidders provide their bid in separately bound sections as follows:

- Section I: Management Bid (1 hard copy)
- Section II: Financial Bid (1 hard copy)
- Section III: Certifications Requirements (1 hard copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>) . To assist Canada in reaching its objectives, bidders are encouraged to:

- (1) use paper containing fibre certified as originating from a sustainably-managed forest and/or containing minimum 30% recycled content; and
- (2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Management Bid

The Management Bid should be concise and should include all the certifications and other requirements as noted in Parts 4 and 6.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Financial Bid Presentation Sheet Annex I and the detailed Pricing Data Sheet, Appendix 1 to Annex I. The total amount of Goods and Services Tax or Harmonized Sales Tax is to be shown separately, if applicable.

Section III: Certification Requirements

Bidders must submit the certifications required under Part 5.

3.1.2 Unscheduled Work and Evaluation Price

In any vessel refit, repair or docking contract, unscheduled work will arise after the vessel and its equipment is opened up and surveyed. The anticipated cost of the Work will be included in the evaluation of bids. The overall total cost will be calculated by including an estimated amount of additional person-hours (and/or material) multiplied by a firm hourly charge-out labour rate and is added to the firm price for the Work.

The overall total referred to as the "Evaluation Price" will be used for evaluating the bids. The estimated work will be based on historical experience and there is no minimum or maximum amount of unscheduled work nor is there a guarantee of such work.

PART 4 – EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical, management and financial evaluation criteria specified below.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Financial Bid

Bidders must submit their financial bid in accordance with the Financial Bid Presentation Sheet Annex "I". The total amount of Goods and Services Tax or Harmonized Sales Tax is to be shown separately, if applicable.

4.1.2 Mandatory Criteria

Bids will be assessed in accordance with the entire requirement of the bid solicitation including compliance with the mandatory certifications and table of deliverable requirements as detailed in Parts 2, 4, 5 & 6. Only those bids which are found to meet all the mandatory requirements within the specified time frames will be deemed responsive.

4.1.3 Table of Mandatory Requirements to be met by bid closing

Notwithstanding deliverable requirements specified anywhere else within this solicitation and its associated Technical Specification, the following are the only mandatory deliverables that must be submitted with the Bid at the time of bid closing. The following are mandatory and the Bidder must be compliant on each item to be considered responsive

Item	Description	Completed and Attached
1	Completed Annex "I" Financial Bid presentation Sheet	
2	Completed Appendix 1 to Annex "I" <u>Price Per Item Sheet</u>	
3	Letter or proof of Insurance as per article 6. 13 of Part 6	

4.1.4 Other information upon request only

The following information, which supports the bid, may be requested by the Contracting Authority from the bidder and it must be provided within **two (2)** working days of the written request:

Item	Description	Completed and Attached
1	Proof of welding certification, as per clause 6.7 of Part 6; and section G.1.2 of the Statement of Requirement	Prior to contract award
2	Information requested as per section 16.1.C.5.4 of the Statement Of Requirement	Prior to contract award
3	Annex J – Pricing Data Sheet;	Prior to contract award
4	Sub-contract and Sub-contractor List , as per clause 7.15 of Part 7	Prior to contract award
5	Technical bid in accordance with Annex K – Mandatory Technical Evaluation Criteria Presentation Sheets	Prior to contract award

4.1.5 Deliverables after Contract award

Element	Description	Doit être fourni après l'attribution du Contrat, dans les
1	Copies of the CD or DVD must be provided to the TA for reference within 48 hours of the start of the contract period (Re Section S.1.8.1 of the Statement Of Requirement)	2 calendar days
2	Work Schedule and Reports as per article 7.16, Part 7; and also section G.1.9.6 of the Statement Of Requirement	3 calendar days
3	Insurance Requirements as per article 7.11, Part 7;	5 calendar days
4	Inspections and tests plan as per article 7.28, Part 7	5 calendar days
5	Letter or proof of conformity for the insulation proposed as requested at section 16.3.D.3.1 of the Statement Of Requirement	5 calendar days

4.2 Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

4.2.1 Equivalent Product

SACC Manual Clause B3000T (2006-06-16) Equivalent Product

4.3 Preliminary Notification

Pending the completion of the bid evaluation process, each Bidder should be notified of the preliminary ranking of its Financial Bid within 2 business days of the Solicitation's closing date by an e-mail from the Contracting Authority.

PART 5 – CERTIFICATIONS

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

5.2 Mandatory Certifications Required Precedent to Contract Award

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity – Required documentation

In accordance with the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the Employment and Social Development Canada (ESDC) - Labour's website

(http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?_ga=1.229006812.1158694905.1413548969).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

6.1 Security Requirement *(Not used)*

6.2 Financial Requirements *(Not used)*

6.3 Accommodation *(Not used)*

6.4 Parking *(Not used)*

6.5 Material and Supply Support *(Not used)*

6.6 Workers' Compensation - Letter of Good Standing *(Not used)*

6.7 Welding Certification

Upon contracting authority's request should submit evidence demonstrating its certification to the welding standards in accordance with the following:

Welding must be undertaken by a company Certified by the Canadian Welding Bureau (CWB) to the requirements of the following Canadian Standards Association (CSA) standards:

- (a) CSA W47.1, Certification of Companies for Fusion Welding of Steel, section 2;
- (b) CSA W47.2, Certification of companies for fusion welding of aluminum;

In addition, welding must be done in accordance with the requirements of the applicable and related drawings and specifications.

6.8 Valid Labour Agreement *(Not used)*

6.9 Work Schedule and Reports *(See also clause G.1.9.6 of the Statement Of Requirement)*

6.10 Fueling and De-fueling Crown Vessels *(Not used)*

6.11 ISO 9001:2000 - Quality Management Systems *(Not used)*

6.12 Environmental Protection *(See also Section 7 clause 24)*

6.13 Insurances Requirements

At bids closing date the Bidder must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Bidder, if awarded a contract as a result of the bid solicitation, can be insured in accordance with the Insurance Requirements specified in Annex "C".

PARTIE 7 – RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

1. Requirement

The Contractor must:

- a) To carry out the ship maintenance and refit of the Canadian Coast Guard Ships C.C.G.S. Amundsen from April 11th up to May 16th 2019 at section 97 of the Queen's Wharf, at the Canadian Coast Guard base, 101 boul. Champlain, Québec, Qc, G1K 7Y7, in accordance with the associated Technical Specifications detailed in the Requirement attached as Annex A of the call for tender.
- b) to carry out any approved unscheduled work not covered in paragraph a) Above.

2. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the *Standard Acquisition Clauses and Conditions* Manual issued by Public Works and Government Services Canada (PWGSC). The Manual is available on the PWGSC Website:

<http://sacc.pwgsc.gc.ca/sacc/index-e.jsp>.

2.1 General Conditions

2030 (2018-06-21), General Conditions - Higher Complexity - Goods, apply to and form part of the Contract (with the exception of Article 26 which is deleted in its entirety and replace with Article 42 here below).

Section 22 of 2030 is amended in Annex E Warranty.

2.2 Supplemental General Conditions

1029 (2018-12-06) Ship Repairs, excluding section 07 & 09 apply to and form part of the Contract.

3. Security Requirement

There is no security requirement associated with this Statement of Work.

4. Term of Contract

4.1 Contract period

The contract period is from Contract award date until the end of the warranty period inclusively.

4.2 Work period

Work is to commence and be completed as follows:

Start: Contract award date for a start by April 11th, 2019.
End: May 16th, 2019 or five (5) weeks after the ship is made available by CCG.

The Contractor agrees that the above time frame provides an adequate period to perform the subject work and absorb a reasonable amount of unscheduled work; and further, that it has sufficient material and human resources allocated or available to complete the subject work and a reasonable amount of unscheduled work within the Work Period.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Vincent DeBlois
Supply Specialist
Telephone: 418-649-2712
Facsimile: 418-648-2209
E-mail address: vincent.deblois@pwgsc-tpsgc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

5.2 Technical Authority

The Technical Authority for the Contract is:

Name will be determined at Contract award

Telephone: _____
Facsimile: _____
E-mail address: _____

The Technical Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority; however, the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

5.3 Inspection Authority/Inspector

The Inspection Authority for the Contract is:

See section 5.2

The Inspection Authority is the Department of Public Works and Government Services Canada, who for the purposes of this requirement is the inspector responsible for inspection of the work and acceptance of the finished work under this requirement. The Inspection Authority will be represented on-site by a designated inspector and such other Government of Canada inspectors who will from time to time be assigned in support of the designated Inspector.

5.4 Contractor's representative

The Technical Authority for the Contract is:

Name will be determined at Contract award

Name: _____

Title: _____

Telephone: _____

Facsimile: _____

E-mail address: _____

5.6 Technical Representative

The Technical Representative for the Contract is:

Name will be determined at Contract award

Telephone: _____

Facsimile: _____

E-mail address: _____

The Technical Representative is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority; however, the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6. Payment

6.1 Basis of Payment - Firm Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid the firm price indicated in Annex B. Goods and Services Tax or Harmonized Sales Tax is extra, if applicable. Payment for unscheduled work will be done in accordance with Basis of Payment outlined at Annex B.

6.2 Payment Terms - Progress Payments

1. Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the Work, up to 90 percent of the amount claimed and approved by Canada if:
 - (a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
 - (b) the amount claimed is in accordance with the basis of payment;
 - (c) the total amount for all progress payments paid by Canada does not exceed 90 percent of the total amount to be paid under the Contract;
 - (d) all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.
2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all work required under the Contract if the Work has been accepted by Canada and a final claim for the payment is submitted.
3. Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the rights to make adjustments to the Contract from time to time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

6.3 Clauses du guide des CCUA

SACC Manual Clause C6000C (2017-08-17)
SACC Manual Clause H4500C (2010-01-11)

Limitation of Price
Lien - Section 427 of the Bank Act

7. Instructions relatives à la facturation

7.1 Présentation des factures

L'entrepreneur doit présenter des factures qui contiennent les renseignements exigés aux Conditions générales 2030 (2018-06-21) article 13.

7.2 Invoice

7.2.1 Transmission of invoices

Invoice to be made to the name of:

DFO.invoicing-facturation.MPO@canada.ca

Mailing Address :
Pêches et Océans Canada
PO Box 1901, STN A
Fredericton (Nouveau-Brunswick)
E3B 5G4

Electronic copy to be sent for verification to:
mathieu.gagnon@tpsgc-pwgsc.gc.ca

7.3 Warranty Holdback

A warranty holdback of **10%** of the total contract price as last amended (applicable taxes excluded) will be applied to the final claim for payment. This holdback will be payable by Canada upon the expiry of the 90 day warranty period(s) applicable to the work. Applicable taxes are to be calculated and paid on the total amount of the claim before the 10% holdback is applied. At the time that the holdback is released, there will be no applicable taxes payable, as it was included in previous payments.

8. Certifications

8.1 Generality

Compliance with the certifications provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the entire contract period. If the Contractor does not comply with any certification or it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

9. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____.

10. Priority of Documents

If there is a discrepancy between the wordings of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the Supplemental General Conditions 1029, (2018-12-06), Ship Repairs;
- (c) General Conditions 2030, (2018-06-21) - Higher Complexity - Goods;
- (d) Annex A, Requirement;
- (e) Annex B, Basis of Payment;
- (f) Annex C, Insurance Requirements;
- (g) Annex E, Warranty;
- (h) the Contractor's bid dated _____.

11. Insurance Requirements

The Contractor must comply with the insurance requirements specified in Annex C. The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements will not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible to decide if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage will be at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within cinq (5) calendar days after the date of award of the Contract a Certificate of Insurance including details of the insurance coverage, exclusions, deductibles and conditions and confirming that the insurance policy complying with the requirements is in force. The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

12. Financial Security *(Not used)*

13. Accommodation *(Not used)*

14. Parking *(Not used)*

15. Sub-contracts and Sub-contractor List

The Contracting Authority is to be notified, in writing, of any changes to the list of subcontractors before commencing the work.

When the Contractor sub-contracts work, a copy of the sub-contract purchase order is to be passed to the Contracting Authority. In addition, the Contractor must monitor progress of sub-contracted work and inform the Inspection Authority on pertinent stages of work to permit inspection when considered necessary the Inspection Authority.

16. Work Schedule and Reports

No later than **three (3) calendar days** after contract award, the preliminary schedule must be revised and expanded as necessary and resubmitted before commencement of the Work.

The Contractor must provide a detailed work schedule showing the commencement and completion dates for the Work in the available work period, including realistic target dates for significant events. During the Work Period the schedule is to be reviewed on an ongoing basis by the Inspection Authority and the Contractor, updated when necessary, and available in the Contractor's office for review by Canada's authorities to determine the progress of the Work.

Production work schedules must be revised and resubmitted before each Progress Meeting. The revised schedules must show the effect of progressed work and approved work arisings. Changes in scheduled completion dates due to unscheduled work will not be accepted except as negotiated under Design Change or Additional Work, Article 26.

17. Insulation Materials - Asbestos Free

All materials used to insulate or re-insulate any surfaces on board the vessel must meet Transport Canada Marine standards, for commercial marine work, and, for all work, be free from asbestos in any form. The Contractor must ensure that all machinery and equipment located below or adjacent to surfaces to be re-insulated are adequately covered and protected before removing existing insulation.

18. Loan of Equipment - Marine *(Not used)*

19. Trade Qualifications

The Contractor must use qualified, certificated (if applicable) and competent tradespeople and supervision to ensure a uniform high level of workmanship. The Inspection Authority may request to view and record details of the certification and/or qualifications held by the Contractor's tradespeople. This request should not be unduly exercised but only to ensure qualified tradespeople are on the job.

20. Material and Supply Support *(Not used)*

21. ISO 9001:2008 - Quality Management Systems *(Not used)*

22. Quality Control Plan

The Contractor must implement and follow the Quality Control Plan (QCP) prepared according to the latest issue (at contract date) of ISO 10005 Quality management - Guidelines for quality plans, approved by the Inspection and Technical Authorities. The QCP shall describe how the Contractor will conform to the specified quality requirements of the Contract and specify how the required quality activities are to be carried out, including quality assurance of subcontractors. The Contractor must include a traceability matrix from the elements of the specified quality requirements to the corresponding paragraphs in the QCP.

The documents referenced in the QCP shall be made available when requested by the Inspection Authority.

The Contractor must make appropriate amendments to the QCP throughout the term of the contract to reflect current and planned quality activities. Amendments to the QCP must be acceptable to the Inspection and Technical Authorities.

Refer to Annex "D" for further details on the Quality Control Plan requirements.

23. Welding Certification

Welding must only be undertaken by a company Certified by the Canadian Welding Bureau (CWB) to the requirements of the following Canadian Standards Association (CSA) standards:

- (a) CSA W47.1, Certification of Companies for Fusion Welding of Steel, section 2.
- (b) CSA W47.2, Certification of companies for fusion welding of aluminum;

In addition, welding must be done in accordance with the requirements of the applicable drawings and specifications.

Before the commencement of any fabrication work, and upon request from the Inspection Authority, the Contractor must provide approved welding procedures and/or a list of welding personnel intended to be used in the completion of the work. The list must identify the CWB welding procedure qualifications attained by each of the personnel listed and must be accompanied by a copy of each person's current CWB welding certification.

24. Environmental Protection

The Contractor and its sub-contractors engaged in the Work on a Crown vessel must carry out the Work in compliance with applicable municipal, provincial and federal environmental laws, regulations and industry standards.

The Contractor must have detailed procedures and processes for identifying, removing, tracking, storing, transporting and disposing of all potential pollutants and hazardous material encountered, to ensure compliance as required above.

All waste disposal certificates are to be provided to the Inspection Authority, with information copies sent to the Contracting Authority. Furthermore, additional evidence of compliance with municipal, provincial and federal environmental laws and regulations is to be furnished by the Contractor to the Contracting Authority when so requested.

The Contractor must have environmental emergency response plans and/or procedures in place. Contractor and subcontractor employees must have received the appropriate training in emergency preparedness and response. Contractor personnel engaging in activities which may cause environmental impacts or potential noncompliance situations, must be competent to do so on the basis of appropriate education, training, or experience.

25. Fueling and De-fueling a Crown Vessel *(Not used)*

26. Procedure for Design Change or Additional Work

SACC Manual Clause B5007C (2010-01-11) Design Change or Additional Work

26.1 Price Breakdown:

L'entrepreneur doit fournir, sur demande, une ventilation de prix pour tous les travaux imprévus, selon les activités individuelles précises, en fonction des domaines professionnels, des heures-personnes, du matériel, des contrats de sous-traitance et des services.

26.2. Pro-rated Prices:

Hours and prices for unscheduled work will be based on comparable historical data applicable to similar work at the same facility, or will be determined by pro-rating the quoted work costs in the Contract when in similar areas of the vessel.

27. Equipment/Systems *(Not used)*

28. Inspection and Test Plan

The Contractor must, in support of their QCP, implement an approved Inspection & Test Plan (ITP).

The Contractor must provide at no additional cost to the Crown, all applicable test data, all Contractor technical data, test pieces and samples as may reasonably be required by the Inspection Authority to verify conformance to contract requirements. The Contractor must forward at his expense such technical data, test data, test pieces and samples to such location as the Inspector may direct.

Refer to Annex "D" for details on Inspection and Test Plan Requirements.

29. Vessel Custody *(Not used)*

30. Vessel manned Refits

SACC Manual Clause A0032C (2011-05-16) Vessel Manned Refits

31. Pre-Refit Meeting

A Pre-Refit meeting will be convened and chaired by the Contracting Authority at the work site, before the commencement of the work period.

32. Meetings

Progress meetings, chaired by the Contracting Authority, will take place at the Contractor's facility as and when required, generally once a month. Interim meetings may also be scheduled. Contractor attendees at these meetings will, as a minimum, be its Contract (Project) Manager, Production Manager (Superintendent) and Quality Assurance Manager. Progress meetings will generally incorporate Technical meetings to be chaired by the Technical Authority.

33. Outstanding Work and Acceptance

The Inspection Authority, in conjunction with the Contractor, will prepare a list of outstanding work items towards the end of the vessel Work Period. This list will form the annexes to the formal acceptance document for the vessel. A Contract Completion Meeting will be convened by the Inspector on the work completion date to review and sign off the Acceptance Document. In addition to any amount held under the Warranty Holdback Clause, a holdback of twice the estimated value of outstanding work will be held until completion of said work.

The PWGSC-TPSGC 1205 Acceptance Document is to be completed and distribution is to be made by the Public Works and Government Services Canada Inspection Authority as follows:

- (a) original to the PWGSC Contracting Authority
- (b) one copy to the Technical Authority
- (c) one copy to contractor.

34. Licensing

The Contractor must obtain and maintain all permits, licenses and certificates of approval required for the work to be performed under any applicable federal, provincial or municipal legislation. The Contractor is responsible for any charges imposed by such legislation or regulations. Upon request, the Contractor must provide a copy of any such permit, license or certificate to Canada.

35. Hazardous Waste – Vessels

SACC Manual Clause A0290C (2008-05-12) Hazardous Waste - Vessels

36. Government Site Regulations

SACC Manual Clause A9068C (2010-01-11) Government Site Regulations

37. Scrap and Waste Material

SACC Manual Clause A9055C (2010-08-16) Scrap and Waste Material

38. Stability and Weight Management *(Not used)*

39. Vessel - Access by Canada *(Not used)*

40. Title to Property - Vessel *(Not used)*

41. Defence Contract

SACC Manual Clause A9006C (2012-07-16) Defence Contract

42. Limitation of Contractor's Liability for Damages to Canada

1. This section applies despite any other provision of the Contract and replaces the section of the general conditions entitled "Liability". Any reference in this section to damages caused by the Contractor also includes damages caused by its employees, as well as its subcontractors, agents, and representatives, and any of their employees.
2. Whether the claim is based in contract, tort, or another cause of action, the Contractor's liability for all damages suffered by Canada caused by the Contractor's performance of or failure to perform the Contract is limited to \$10 million per incident or occurrence to an annual aggregate of \$20 million for losses or damage caused in any one year of carrying out the Contract, each year starting on the date of coming into force of the Contract or its anniversary. This limitation of the Contractor's liability does not apply to nor include:
 - (a) Any infringement of intellectual property rights;
 - (b) Any breach of warranty obligations;
 - (c) Any liability of Canada to a third party arising from any act or omission of the Contractor in performing the Contract; or
 - (d) Any loss for which the policies of insurance specified in the Contract or any other policies of insurance held by the Contractor would provide insurance coverage.
3. Each Party agrees that it is fully liable for any damages that it causes to any third party in connection with the Contract, regardless of whether the third party makes its claim against Canada or the Contractor. If Canada is required, as a result of joint and several liability, to pay a third party in respect of damages caused by the Contractor, the Contractor must reimburse Canada for that amount.

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4. The Parties agree that nothing herein is intended to limit any insurable interest of the Contractor nor to limit the amounts otherwise recoverable under any insurance policy. The Parties agree that to the extent that the insurance coverage required to be maintained by the Contractor under this Contract or any additional insurance coverage maintained by the Contractor, whichever is greater, is more than the limitations of liability described in sub article (2), the limitations provided herein are increased accordingly and the Contractor shall be liable for the higher amount to the full extent of the insurance proceeds recovered.
 5. If, at any time, the total cumulative liability of the Contractor for losses or damage suffered by Canada caused by the Contractor's performance of or failure to perform the Contract, excluding liability described under subsection 2(a), (b), (c) and (d) exceeds \$40 million, either Party may terminate the Contract by giving notice in writing to the other Party and neither Party will make any claim against the other for damages, costs, expected profits or any other such loss arising out of the termination. However, no such termination or expiry of the Contract shall reduce or terminate any of the liabilities that have accrued to the effective date of the termination but which liabilities are subject to the limitations as specified in sub-article (1) through (4) above.
 6. The date of termination pursuant to this Article, shall be the date specified by Canada in its notice to terminate, or, if the Contractor exercises the right to terminate, in a notice to the Contractor from Canada in response to the Contractor's notice to terminate. The date of termination shall be in Canada's discretion to a maximum of 12 months after service of the original notice to terminate served by either Party pursuant to sub-article 5, above.
 7. In the event of a termination under this Article, the Contract will automatically remain in force subject to all of the same terms and conditions until the date of termination and the Contractor agrees that it will be paid in accordance with the applicable provisions as set out in the Basis of Payment, Annex B and that the Contractor's liability remains as specified in sub-articles (1) through (4), above.
 8. Nothing shall limit Canada's other remedies, including Canada's right to terminate the Contract for default for breach by the Contractor of any of its obligations under this Contract, notwithstanding that the Contractor may have reached any limitation of its liability hereunder.

Solicitation No – N° de l'invitation
F3756-18N738/A
Client Ref No. – N° de réf. du client
F3756-18N738

Amd. No. – N° de la modif.
File No. – N° du dossier
QCV-8-41270

Buyer ID – id de l'acheteur
qcv 004

ANNEX A

STATEMENT OF REQUIREMENT

See electronic Annex.

ANNEX B

BASIS OF PAYMENT FIRM PRICE

Remark to Bidder: Annex B will form the Basis of Payment for the resulting contract and should not be filled in at annex 'I' the bid submission stage.

B1 Contract Firm Price

A)	Known Work For work as stated in Contract Clause 1a), Specified in Annex "A" and detailed in the Price per Item Sheet, Appendix 1 of Annex B, for a FIRM PRICE of:	\$ _____
	Total Firm Price :	\$ _____

B2 Unscheduled Work

Payment for Unscheduled Work:

The Contractor will be paid for unscheduled work arising, as authorized by Canada. The authorized unscheduled work will be calculated as follows:

Number of hours (to be negotiated) X \$ _____, being the Contractor's firm hourly charge-out labour rate which includes overhead and profit, plus net laid-down cost of materials to which will be added a mark-up of 10 percent, plus Goods and Services Tax or Harmonized Sales Tax, if applicable, calculated at 5 percent of the total cost of material and labour. The firm hourly charge-out labour rate and the material mark-up will remain firm for the term of the Contract and any subsequent amendments.

- B2.1:** Notwithstanding definitions or useage elsewhere in this document, or in the Bidder's Cost Management System, when negotiating *Hours* for unscheduled work, PWGSC will consider only those hours of labour directly involved in the production of the subject work package. Elements of *Related Labour Costs* identified in B2.2 below, will not be negotiated, but will be included in the firm hourly Charge-out Labour Rate in accordance with paragraph B2.2
- B2.2:** Allowance for *Related Labour Costs* such as: Management, Direct Supervision, Purchasing and Material Handling, Quality Assurance and Reporting, First Aid, Gas Free Inspecting and Reporting, and Estimating will be included as *Overhead* within the *firm hourly Charge-out Labour Rate* entered in line B2 above.
- B2.3:** The 10% mark-up rate for materials will also apply to subcontracted costs. The mark-up rate includes any allowance for material and subcontract management not allowed for in the Chargeout Labour Rate. The Contractor will not be entitled to a separate labour component for the purchase and handling of materials or subcontract administration.

B3 Overtime

No overtime work shall be compensated for under the Contract unless authorized in advance and in writing by the Contracting Authority. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing such details as Canada may require with respect to the overtime work performed. Compensation for authorized overtime will be calculated in the following manner:

- a. For Known Work, the Contractor will be paid the original contract price plus agreed overtime hours paid at the following premium rates; or,
- b. For Unscheduled Work, the Contractor will be paid for agreed overtime hours paid at the firm hourly Charge-out Labour Rate above plus the following premium rates:

Premium for Time and one half: \$ _____ per hour; or,

Premium for Double time: \$ _____ per hour

The above premiums rates shall be calculated as follows:

Premium for time and one half:

½ (that portion of the firm Hourly Charge-out Labour Rate in B2 that is directly attributable to salary cost plus related certified fringe benefits) times 7.5% (representing profit)

Premium for double time:

The portion of the Unscheduled Work firm Charge-out Labour Rate in B2 that is directly attributable to salary cost plus related certified fringe benefits times 7.5% (representing profit)

These premiums will remain firm for the duration of the Contract, including all amendments and are subject to audit by Canada, and to retroactive adjustment if Canada discovers that the premiums have not been calculated in accordance with the formulae, above.

B4 Daily Services Fee

Not used

B5 Cost of all Services is Included in Contract Price

All charges, fees expenses and disbursements incidental to the carrying out of the Work, are included in the Contract Price for the Work, including, without limitation:

1. **Services:** Not used
2. **Docking and Undocking:** Not used
3. **Field Service Representatives/Supervisory Services:** include all costs for field service representatives/supervisory services including manufacturers' representatives, engineers, etc.
4. **Removals:** include all costs for removals necessary to carry out the Work and

will be the responsibility of the Contractor whether or not they are identified in the specifications, except those removals not apparent when viewing the vessel or examining the drawings. The Contractor will also be responsible for safe storage of removed items and reinstalling them on completion of the Work. The Contractor will be responsible for renewal of components damaged during removal.

5. **Sheltering, Staging, Cranage and Transportation:** include the cost of all sheltering, staging including handrails, cranage and transportation to carry out the Work as specified.

The Contractor will be responsible for the cost of any necessary modification of these facilities to meet applicable safety regulations.

ANNEX C

INSURANCE REQUIREMENTS

C.1 Ship Repairers' Liability Insurance

1. The Contractor must obtain Ship Repairer's Liability Insurance and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$10,000,000 per accident or occurrence and in the annual aggregate
2. The Ship Repairer's Liability insurance must include the following:
 - (a) Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada as additional insured should read as follows: Canada, represented by Public Works and Government Services Canada.
 - (b) waiver of subrogation rights: Contractor's insurer to waive all rights of subrogation against Canada as represented by the Department of Public Works and Government Services Canada and the Canadian Coast Guard for any and all loss of or damage to the vessel, however caused.
 - (c) Notice of Cancellation: The Insurer will endeavor to provide the Contracting Authority thirty (30) days written notice of cancellation.
 - (d) Contractual Liability: The policy must, on a blanket basis or by specific reference to the contract, extend to assumed liabilities with respect to contractual provisions.
 - (e) Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.

C.2 Commercial General Liability Insurance

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$10,000,000 per accident or occurrence and in the annual aggregate
2. The Commercial General Liability Insurance policy must include the following:
 - (a) Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by Public Works and Government Services Canada.
 - (b) Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.

-
- (c) Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.
 - (d) Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
 - (e) Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
 - (f) Employees and, if applicable, Volunteers must be included as Additional Insured.
 - (g) Employers' Liability: to protect the Contractor for liabilities arising in the management and administration of statutory and contractual entitlements of its employees.
 - (h) Notice of Cancellation: The Insurer agrees to provide the Contracting Authority thirty (30) days written notice of policy cancellation.
 - (i) If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.
 - (j) Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.
 - (k) Sudden and accidental Pollution Liability (minimum 72 hours): To protect the Contractor for liabilities arising from damages caused by accidental pollution incidents.

ANNEX D

INSPECTION/QUALITY ASSURANCE/QUALITY CONTROL

D.1 Inspection and Test Plan (ITP):

1. The Contractor must prepare an Inspection and Test Plan (ITP) comprising individual inspection and test plans for each specification item of this project, in accordance with the Quality Standard and its Quality Control Plan. The ITP must be submitted to the Inspection Authority for review and amended by the Contractor to the satisfaction of the Inspection Authority.
 - (a) Each ITP must contain all inspection points identified in the Technical Specification highlighting any mandatory points that must be witnessed by the Inspection Authority and other "hold" points imposed by the Contractor to ensure the quality of the work.
 - (b) Milestone delivery date for the ITP is given in the Contract, however individual ITPs should be forwarded for review as developed.
2. Coding:
 - (a) Each Inspection and Test Plan (ITP) is to be coded for identification clearly demonstrating a systematic approach similar to the following (Contractor's system should be defined in its Quality Control Plan):
 - (i) Prefixes for Inspections, Test and Trials:

Prefix "1" is a Contractor inspection, i.e. 1H-10-01, 1H-10-02;

prefix "2" is a Contractor post repair test, i.e. 2H-10-01; and

prefix "3" is a Contractor post repair trial, i.e. 3H-10-01.
 - (b) Specification items followed by assigned sequence numbers for inspection processes within each Specification Item; and
 - (c) Cross reference to a verification document number
3. Inspection and Test Plan Criteria:

Inspection criteria, procedures and requirements are stated in the specifications, drawings, technical orders and reference standards invoked by the Specifications. Test and trial documentation may also be included or referenced in the Specifications. An individual Inspection and Test Plan (ITP) is required for each Specification item.

 - (a) All ITPs must be prepared by the Contractor in accordance with the above criteria, its Quality Plan, and must provide the following reference information:
 - (i) the ship's name;
 - (ii) the Specification item number;

-
- (iii) equipment/system description and a statement defining the parameter which is being inspected;
 - (iv) a list of applicable documents referenced or specified in the inspection procedure;
 - (v) the inspection, test or trial requirements specified in the Technical Specification;
 - (vi) the tools and equipment required to accomplish the inspection;
 - (vii) the environmental conditions under which the inspections are to be conducted and the tolerances on the inspection conditions;
 - (viii) a detailed step-by step procedure of how each inspection is to be performed, conformance parameters, accept/reject criteria and recording of results, deficiencies found and description of corrective action(s) required;
 - (ix) name and signature of the person who prepared the plan, date prepared and amendment level; and,
 - (x) names and signatures of the persons conducting and witnessing the inspection, test or trial.

4. Contractor Imposed Testing:

Tests and trials in addition to those given in the Technical Specification must be approved by the Inspection Authority.

- (a) Amendments: Amendment action for the Inspection and Test Plans must be ongoing throughout the refit and reflect the inspection requirements for unscheduled work. Amendments must be submitted as developed, but not less frequently than once every second week.

D.2 Conduct of Inspection

1. Inspections must be conducted in accordance with the ITP.
2. The Contractor must provide its own staff or subcontracted staff to conduct inspections, tests and trials; excepting that Technical Authority or Inspection Authority personnel may be designated in the specifications, in which case the Contractor must ensure that its own staff are provided in support of such inspection/test/trial.
3. The Contractor must ensure that the required conditions stated in the ITP prevail at the commencement of, and for the duration of, each inspection/test/trial.
4. The Contractor must ensure that personnel required for equipment operation and records taking during the inspection/test/trial are briefed and available at the start and throughout the duration of the inspection/test/trial. Tradesmen or FSRs who may be required to effect minor changes or adjustments in the installation must be available at short notice.
5. The Contractor is to coordinate the activities of all personnel taking part in each inspection/test/trial and ensure that safe conditions prevail throughout the inspection/test/trial.

D.3 Inspection Records and Reports

1. The Contractor on the inspection record, test or trials sheets as applicable must record the results of each inspection. The Contractor must maintain files of completed inspection records consistent with the Quality Standard and its Quality Plan for this project.

2. The Contractor's QC representative (and the FSR when required) must sign as having witnessed the inspection, test or trial on the inspection record. The Contractor must forward originals of completed inspection records, together with completed test(s) and/or trials sheets to the Inspection Authority as they are completed.
3. Unsatisfactory inspection/test/trial results, for which corrective action cannot be completed during the normal course of the inspection/test/trial, will require the Contractor to establish and record the cause of the unsatisfactory condition to the satisfaction of the Inspection Authority. Canada representatives may assist in identification where appropriate.
4. Corrective action to remove cause of unsatisfactory inspections must be submitted to the Inspection Authority in writing by the Contractor, for approval before affecting such repairs and rescheduling of the unsatisfactory inspection/test/trial. Such notices must be included in the final records passed to the Inspection Authority.
5. The Contractor must undertake rectification of defects and deficiencies in the Contractor's installation or repair as soon as practicable. The Contractor is responsible to schedule such repairs at its own risk.
6. The Contractor must reschedule unsatisfactory inspections after any required repairs have been completed.
7. Quality Control, Inspection and Test records that substantiate conformance to the specified requirements, including records of corrective actions, must be retained by the Contractor for three (3) years from the date of completion or termination of the Contract and must be made available to the Inspection Authority upon request.

D.4 Inspection and Trials Process

1. Drawings and Purchase Orders
 - (a) Upon receipt of two (2) copies of each drawing or purchase order, the designated Inspection Authority will review its content against the provisions of the Specifications. Where discrepancies are noted, the Inspection Authority will formally advise all concerned, in writing using a Discrepancy Notice. The resolution of any such discrepancy is a matter for consultation between the Contractor and other Crown Authorities.

The Inspection Authority is NOT responsible for the resolution of discrepancies.

2. Inspection
 - (a) Upon receipt and acceptance of the Contractor's ITP, inspection will consist of a number of Inspection Points supplemented by such other inspections, tests, demonstrations and trials as may be deemed necessary by the Inspection Authority to permit him to certify that the work has been performed in compliance with the provisions of the Specifications. The Contractor must be responsible for notifying the designated Inspection Authority of when the work will be available for inspection, sufficiently in advance to permit the designated Inspection Authority to arrange for the appropriate inspection.
 - (b) The Inspection Authority will inspect the materials, equipment and work throughout the project against the provisions of the Technical Specification and, where non-conformances are noted, will issue appropriate **INSPECTION NON-CONFORMANCE REPORTS**.

- (c) The Contract requires the implementation of a Quality Assurance/Quality Control system, so the Inspection authority must require that the Contractor provide a copy of its internal inspection report pertaining to a work item before conducting the requested inspection. If third party inspections are required by the Contract (e.g. inspections by a certified CWB 178.2 welding inspector), the reports of these inspections must be required before the Work is inspected by the Inspection Authority.
- (d) The QA/QC system is a requirement, so if the documentation is presented to the Inspection Authority before an inspection stating that the Work is satisfactory but the Inspection Authority finds that the Work has not been satisfactorily inspected, the Inspection Authority must issue an Inspection Non-conformance Report against the Work and another against the failure of the Contractor's QA/QC system.
- (e) Before carrying out any inspection, the Inspection Authority must review the requirements for the Work and the acceptance and/or rejection standards to be applied. Where more than one standard or requirement is called up and they are potentially conflicting, the Inspection Authority must refer to the order of precedence in the Contract to determine the standard or requirement to be applied.

3. Inspection Non-conformance report

- (a) An Inspection Non-conformance report will be issued for each non-conformance noted by the Inspection Authority. Each report will be uniquely numbered for reference purposes, will be signed and dated by the Inspection Authority, and will describe the non-conformance.
- (b) When the non-conformance has been corrected by the Contractor and has been re-inspected and accepted by the Inspection Authority, the Inspection Authority will complete the Report by adding an applicable signed and dated notation.
- (c) At the end of the project, the content of all Inspection Non-conformance Reports which have not been signed-off by the Inspection Authority will be transferred to the Acceptance Documents before the Inspection Authority's certification of such documents.

4. Tests, Trials, and Demonstrations

- (a) To enable the Inspection Authority to certify that the Work has been performed satisfactorily, in accordance with the Contract and Specifications, the Contractor must schedule, co-ordinate, perform, and record all specified Tests, Trials and Demonstrations required by the Inspection Authority.
- (b) Where the Specifications contain a specific performance requirement for any component, equipment, sub-system or system, the Contractor must test such component, equipment, sub-system or system to the satisfaction of the Inspection Authority, to prove that the specified performance has been achieved and that the component, equipment, sub-system or system performs as required by the specifications.
- (c) Tests, trials and demonstrations must be conducted in accordance with a logical, systematic schedule which must ensure that all associated components and equipment are proven before sub-systems demonstration or testing, and that sub-systems are proven before system demonstration or testing.

-
- (d) Where the Specifications do not contain specific performance requirements for any component, equipment, sub-system or system, the Contractor must demonstrate such component, equipment, sub-system or system to the satisfaction of the Inspection Authority.
 - (e) The contractor must submit its Test and Inspection Plan as indicated in section D.1 above.
 - (f) The Contractor must co-ordinate each test, trial and demonstration with all interested parties, including the Inspection Authority; Contracting and Technical Authorities; regulatory authorities; Classification Society; Sub-contractors; etc. The Contractor must provide the Inspection Authority and other Crown Authorities with a minimum of five working days' notice of each scheduled test, trial, or demonstration.
 - (g) The Contractor must keep written records of all tests, trials, and demonstrations conducted.
 - (h) The Contractor must in all respects be responsible for the conduct of all tests and trials in accordance with the requirements of the Contract.
 - (i) The Inspection Authority and the Technical Authority reserve the right to defer starting or continuing with any sea trials for any reasonable cause including but not limited to adverse weather, visibility, equipment failure or degradation, lack of qualified personnel and inadequate compliance with safety standards..

ANNEX E

WARRANTY

2030 (2018-06-21) General Conditions Higher Complexity Goods are hereby amended, by deleting section 2030 22 (2014-09-25), Warranty and replacing it as follows:

E.1 Section 22 Warranty

1. At the discretion of the Minister, the Contractor will replace or make good at its own expense any finished work, excluding Government Issue incorporated therein, which becomes defective or which fails to conform to contract requirements as a result of faulty or inefficient manufacture, material or workmanship.
2. Notwithstanding prior acceptance of the finished work, and without restricting any other term of the Contract or any condition, warranty or provision implied or imposed by law, the Contractor hereby warrants that the following shall be free from all defects and shall conform with the requirements of the contract:
 - (a) The painting of the underwater portion of the hull for a period of three hundred and sixty-five (365) days commencing from the date of undocking, except that the Contractor will only be liable to repair and/or replace to a value to be determined as follows:

Original cost to Canada of the underwater painting Work, divided by three hundred and sixty-five (365) days and multiplied by the number of days remaining in the warranty period. The resultant would represent the "Dollar Credit" due to Canada from the Contractor.

- (b) All other painting Work for a period of three hundred and sixty-five (365) days commencing from the date of acceptance of the Work;
 - (c) all parts and material provided by the Contractor for a period of three hundred and sixty-five (365) days commencing from the date of acceptance of such parts or material;
 - (d) All other items of Work for a period of ninety (90) days commencing from the date of acceptance of the Work, except that:
 - (i) the warranty on the Work related to any system or equipment not immediately placed in continuous use or service shall extend for a period of ninety (90) days from the date of acceptance of the vessel;
 - ii) for all outstanding defects, deviations, and Work items listed on the Acceptance Document at Delivery, the Warranty will be ninety (90) days from the subsequent date of acceptance for each item.
3. If more than one warranty period applies, in accordance with the above, to any Work, then the warranty shall be for the longest period.
4. The Contractor agrees to pass to Canada, and exercise on behalf of Canada, all warranties on the Materials supplied or held by the Contractor which exceed the periods indicated Above.

E.2 Warranty Procedures

E2.1 Scope

- (a) The following are the procedures which suit the particular requirements for warranty considerations for a vessel on completion of a refit.

E2.2 Definition

- (a) There are a number of definitions of "warranty" most of which are intended to describe its force and effect in law. One such definition is offered as follows:

"A warranty is an agreement whereby the vendor's or manufacturer's responsibility for performance of its product is extended for a specific period of time beyond the date at which the title to the product passes to the buyer."

E2.3 Warranty Conditions

- (a) General Conditions 2030, Higher Complexity - Goods are augmented by clauses incorporated into the subject Contract.
- (b) The warranty periods may be stated in more than one part.
 - (i) 90 days commencing from the day the PWGSC 1205 Acceptance Document is signed for workmanship provided by the contractor for the refit work specified;
 - (ii) 365 days from the date of undocking the vessel for the specified areas of underwater paint and topside painting;
 - (iii) 365 days commencing from the day the PWGSC 1205 Acceptance Document is signed for parts and material provided by the contractor for the refit work specified;
 - (iv) Any other specific warranty periods that may be required in the contract or offered by the Contractor.
- (c) The foregoing does not cover the disposition of other deficiencies that will be directly related to Technical Authority problem areas of the following nature:
 - (i) items becoming unserviceable that were not included in the refit specification;
 - (ii) refit specifications or other related documentation requiring amendments or corrections to increase viability; and
 - (iii) work performed that is directly related to the Technical Authority.

E2.4 Reporting Failures with Warranty Potential

- (a) The initial purpose of a report of a failure is to facilitate the decision as to whether or not to involve warranty and to generate action to effect repairs. Therefore in addition to identification, location data, etc. the report must contain details of the defect. Warranty decisions as a general rule are to be made locally and the administrative process is to be in accordance with procedures as indicated.
- (b) These procedures are necessary as invoking a warranty does not simply mean that the warrantor will automatically proceed with repairs at his expense. A review of the defect may well result in a disclaimer of responsibility, therefore, it is imperative that during such a review the Department is directly represented by competent technical authority qualified to agree or disagree with the warrantor's assertions.

E2.5 Procedures

- (a) Immediately it becomes known to the Ship's Staff that an equipment/system is performing below accepted standards or has become defective, the procedures for the investigation and reporting are as follows:
 - (i) The vessel advises the Technical Authority when a defect, which is considered to be directly associated the refit work, has occurred.
 - (ii) On review of the Specification and the Acceptance Document, the Technical Authority in consort with Ship's Staff is to complete the Tombstone Data and section 1 of the Warranty Claim Form and forward the original to the Contractor for review with a copy to the PWGSC contracting Authority. If the PWGSC Contracting or Inspection Authority is unable to support warranty action, the Defect Claim Form will be returned to the originator with a brief justification. (It is to be noted that in the latter instance PWGSC will inform the Contractor of its decision and no further action will be required of the Contractor.

Warranty defect claims may be forwarded in hard copy, by fax or by e-mail whichever format is the most convenient.

- (iii) Assuming the Contractor accepts full responsibility for repair, the Contractor completes Section 2 and 3 of the Warranty Claim Form, returns it to the Inspection Authority who confirms corrective action has been completed, and who then distributes the form to the Technical Authority and the PWGSC Contracting Authority.
- (b) In the event that the Contractor disputes the claim as a warranty defect, or agrees to share, the contractor is to complete Part 2 of the Warranty Claim Form with the appropriate information and forward it to the Contracting Authority who will distribute copies as necessary.
- (c) When a warranty defect claim is disputed by the Contractor, the Technical Authority may arrange to correct the defect by in-house resources or by contracting the work out. All associated costs must be tracked and recorded as a possible charge against the contractor by PWGSC action. Material costs and man-hours expended in correcting the defect are to be recorded and entered in Section 5 of the warranty defect claim by the Technical Authority who will forward the warranty defect claim to the PWGSC Contracting Authority for action. Defective parts of equipment are to be retained pending settlement of claim.
- (d) Defective equipment associated with potential warranty should not normally be dismantled until the contractor's representative has had the opportunity to observe the defect. The necessary work is to be undertaken through normal repair methods and costs must be segregated as a possible charge against a contractor by PWGSC action.

E2.6 Liability

- (a) Agreement between the Contracting Authority, Inspection Authority, Technical Authority and the Contractor will result in one of the following conditions:
 - (i) The contractor accepts full responsibility for costs to repair or overhaul under the warranty provisions of the contract;
 - (ii) The Technical Authority accepts full responsibility for repair and overhaul of item concerned; or
 - (iii) The Contractor and the Technical Authority agree to share responsibility for the costs to repair or overhaul the unserviceable item, in such cases the PWGSC Contracting Authority will negotiate the best possible sharing arrangement.
- (b) In the event of a disagreement as in paragraph 5c, PWGSC will take necessary action with the contractor while the Technical Authority informs its Senior Management including pertinent data and recommendations.
- (c) The total cost of processing warranty claims must include accommodation and travel costs of the contractor's employees as well as equipment/system down time and operational constraints. Accordingly, the cost to remediate the defect, in man-hours and material, will be discussed between the Contracting/Inspection Authorities and the Technical Authority to determine the best course of action.

E2.7 Alongside Period For Warranty Repairs and Checks

- (a) If at all possible, an alongside period for the vessel is to be arranged just before the expiration of the 90 day warranty period. This alongside period is to provide time for warranty repair and check by the contractor.
- (b) In respect to the underwater paint, should it become defective during the associated warranty period the contractor is only liable to repair to a value determined as follows:

“Original cost to Canada for painting and preservation of the underwater section of the hull, divided by three hundred and sixty-five (365) days and multiplied by the number of days remaining in the three hundred and sixty-five (365) days day warranty period. The resultant would represent the ‘Dollar Credit’ due to Canada from the Contractor.”
- (c) The Underwater paint system, before expiration of the warranty, should be checked by divers. The Technical Authority, is to arrange the inspection and inform the Contracting Authority of any adverse results.

APPENDIX 1 OF ANNEX E



Public Works and
Government
Services Canada

Travaux publics et Services
gouvernementaux Canada

Warranty Claim Réclamation De Garantie

Vessel Name – Nom de navire	File No. – N° de dossier	Contract No. - N ° de contrat
Customer Department – Ministère client		Warranty Claim Serial No. Numéro de série de réclamation de garantie
Contractor – Entrepreneur		<u>Effect on Vessel Operations</u> <u>Effet sur des opérations de navire</u> Critical Degraded Operational Non-operational Critique Dégradé Opérationnel Non-opérationnel

1. Description of Complaint – Description de plainte

Contact Information – l'information de contact

Name – Nom

Tel. No. - N ° Tél

Signature – Signature

Date

2. Contractor's Investigative Report – Le rapport investigateur de l'entrepreneur

Solicitation No – N° de l'invitation
F3756-18N738/A
Client Ref No. – N° de réf. du client
F3756-18N738

Amd. No. – N° de la modif.
File No. – N° du dossier
QCV-8-41270

Buyer ID – id de l'acheteur
qcv 004

3. Contractor's Corrective Action – La modalité de reprise de l'entrepreneur

Contractor's Name and Signature – Nom et signature de l'entrepreneur
Corrective Action - Date de modalité de reprise

Date of

Client Name and Signature - Nom et signature de client

Date

4. PWGSC Review of Warranty Claim Action – Examen d'action de réclamation de garantie par TPSGC

Name:

Signature

Date

Solicitation No – N° de l'invitation
F3756-18N738/A
Client Ref No. – N° de réf. du client
F3756-18N738

Amd. No. – N° de la modif.
File No. – N° du dossier
QCV-8-41270

Buyer ID – id de l'acheteur
qcv 004

ANNEX F
VESSEL CUSTODY
(NOT USED)

Solicitation No – N° de l'invitation
F3756-18N738/A
Client Ref No. – N° de réf. du client
F3756-18N738

Amd. No. – N° de la modif.
File No. – N° du dossier
QCV-8-41270

Buyer ID – id de l'acheteur
qcv 004

ANNEXE G
SECURITY REQUIREMENTS CHECK LIST
(NOT USED)

Solicitation No – N° de l'invitation
F3756-18N738/A
Client Ref No. – N° de réf. du client
F3756-18N738

Amd. No. – N° de la modif.
File No. – N° du dossier
QCV-8-41270

Buyer ID – id de l'acheteur
qcv 004

ANNEXE H
PROJECT MANAGEMENT SERVICES
(NOT USED)

ANNEX I

FINANCIAL BID PRESENTATION SHEET

I1 Price for Evaluation

A)	Known Work For work as stated in Part 1 Clause 1.2 (i) a), Specified in Annex "A" and detailed in the Price per Item Sheet, Appendix 1 of this Annex, for a FIRM PRICE of:	_____ \$
B)	Unscheduled Work Contractor <i>Labour Cost</i> . Estimated labour hours at a firm <i>hourly Charge-out Labour Rate</i> , including overhead and profit for evaluation purpose only: 518 person hours X \$_____ per hour for a PRICE of: See Note I2.1 and I2.2 below.	_____ \$
C)	EVALUATION PRICE GST Excluded, [A + B]: For an EVALUATION PRICE of :	_____ \$

I2 Unscheduled Work

The Contractor will be paid for unscheduled work arising, as authorized by the Minister, calculated in the following manner:

"Number of hours (to be negotiated) X \$_____ your firm *hourly Charge-out Labour Rate* which includes *Overhead* and profit, plus net laid-down cost of materials to which shall be added a 10% mark-up, plus Goods and Services Tax or Harmonized Sales Tax as applicable, of the total cost of material and labour. The firm *hourly Charge-out Labour Rate* and the material mark-up will remain firm for the duration of the Contract and any subsequent amendments thereto."

I2.1: Notwithstanding definitions or usage elsewhere in this document, or in the Bidder's Cost Management System, when negotiating *Hours* for unscheduled work, PWGSC will consider only those hours of labour directly involved in the production of the subject work package.

Elements of Related Labour Costs identified in I2.2 below, will not be negotiated, but will be compensated for in accordance with paragraph I2.2. It is therefore incumbent upon the Bidder to enter values in the above table which will result in fair compensation, regardless of the structure of their Cost Management System.

I2.2: Allowance for *Related Labour Costs* such as: Management, Direct Supervision, Purchasing and Material Handling, Quality Assurance and Reporting, First Aid, Gas Free Inspecting and Reporting, and Estimating will be included as *Overhead* for the purposes of determining the *Charge-out Labour Rate* entered in line I2 above.

I2.3: The 10% mark-up rate for materials will also apply to subcontracted costs. The mark-up rate includes any allowance for material and subcontract management not allowed for in the Chargeout Labour Rate. The Contractor will not be entitled to a separate labour component for the purchase and handling of materials or subcontract administration.

I3 Overtime

No overtime work shall be compensated for under the Contract unless authorized in advance and in writing by the Contracting Authority. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing such details as Canada may require with respect to the overtime work performed. Compensation for authorized overtime will be calculated in the following manner:

- a. For Known Work, the Contractor will be paid the original contract price plus agreed overtime hours paid at the following premium rates; or,
- b. For Unscheduled Work, the Contractor will be paid for agreed overtime hours paid at the firm hourly Charge-out Labour Rate above plus the following premium rates:

Premium for Time and one half: \$ _____ per hour; or,

Premium for Double time: \$ _____ per hour

The above premiums rates shall be calculated as follows:

Premium for time and one half:

½ (that portion of the firm Hourly Charge-out Labour Rate in I2 that is directly attributable to salary cost plus related certified fringe benefits) times 7.5% (representing profit)

Premium for double time:

The portion of the Unscheduled Work firm Charge-out Labour Rate in I2 that is directly attributable to salary cost plus related certified fringe benefits times 7.5% (representing profit)

These premiums will remain firm for the duration of the Contract, including all amendments and are subject to audit by Canada, and to retroactive adjustment if Canada discovers that the premiums have not been calculated in accordance with the formulae, above.

I4 Daily Services Fee

Not used

I5 Cost of all Services is Included in Contract Price

All charges, fees expenses and disbursements incidental to the carrying out of the Work, are included in the Evaluation Price for the Work, including, without limitation:

1. **Services:** Not used
2. **Docking and Undocking:** Not used
3. **Field Service Representatives/Supervisory Services:** include all costs for field service representatives/supervisory services including manufacturers' representatives, engineers, etc.
4. **Removals:** include all costs for removals necessary to carry out the Work and will be the

responsibility of the Contractor whether or not they are identified in the specifications, except those removals not apparent when viewing the vessel or examining the drawings. The successful Bidder will also be responsible for safe storage of removed items and reinstalling them on completion of the Work. The successful Bidder will be responsible for renewal of components damaged during removal.

5. **Sheltering, Staging, Cranage and Transportation:** include the cost of all sheltering, staging including handrails, cranage and transportation to carry out the Work as specified.

The successful Bidder will be responsible for the cost of any necessary modification of these facilities to meet applicable safety regulations.

I6 Vessel Transfer Costs

Not used

APPENDIX 1 OF ANNEX I

PART 1	SECTION A : Scheduled Work :	
:		
PRICE PER ITEM SHEETS		
ITEM	Description – SECTION A : SCHEDULED WORK	FIRM PRICE
G 1.0 & S 1.0	GENERAL REQUIREMENTS AND SERVICES (General information, Section G 1.0 and section S 1.0 SERVICES of the Statement of Requirements (SoR) of Annex A	_____ \$
G 1.9	PRODUCTION DIAGRAM	_____ \$
10,1	FIREFIGHTING SYSTEMS	_____ \$
10,2	ELEVATOR AND DUMBWAITER	_____ \$
10,3	LIFEBOATS, DAVITS AND MIRANDA DAVITS	_____ \$
10,4	FUEL TRANSFER HOSES	_____ \$
11,1	UNDERWATER HULL INSPECTION	_____ \$
11,2	GALLEY RANGE HOOD CLEANING	_____ \$
11,3	MODIFICATION OF THE OPENING OF THE STORAGE UNDER THE STAIR (MAIN DECK FRAME 62+305MM) (OPTIONAL WORK)	SEE OPTIONAL WORK
14,1	REPAIR OF TRANSIT LEAKS	_____ \$
16,1	CLEAN AND INSPECT THE PORT SIDE POTABLE WATER TANK	_____ \$
16,2	REFRIGERATION SYSTEM ANNUAL INSPECTION AND MAINTENANCE	_____ \$

16,3	INSULATION OF DUCTS AND PIPES IN HVAC COMPARTMENT UNITS # 2, 3, 4 AND 5	_____ \$
16,4	BEVERAGE REFRIGERATOR (OFFICERS' LOUNGE) (OPTIONAL WORK)	SEE OPTIONAL WORK
17,1	INSPECTION AND MAINTEMANCE OF WINDLASS	_____ \$
20,1	MODIFICATION OF ROOFS OF THE ROSETTE CONTROL ROOM AND GYMNASIUM (OPTIONAL WORK)	SEE OPTIONAL WORK
PART 1 - SECTION A) SCHEDULED WORK – TOTAL FIRM PRICE =		_____ \$
SEE FOLLOWING SECTION - POTENTIAL WORK OR OPTIONAL		
PART 2 :	SECTION B : Potential Work or Optional Work :	
PRICE PER ITEM SHEETS		
ITEM	Description – SECTION B : POTENTIAL WORK or OPTIONAL WORK	FIRM PRICE
11,3	MODIFICATION OF THE OPENING OF THE STORAGE UNDER THE STAIR (MAIN DECK FRAME 62+305MM) (OPTIONAL WORK)	_____ \$
16,4	BEVERAGE REFRIGERATOR (OFFICERS' LOUNGE) (OPTIONAL WORK)	_____ \$
20,1	MODIFICATION OF ROOFS OF THE ROSETTE CONTROL ROOM AND GYMNASIUM (OPTIONAL WORK)	_____ \$
PART 2 - SECTION B) OPTIONAL WORK – TOTAL FIRM PRICE =		_____ \$

ANNEX J

PART 1 : SECTION A : Scheduled Work :

FEUILLE DE RENSEIGNEMENT SUR LES PRIX		
ITEM	Description – SECTION A : SCHEDULED WORK	FIRM PRICE
G 1.0 & S 1.0	GENERAL (The Bidder may enter \$ 0.00 or indicate 'included' if the fee for this item is distributed in each of the items below. If not, an amount must be indicated in the price box.)	\$
G 1.9	PRODUCTION DIAGRAM Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ Subcontracting (if applicable) : Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ TOTAL – SECTION G 1.9 :	\$
10,1	FIREFIGHTING SYSTEMS 10.1.A Scope, 10.1.B References and 10.1.D Proof of Performance (Overhead costs related to this article must be distributed in each of the sub-articles.) 10.1.C Statement of Work 10.1.C.1 Anti-defragmentation heat detectors (Fees related to this article must be distributed in each article here below.) Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ Subcontracting (if applicable) : Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ Subtotal – Section 10.1.C.1:	\$
	10.1.C Statement of Work 10.1.C.2 Fixed CO2 extinguishing systems of ship and barge compartment Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$	

	<p>Subcontracting (if applicable) :</p> <p>Mobilization / demobilization = _____ \$</p> <p>Materials, equipment and consumables = _____ \$</p> <p>Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p>Subtotal – Section 10.1.C.2:</p>		
	<p>10.1.C Statement of Work</p> <p>10.1.C.3 Portable fire extinguishers</p> <p>Provide a price for known extinguishers (based on the deadlines given in the supplied list). Unit prices for additional fire extinguishers are to be entered in Section B) Optional Work</p> <p>Mobilization / demobilization = _____ \$</p> <p>Materials, equipment and consumables = _____ \$</p> <p>Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p>Subcontracting (if applicable) :</p> <p>Mobilization / demobilization = _____ \$</p> <p>Materials, equipment and consumables = _____ \$</p> <p>Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p>Subtotal – Section 10.1.C.3:</p>		
10,1	<p>10.1.C Statement of Work</p> <p>10.1.C.4 Kitchen Knight II Fixed extinguishing system</p> <p>Provide a price for known extinguishers (based on the deadlines given in the supplied list). Unit prices for additional fire extinguishers are to be entered in Section B) Optional Work</p> <p>Mobilization / demobilization = _____ \$</p> <p>Materials, equipment and consumables = _____ \$</p> <p>Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p>Subcontracting (if applicable) :</p> <p>Mobilization / demobilization = _____ \$</p> <p>Materials, equipment and consumables = _____ \$</p> <p>Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p>Subtotal – Section 10.1.C.4:</p>		

	<p>10.1.C Statement of Work</p> <p>10.1.C.5 Flight deck fire extinguishing system</p> <p>Provide a price for known extinguishers (based on the deadlines given in the supplied list). Unit prices for additional fire extinguishers are to be entered in Section B) Optional Work</p> <p>Mobilization / demobilization = _____ \$</p> <p>Materials, equipment and consumables = _____ \$</p> <p>Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p>Subcontracting (if applicable) :</p> <p>Mobilization / demobilization = _____ \$</p> <p>Materials, equipment and consumables = _____ \$</p> <p>Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p>Subtotal – Section 10.1.C.5:</p>		
	<p>10.1.C Statement of Work</p> <p>10.1.C.6 Smoke and heat detectors</p> <p>Mobilization / demobilization = _____ \$</p> <p>Materials, equipment and consumables = _____ \$</p> <p>Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p>Subcontracting (if applicable) :</p> <p>Mobilization / demobilization = _____ \$</p> <p>Materials, equipment and consumables = _____ \$</p> <p>Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p>Subtotal – Section 10.1.C.6:</p>		
	<p>TOTAL – SECTION 10.1 :</p>		
<p>10,2</p>	<p>ASCENSEUR ET MONTE-PLAT</p> <p>10.2.A Scope, 10.2.B References and 10.2.D Proof of Performance (Overhead costs related to this article must be distributed in each of the sub-articles.)</p> <p>10.2.C Statement of Work</p> <p>10.2.C.1 Elevator</p> <p>(Fees related to this article must be distributed in each article here below.)</p> <p>Mobilization / demobilization = _____ \$</p> <p>Materials, equipment and consumables = _____ \$</p> <p>Labour ; _____ \$/hour X _____ hours = _____ \$</p>		

	<p>Subcontracting (if applicable) : Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p>Subtotal – Section 10.2.C.1:</p>	<p>\$</p>
	<p>10.2.C Statement of Work</p>	
	<p>10.2.C.2 Dumbwaiter</p>	
	<p>Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$</p>	
	<p>Subcontracting (if applicable) :</p>	
	<p>Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$</p>	
	<p>Subtotal – Section 10.2.C.2:</p>	<p>\$</p>
	<p>TOTAL – SECTION 10.2 :</p>	<p>\$</p>
	<p>LIFEBOATS, DAVITS AND MIRANDA DAVITS</p>	
	<p>10.3.A Scope, 10.3.B References and 10.3.D Proof of Performance</p>	
	<p>(Overhead costs related to this article must be distributed in each of the sub-articles.)</p>	
	<p>10.3.C Statement of Work</p>	
	<p>10.3.C.1 , 10.3.C.2, 10.3.C.3, 10.3.C.4, 10.3.C.5 and 10.3.C.6 Lifeboats, Davits and Miranda Davits</p>	
	<p>(Fees related to this article must be distributed in each article here below.)</p>	
	<p>Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$</p>	
	<p>Subcontracting (if applicable) :</p>	
	<p>Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$</p>	
	<p>TOTAL – SECTION 10.3 :</p>	<p>\$</p>

10,4	FUEL TRANSFER HOSES	
	10.4.A Scope, 10.4.B References and 10.4.D Proof of Performance	
	(Overhead costs related to this article must be distributed in each of the sub-articles.)	
	10.4.C Statement of Work	
	10.4.C.1 , 10.4.C.2, 10.4.C.3 and 10.4.C.4 Fuel Transfer Hoses (Fees related to this article must be distributed in each article here below.) Mobilization / demobilization = _____ \$ Shipping costs of hoses = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ Subcontracting (if applicable) : Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$	
TOTAL – SECTION 10.4 :		\$
11,1	UNDERWATER HULL INSPECTION	
	11.1.A Scope, 11.1.B References and 11.1.D Proof of Performance	
	(Overhead costs related to this article must be distributed in each of the sub-articles.)	
	11.1.C Statement of Work	
	11.1.C.1 , 11.1.C.2, 11.1.C.3, 11.1.C.4, 11.1.C.5 and 11.1.C.6 11.1 Underwater Hull Inspection (Fees related to this article must be distributed in each article here below.) Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ Subcontracting (if applicable) : Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$	
TOTAL – SECTION 11.1 :		\$
11,2	GALLEY RANGE HOOD CLEANING	
	11.2.A Scope, 11.2.B References and 11.2.D Proof of Performance	
	(Overhead costs related to this article must be distributed in each of the sub-articles.)	
	11.2.C Statement of Work	
	11.2.C.1 , 11.2.C.2, 11.2.C.3, 11.2.C.4 and 11.2.C.5 Galley Range Hood Cleaning (Fees related to this article must be distributed in each article here below.) Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ Subcontracting (if applicable) : Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$	

	Labour ; _____ \$/hour X _____ hours = _____ \$	
	TOTAL – SECTION 11.2 :	\$
11,3	MODIFICATION OF THE OPENING OF THE STORAGE UNDER THE STAIR (MAIN DECK FRAME 62+305MM) (OPTIONAL WORK)	SEE OPTIONAL WORK
14,1	REPAIR OF TRANSIT LEAKS 14.1.A Scope, 14.1.B References and 14.1.D Proof of Performance (Overhead costs related to this article must be distributed in each of the sub-articles.) 14.1.C Statement of Work 14.1.C.1 Repair of Transit Leaks (Fees related to this article must be distributed in each article here below.) Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ Subcontracting (if applicable) : Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ TOTAL – SECTION 14.1 :	\$
16,1	CLEAN AND INSPECT THE PORT SIDE POTABLE WATER TANK 16.1.A Scope, 16.1.B References and 16.1.D Proof of Performance (Overhead costs related to this article must be distributed in each of the sub-articles.) 16.1.C Statement of Work 16.1.C.1 and 16.1.C.2 Maintenance and inspection of the port potable water tank (Fees related to this article must be distributed in each article here below.) Mobilization / demobilization = _____ \$ 16.1.C.3 Initial preparation and cleaning Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ 16.1.C.4 Initial preparation and cleaning prior to painting (10%) Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ 16.1.C.5 Application of coating (paint) (10%) Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ 16.1.C.6 Commissioning potable water tanks Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ Subcontracting (if applicable) : Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$	

	TOTAL – SECTION 16.1 :	\$
16,2	REFRIGERATION SYSTEM ANNUAL INSPECTION AND MAINTENANCE	
	16.2.A Scope, 16.2.B References and 16.2.D Proof of Performance (Overhead costs related to this article must be distributed in each of the sub-articles.)	
	16.2.C Statement of Work 16.2.C.1 and 16.2.2 Refrigeration System Annual Inspection and Maintenance (with the exception of the refrigerant cylinder)	
	Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$	
	Subcontracting (if applicable) : Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$	
	TOTAL – SECTION 16.2 :	\$
16,3	INSULATION OF DUCTS AND PIPES IN HVAC COMPARTMENT UNITS # 2, 3, 4 AND 5	
	16.3.A Scope, 16.3.B References and 16.3.D Proof of Performance (Overhead costs related to this article must be distributed in each of the sub-articles.)	
	16.3.C Statement of Work	
	16.3.C.1 Insulation of Ducts and Pipes in HVAC Compartment Units # 2, 3, 4 and 5 (Fees related to this article must be distributed in each article here below.)	
	Mobilization / demobilization = _____ \$	
	16.3.C.2 Circular ventilation duct Materials, Equipment, Consumables and Labour Insulation Circular duct	
	4 in diameter; _____ \$/lin ft X _____ lin ft = _____ \$ 5 in diameter; _____ \$/lin ft X _____ lin ft = _____ \$ 6 in diameter; _____ \$/lin ft X _____ lin ft = _____ \$ 7 in diameter; _____ \$/lin ft X _____ lin ft = _____ \$ 8 in diameter; _____ \$/lin ft X _____ lin ft = _____ \$ 9 in diameter; _____ \$/lin ft X _____ lin ft = _____ \$ 14 in diameter; _____ \$/lin ft X _____ lin ft = _____ \$	
	16.3.C.3 Large rectangular ventilation duct (air intake) Materials, Equipment, Consumables and Labour Insulation Copper pipe	
	50m ² ; _____ \$/m ² X _____ m ² = _____ \$	
	16.3.C.4 Steam lines and cold water for humidifier supply Materials, Equipment, Consumables and Labour Insulation Copper pipe	
	1.125 in diameter; _____ \$/lin ft X _____ lin ft = _____ \$	

	<p>1.75 in diameter; _____ \$/lin ft X _____ lin ft = _____ \$</p> <p>2.25 in diameter; _____ \$/lin ft X _____ lin ft = _____ \$</p> <p>16.3.C.5 Seawater pipes Materials, Equipment, Consumables and Labour Isolation Tuyau noir et acier inoxydable</p> <p>3 in outer diameter; _____ \$/lin ft X _____ lin ft = _____ \$</p> <p>3.5 in outer diameter; _____ \$/lin ft X _____ lin ft = _____ \$</p> <p>Insulation blankets for accessories (dimensions of individual items must be verified)</p> <p>Flange 7 in OD X 2 in thk.; _____ \$/flange X _____ flange = _____ \$</p> <p>Valve; _____ \$/valve lin X _____ valve = _____ \$</p> <p>Strainer; _____ \$/strainer X _____ strainer = _____ \$</p> <p>Subcontracting (if applicable) : Please fill in each item above and indicate the name of the subcontractor here: _____</p> <p style="text-align: right;">TOTAL – SECTION 16.3 :</p>	\$
16,4	BEVERAGE REFRIGERATOR (OFFICERS' LOUNGE) (OPTIONAL WORK)	SEE OPTIONAL WORK
17,1	<p>INSPECTION AND MAINTENANCE OF WINDLASS</p> <p>17.1.A Scope, 17.1.B References and 17.1.D Proof of Performance (Overhead costs related to this article must be distributed in each of the sub-articles.)</p> <p>17.1.C Statement of Work 17.1.C.1 Inspection and Maintenance of Windlass (Fees related to this article must be distributed in each article here below.)</p> <p style="text-align: right;">Mobilization / demobilization = _____ \$</p> <p style="text-align: right;">Materials, equipment and consumables = _____ \$</p> <p style="text-align: right;">Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p>Subcontracting (if applicable) :</p> <p style="text-align: right;">Mobilization / demobilization = _____ \$</p> <p style="text-align: right;">Materials, equipment and consumables = _____ \$</p> <p style="text-align: right;">Labour ; _____ \$/hour X _____ hours = _____ \$</p> <p style="text-align: right;">TOTAL – SECTION 17.1 :</p>	\$
20,1	MODIFICATION OF ROOFS OF THE ROSETTE CONTROL ROOM AND GYMNASIUM (OPTIONAL WORK)	SEE OPTIONAL WORK
PART 1 - SECTION A) SCHEDULED WORK – TOTAL FIRM PRICE =		\$

PART 2 : SECTION B : Potential Work or Optional Work :

PRICE PER ITEM SHEETS		
ITEM	Description – SECTION B : POTENTIAL WORK or OPTIONAL WORK	FIRM PRICE
10,1	FIREFIGHTING SYSTEMS	
	10.1.C.3 Portable fire extinguishers	
	not foreseen according to the list of extinguishers in appendix, according to the deadlines given in the list	
	Système fixe d'extinction au CO2, Système d'extincteurs portatifs, Système d'extinction fixe (Kitchen Knight II) de la cuisine & Système d'extinction d'incendie du pont d'envol	
	(Overhead costs related to this article must be distributed in each of the sub-articles.)	
	Price for handling, emptying and filling and installation of cylinders (final prices to be prorated)	
	CO2 100 lbs Cylinder; _____ \$/Cylinder X 1 Cylinder = _____ \$	
	FM 200 113 lbs Cylinder; _____ \$/Cylinder X 1 Cylinder = _____ \$	
	ABC 2,5 lbs Cylinder; _____ \$/Cylinder X 5 Cylinder = _____ \$	
	ABC 5 lbs Cylinder; _____ \$/Cylinder X 5 Cylinder = _____ \$	
11,3	ABC 10 lbs Cylinder; _____ \$/Cylinder X 5 Cylinder = _____ \$	
	ABC 15 lbs Cylinder; _____ \$/Cylinder X 5 Cylinder = _____ \$	
	ABC 20 lbs Cylinder; _____ \$/Cylinder X 5 Cylinder = _____ \$	
	CO2 5 lbs Cylinder; _____ \$/Cylinder X 5 Cylinder = _____ \$	
	CO2 10 lbs Cylinder; _____ \$/Cylinder X 5 Cylinder = _____ \$	
	CO2 15 lbs Cylinder; _____ \$/Cylinder X 5 Cylinder = _____ \$	
	BC 20 lbs Cylinder; _____ \$/Cylinder X 5 Cylinder = _____ \$	
	AFF 9,5 lbs Cylinder; _____ \$/Cylinder X 5 Cylinder = _____ \$	
	MODIFICATION OF THE OPENING OF THE STORAGE UNDER THE STAIR (MAIN DECK FRAME 62+305MM) (OPTIONAL WORK)	
	11.3.A Scope, 11.3.B References and 11.3.D Proof of Performance	
	(Overhead costs related to this article must be distributed in each of the sub-articles.)	
	11.3.C Statement of Work	
	11.3.C.1 MODIFICATION OF THE OPENING OF THE STORAGE UNDER THE STAIR (MAIN DECK FRAME 62+305MM) (OPTIONAL WORK)	
	(Fees related to this article must be distributed in each article here below.)	
	Mobilization / demobilization = _____ \$	
	Materials, equipment and consumables = _____ \$	
	Labour ; _____ \$/hour X _____ hours = _____ \$	
	Subcontracting (if applicable) :	
	Mobilization / demobilization = _____ \$	
	Materials, equipment and consumables = _____ \$	
	Labour ; _____ \$/hour X _____ hours = _____ \$	

	TOTAL – SECTION 11.3 :	\$
16,1	CLEAN AND INSPECT THE PORT SIDE POTABLE WATER TANK	
	16.1.C.3 Initial preparation and cleaning 16.1.C.3.2 The tanks shall be washed and cleaned of any contaminant or debris and then wiped dry. For bidding purposes, the Contractor shall plan on removing and disposing of water and debris. (final prices to be prorated)	
	200 litres; _____ \$/litre X 200 litres = _____ \$	
	TOTAL – SECTION 16.1 :	\$
16,2	REFRIGERATION SYSTEM ANNUAL INSPECTION AND MAINTENANCE	
	16.2.C.1 Refrigeration System Annual Inspection and Maintenance Price for handling, emptying and filling and installation of cylinders (final prices to be prorated)	
	Coolant Gas Cylinder 30 lbs; _____ \$/Cylinder X 1 Cylinder = _____ \$	
	TOTAL – SECTION 16.2 :	\$
16,4	BEVERAGE REFRIGERATOR (OFFICERS' LOUNGE) (OPTIONAL WORK)	
	16.4.A Scope, 16.4.B References and 16.4.D Proof of Performance (Overhead costs related to this article must be distributed in each of the sub-articles.)	
	16.4.C Statement of Work 16.4.C.1, 16.4.C.2 and 16.4.C.3 Beverage Refrigerator (Officers' Lounge) (Optional Work) (Fees related to this article must be distributed in each article here below.)	
	Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$	
	Subcontracting (if applicable) : Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$	
	TOTAL – SECTION 16.4 :	\$

20,1	MODIFICATION OF ROOFS OF THE ROSETTE CONTROL ROOM AND GYMNASIUM (OPTIONAL WORK)	
	20.1.A Scope, 20.1.B References and 20.1.D Proof of Performance (Overhead costs related to this article must be distributed in each of the sub-articles.)	
	20.1.C Statement of Work 20.1.C.1 Modification of Roofs of the Rosette Control Room and Gymnasium (Optional Work) (Fees related to this article must be distributed in each article here below.) Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$ Subcontracting (if applicable) : Mobilization / demobilization = _____ \$ Materials, equipment and consumables = _____ \$ Labour ; _____ \$/hour X _____ hours = _____ \$	
	TOTAL – SECTION 20.1 :	\$
PART 2 - SECTION B) OPTIONAL WORK – TOTAL FIRM PRICE =		\$

Solicitation No – N° de l'invitation
F3756-18N738/A
Client Ref No. – N° de réf. du client
F3756-18N738

Amd. No. – N° de la modif.
File No. – N° du dossier
QCV-8-41270

Buyer ID – id de l'acheteur
qcv 004

ANNEX “K”

Technical bid presentation sheet

(Not used)

Annex A

CCGS AMUNDSEN – SPRING 2019 REFIT

F3756 – 18N738

DATES: 11-04-2019 TO 16-05-2019

Version D1
16 mars 2019

Prepared by:
Marine Engineering
101 boul. Champlain
Québec (Québec)
G2C 1W4

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GENERAL NOTES

G 1.1 Vessel Particulars

Details

G 1.0

G 1.1.1

Name:	NGCC AMUNDSEN
Type:	Medium Icebreaker / fluvial
Class:	Type 1200
Year Built:	1979
Yard	Burrard Dry dock, Vancouver, B-C
Principle Dimensions:	
Length:	98.2 m
Breadth, molded:	19.5 m
Loaded Draft:	7.2 m
Tonnage, displ:	1678.8 TM
Power	13 2000 KW
Propulsion	Diesel electrique

G 1.1.2

Equipment[– Not Used]

Equipment	Make	Model	Serial#

G 1.2 References**Acts, regulations, standards, publications and procedures**

The latest edition, at the time of contract signing, of all Acts, regulations, standards, publications, and procedures listed below are to be used as reference. The Contractor will ensure all work completed in the specification are done to all pertinent federal and territorial regulations and standards. CCG procedures are to be used as a guide if no other regulation takes precedence.

G 1.2.1

G 1.2.1.1

FSM Procedures	Title	Included Yes/No
DFO/5737	Fleet Safety Manual (Latest Edition)	Yes
7.A.1	Assessing Risk	Included CCG/5737
7.A.10	Handling and Containing Asbestos Materials	Included CCG/5737
7.A.12	Potable Water Quality	Included CCG/5737
7.B.2	Fall Protection	Included CCG/5737
7.B.3	Entry Into Confined Spaces	Included CCG/5737
7.B.4	Hotwork	Included CCG/5737
7.B.5	Lockout and Tagout	Included CCG/5737
7.B.6	Electrical Safety – Working on Energized Electrical Conductors or Circuit Parts	Included CCG/5737
7.E.5	Handling, Storage, and Disposal of Hazardous Materials	Included CCG/5737
7.E.8	Use of Halocarbons	Included CCG/5737
10.A.6	Paint and Other Coatings	Included CCG/5737
10.A.7	Contractor Safety and Security	Included CCG/5737
171-09529-23	Gestion des matières dangereuses (2018)	Yes
Publications		
TP 3177	Standard for the Control of Gas Hazards in Vessels to be repaired or altered	No
TP 127 E	Ships Electrical Standards (2018)	No
NFPA 306 2014	Standard for the Control of Gas Hazards on Vessels	No
TP 14231	Marine Occupational Health and Safety Program	No

TP 14612	Procedures for Approval of Life-saving Appliances and Fire Safety Systems, Equipment and Products	No
IEEE45	Institute of Electrical and Electronics Engineers, Recommended Practice for Electrical Installations on Shipboard	No
70-000-000-EU-JA-001	Specification for the Installation of Shipboard Electronic Equipment	Available at: CCG/ITS
Report EPS 1/RA/2	Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems	No
NFPA 10	Standard for Portable Fire Extinguishers	No
18-080-000-SG-003	Paints and Coatings Standard (formerly DFO/5884 – TP 12445F)	No
Circular 1206	Measures to Prevent Accidents with Lifeboats (IMO/MSC)	Non
Standards		
CSA W47.1	Certification of Companies for Fusion Welding of Steel Structures Division 2 Certification	No
CSA W47.2	Certification of Companies for Fusion Welding of Aluminum	No
CSA W59	Welded Steel Construction – Metal Arc Welding	No
CSA W59.2	Welded Aluminum Construction	No
ISO 9712:2005	International Standards for NDT	No
CT-043-EQ-EG-001-E	Welding Specification http://intra.coast-guard.ca/folios/00922/docs/WeldingSpecification-eng.pdf	Available at: CCG/ITS
ISO 8501-1:2007	Preparation of steel substrates before application of paints and related products	No
Acts (Laws)		
S.C. 2001, c. 26	Canada Shipping Act	No
R.S.C., 1985, c. L-2	Canada Labour Code	No
Regulations		
SOR/2010-120	Maritime Occupational Health and Safety Regulations	No
SOR/90-264	Marine Machinery Regulations	No

SOR/2017-14	Vessel Fire Safety Regulations	No
C.R.C., c. 1432	Hull Inspection Regulations	No
SOR/2003-289	Federal Halocarbon Regulations, 2003	No
SOR/87-183	Marine Occupational Safety and Health Regulations	No

Guidance Drawings

The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes.

G 1.2.2

G 1.2

Drawing Number	DRAWING TITLE	Number of Sheets
222-H-101	General Arrangement	3
222-H-146	Capacity Plan	1

G 1.2.3

Tanks

G 1.2.3.1

Listed are the tanks found on board, their Location by frame number and capacity (Where available). These are to be used as reference only and will not supersede any specification.

Tank name	Location	Capacity (m ³)
Port Potable Water	13-27	68.76
Stbd Potable Water	13-27	68.76

G 1.2.4

Abbreviations

ACM: Asbestos Containing Material	MCA: Matériaux contenant de l'amiante
CFM: Contractor Furnished Material and/or Equipment	MFE: Matériel fourni par l'entrepreneur
CLC: Canada Labour Code	CCT: Code canadien du travail
CSA: Canadian Standards Association	CSA: Association canadienne de normalisation - ACNOR
CWB: Canadian Welding Bureau	BCS: Bureau canadien du soudage

DFO/CCG: Department of Fisheries and Oceans, Canadian Coast Guard	MPO/ GCC: Ministère des Pêches et des Océans, Garde côtière canadienne
FSR: Manufacturer's Field Service Representative	RSF: Représentant de service du fabricant
FSM: Fleet Safety Manual	MSF: Manuel de sécurité de la Flotte
GSM: Government Supplied Material and/or Equipment	MFG: Matériel fourni par le Gouvernement
HC: Health Canada	SC: Santé Canada
IEEE: The Institute of Electrical & Electronic Engineers Inc.	IEEE: Institute of Electrical and Electronic Engineers
MSDS: Material Safety Data Sheet	FS: Fiche signalétique
NDT: Non Destructive Testing	END: Essais non destructifs
OEM: Original Equipment Manufacturer	FEO: Fabricant d'équipement d'origine
OHS: Occupational Health and Safety	SST: Santé et sécurité au travail
PWGSC: Public Works and Government Services Canada	TPSGC: Travaux publics et Services gouvernementaux Canada
RO: Recognized Organization as defined by Canada Shipping Act.	OR: organismes reconnus par la Loi sur la marine marchande du Canada
SSMS: Safety and Security Management System	SGSS: Système de gestion de la sécurité et de la sûreté
TBS: Treasury Board of Canada Secretariat	SCT: Secrétariat du Conseil du Trésor du Canada
CA : Contract Authority - PSPC	AC : Autorité contractuelle - SPAC
TA: Technical Authority -CCG Superintendent, Marine Engineering Western Region, or her delegated Representative.	AT: Autorité technique – Représentant du propriétaire (GCC)
TCMS: Transport Canada Marine Safety	SMTC: Sécurité Maritime de Transports Canada
TI: Technical Inspector – CCG delegated.	AI: Autorité de l'Inspection – Inspecteur technique (GCC)
VCS: Vessel Condition Survey	DCC: Demange de Changement de Configuration
VLE: Vessel Life Extension	PVN: Prolongement de vie d'un navire
WCB: Workers' Compensation Board	CNESST: Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST)
WHMIS Workplace Hazardous Materials Information System	SIMDUT: Système d'information sur les matières dangereuses utilisées au travail

G 1.3.1.1

G 1.3**Conditions and Definitions****General**

The following conditions and definitions are applicable to all work contained in the Specifications and are intended to outline the quality of workmanship and practice that is the minimum acceptable level.

The Contractor must employ qualified, certified (if applicable) and competent tradespeople and supervise them to ensure a consistently high standard of workmanship.

G 1.3.1.2 The Inspection Authority may request to review and record details of the certifications or skills of the Contractor's tradespeople. This request should not be exercised unduly, but only to ensure that skilled tradespeople perform the necessary work.

G 1.3.1.3 CCG and DFO employees and other employees, such as the manufacturer's representatives, TCMS or classification surveyors, could conduct other shipboard work, including work not mentioned in the present specification, during the period of the works.

G 1.3.1.4 The TA will make every effort to ensure that other work, related inspections and investigations do not interfere with the Contractor's work. The Contractor will not be responsible for coordinating related inspections or paying inspection fees for this work.

G 1.4 Miscellaneous Provisions

G 1.4.1 Occupational Health and Safety

G 1.4.1.1 The Contractor and all sub-contractors must follow Occupational Health and Safety (OHS) procedures in accordance with applicable federal and provincial OHS regulations ensuring that Contractor activities are carried out in a safe manner and do not endanger the safety of any personnel.

G 1.4.1.2 Where “Safety Management System” is referenced in this document, it is referring to the Contractor’s Safety Management System, which must be in affect while in a) the Contractor’s Care and Custody and must be in accordance with the applicable OHS regulations and procedures.

G 1.4.1.3 The Contractor must, for all work on Canadian Coast Guard Vessel, meet or exceed the Safety Management System defiend in the FSM unless a Contractor propped comprehensive Safety Management System is presented a) and accepted by the TA.

When the Contractor works on the vessel while in the Care and Custody of the Canadian Coast Guard, the Safety Management System of CCG must be followed:

Contractor and all its representatives must attend an orientation session on vessel safety before beginning any work to familiarize the Contractor’s

employees with the dangers specific to the vessel and with its permit systems for work protocols as well as with the procedures for safety, risk prevention, hazard response and pre-work safety assessments.

The Contractor will have access to an uncontrolled copy of the Fleet Safety and Security Manual. The Contractor must comply with the Fleet Safety Manual (DFO/5737), as well as with the instructions for working on board the vessel, in addition to the relevant requirements of the Canada Labour Code during performance of the following types of work:

- b)
 - i) Work at heights;
 - ii) Entry into enclosed spaces;
 - iii) Degassing before entering into confined spaces and for hot work;
 - iv) Lockout and Tagout;
 - v) Pre-work safety assessments.
- c) For the purpose of the Lockout and identification procedure, the Contractor must provide the padlocks and locking devices for the Contractor's employees in addition to those provided by the Chief Engineer for the vessel's crew.
- d) The Contractor must adhere to local facilities shore based safety instructions and safety procedures.

G 1.4.1.4 The Contractor must identify a specified person that is responsible for the safety management of the work site. The Safety Manager must insure that daily safety rounds are carried out and that safety issues are identified and safety precautions are maintained.

G 1.4.1.5 Areas that pose a hazard as a result of the specification work are to be secured and clearly identified by the Contractor with signage to advise and protect all personnel from the hazard in accordance with applicable regulations.

G 1.4.1.6 The Contractor and its employees will not have access to the ships washrooms or crew lounges. The Contractor must provide the necessary facilities for its employees and subcontractors as required.

G 1.4.1.7 During the period of work, the contractor will be responsible for the maintenance of the areas of the ship that his personnel uses to access the work areas. Areas should be clean and free of debris, and garbage should be removed daily.

At the end of this contract, the Contractor must ensure that all waste produced as a result of the work of this specification is disposed of and that the vessel is as clean as it was before the beginning of the period. of the contract.

- G 1.4.1.9 Once all known work has been completed and final cleaning has been completed, the Contractor's Quality Assurance Representative will be required to visit all areas of the vessel where work has been completed by the Contractor. Any deficiencies or damage noted shall be recorded and compared to the photographs taken to determine if the deficiency or damage arises from the work performed by the Contractor. If this is the case, the damage must be repaired by the contractor at no cost to the CCG.

Lead Paint and Paint Coatings

The Contractor must not use lead based paints.

- G 1.4.2 CCG ships have been painted with lead based paints in the past and as a result some of the Contractor's processes such as grinding, welding and burning may release this lead from the coatings. Canadian Coast Guard will provide copies of all available lead testing results.
- G 1.4.2.1
- G 1.4.2.2

- G 1.4.2.3 The Contractor must ensure that coatings in affected work areas are examined for lead content and that work is performed in accordance with applicable federal and provincial regulations.

- G 1.4.2.4 The Contractor must demonstrate product approval by HC for HC controlled hull paints and the Pest Management Regulatory Agency.

G 1.4.3

Touch-up / Disturbed Paint

G 1.4.3.1

The Contractor, at a minimum, must repair coating systems disturbed as a result of the specified work. Coating systems must be in accordance with the coating system of the vessel, and be applied in accordance with the paint manufacturer's recommended procedures.

G 1.4.3.2

- G 1.4.3.3 The Contractor must prepare any new steel or steel affected to the standards of the paint manufacturer prior to painting.

Unless otherwise indicated, all new steel and / or steel affected must receive two coats of marine primer compatible with the ship's paint coating scheme.

Asbestos Containing Materials (ACM)

The Contractor must use insulation that contains 0% ACM.

The Contractor will be supplied the most recent Asbestos Risk Assessment Report and Asbestos Management Plan by CCG.

G 1.4.4

G 1.4.4.1

G 1.4.4.2

Handling of any asbestos containing materials must be performed by trained personnel and/or a company certified in the removal of asbestos in accordance with Federal, Provincial/Territorial and Municipal regulations.

G 1.4.4.3

The Contractor must provide the TA with disposal certificates for all asbestos containing material removed from the vessel indicating that the disposal was in accordance with Federal, Provincial and Municipal regulations in effect.

G 1.4.4.4

G 1.4.4.5

The Contractor must provide an "Observation Report (OR)" with reference to any concerns or intentions in regards to asbestos containing materials not already specified. The Contractor is to identify any materials that are suspected to contain asbestos prior to any work being completed. Any approved work resulting from the OR will follow the Additional Work Procedures.

G 1.4.5

Confined Spaces

G 1.4.5.1

Entry into any confined space onboard the vessel during the contract period must be conducted in accordance with the safety management system as determined in the Pre-Work Meeting. In addition to those requirements, the Contractor must also

a) conduct the following:

Have a qualified person issues a "Gas Free Certificate" for spaces that will be entered and post the certificate outside the entrance to the space. Certificates must specify, "Safe for persons" or "safe for hot work" as appropriate.

b)

G 1.4.5.2

Provide copies of all certificates generated to the TA in accordance with the Documentation section of the General Notes.

The Contractor may request a list of the enclosed spaces of the vessel at the meeting preceding the refit.

Hot Work

All hot work conducted during the contract must be in accordance with the Safety Management System. In addition to the requirements of the Safety Management System the Contractor must as a minimum also:

G 1.4.6

G 1.4.6.1

Certify confined spaces affected by hot work as “safe for hot work” in accordance with the Confined Spaces section of the General Notes.

a) Remove all portable combustible materials from the vicinity, to a safe distance not less than two meters away;

b) Supply and install protective material to prevent the spread of sparks, protect electrical cables and other services;

c) Supply and post fire sentries in each space and in the adjacent space where welding, grinding, or burning is being carried out on bulkheads, deckheads

d) or decks;

e) Supply and provide appropriate fire extinguisher(s) to the fire sentries and ensure each sentry is trained in the extinguisher’s use. The fire sentry must maintain a watch in his designated area for a minimum of thirty (30) minutes after any hot work has been completed. The Contractor must record the sentry attendance time on all hot work permits indicating when hot work stopped, and time sentry left post;

f) Provide a copy of the site generated hot work permits to the TA in accordance with the Documentation section of the General Notes; Named in accordance with the specification item generating the required work.

G 1.4.7

G 1.4.7.1

Work Aloft

Any work aloft onboard the vessel during the maintenance/refit period must be conducted in accordance with the Safety Management System. Notices must be placed to prevent operation of Radars while personnel are working aloft on the mast or on the wheelhouse top.

G 1.4.8

G 1.4.8.1

Electrical Equipment

a) When working on electrically operated equipment, the Contractor must lock-out equipment in accordance with the Safety Management System, and as a minimum conduct the following::

Isolate the main power source and any alternative power source to the equipment;

Install Electrical lock-outs and place electrical caution tags on the main power source and any alternate power sources for the switches/disconnects supplying the equipment under maintenance;

Verify at the terminals to ensure power is not present.

b) Ensure the lock-outs and electrical caution tags remain in place until completion of all work.

c) The TA must be notified of all such ongoing work.

d) All electrical installations and repairs must be done in accordance with the latest revisions of TP127 - Electrical Standards of Transport Canada Marine Safety and of standard 45- Recommended Practice for electrical installation on ships – of the IEEE. Standard TP127 takes precedence over the IEEE standard.

G 1.4.8.2

G 1.4.8.3

G 1.4.8.4

All electronic equipment installations and repairs must be performed in accordance with the Canadian Coast Guard's Telecommunications and Electronics publication " Specification for the Installation of Shipboard Electronic Equipment ".

G 1.4.9

Workplace Hazardous Materials Information System (WHIMS)

G 1.4.9.1

The Contractor must provide the TA with Material Safety Data Sheets (MSDS) for all Contractor and sub-contractor supplied WHIMS controlled products. MSDS sheets are to be the formats requested in the Documentation section G 1.5 of the General Notes.

G 1.4.9.2

G 1.4.9.3

All MSDS sheets must be maintained in accordance with OHS procedures.

G 1.4.10

The TA will provide the Contractor with access to MSDS sheets for all controlled products on the ship for all specified work items on request.

G 1.4.10.1

Smoking in the Work Space

The Contractor must ensure compliance with the Non-Smokers' Health Act. The Contractor must ensure that there is absolutely no smoking onboard the vessel by their employees, sub-contractors, including the employees of any sub-contractor.

Contractor Furnished Materials (CFM) and Tools

The contractor must ensure that all equipment is new and has never been used.

G 1.4.11 The Contractor must ensure replacement material such as jointing, packing, insulation, small hardware, oils, lubricants, cleaning solvents, preservatives, paints, coatings etc. are in accordance with the equipment manufacturer's drawings, manuals and/or instructions.

G 1.4.11.1

G 1.4.11.2

G 1.4.11.3

Where no particular item is specified or where substitution must be made, the Contractor must submit an Observation Report indicating the substitution or item not specified to the TA. The Contractor must provide information about materials used, certificate of grade and quality of various materials to the TA prior to use.

G 1.4.11.4

The Contractor must provide all equipment, devices, tools and machinery such as craneage, staging, scaffolding, hoarding, and rigging necessary for the completion of the work in this specification.

G 1.4.11.5

The Contractor must deliver and store all new CFM equipment at their facility. The CFM must be stored in a secure, environmentally controlled space in accordance with the equipment storage section of this specification.

G 1.4.11.6

All tools are Contractor supplied unless otherwise stated in the technical specifications.

G 1.4.12

G 1.4.12.1

Government Supplied Materials (GSM) & Tools

G 1.4.12.2

All tools must be provided by the contractor unless otherwise stated in the technical specifications.

G 1.4.12.3

Where tools are supplied by the TA they must be returned by the Contractor in the same condition as when they were borrowed. Borrowed tools must be inventoried and signed for by the Contractor on receipt and return to the TA.

G 1.4.12.4

The Contractor must retain all Government Furnished Goods in a secure atmosphere controlled warehouse or warehouse in accordance with the manufacturer's instructions.

Any GSM not specifically stated in the Technical Specification must be received by the Contractor and stored in accordance with the Equipment Storage section of this specification. These activities are to be covered by the Procedures for Design Change or Additional Work. (PWGSC 1379).

StorageEquipment (i.e. covers, cowling and other items that may need to be removed and stored) must be stored in accordance with the equipment manufacturer's or equipment vendor's specific storage instructions. The Contractor must make these instructions available to the TA.

- G 1.4.13 All equipment and items must be stored in such a manner so as to be easily accessible for inspection. No items are to be stored directly on floors.

Regulatory Inspections and/or Class Surveys

- G 1.4.13.2 The Contractor must schedule and coordinate all regulatory inspections and classification investigations in collaboration with the appropriate authority, eg. eg, Transport Canada Marine Safety, Classification Society, Health Canada, Environment Canada or others, based on this specification.
- G 1.4.14
- G 1.4.14.1

- G 1.4.14.2 Any documents produced as part of the inspections and investigations mentioned above and demonstrating that they have occurred (eg original signed and dated certificates) must be submitted to the TA.

- G 1.4.14.3 The Contractor must not substitute inspection by the TA for TCMS regulatory inspections or classification surveys.

- G 1.4.14.4 The Contractor must provide advance notice (not less than 24 hours) to the TA prior to TCMS regulatory inspections or scheduled classification surveys so that the TA can attend the inspection.
- G 1.4.15

Contractor Inspections

G 1.4.15.1

- G 1.4.15.2 The Contractor must afford the opportunity for the TA to conduct an inspection with the contractor on the condition and location of items to be removed prior to either carrying out the specified work or gaining access to a location to carry out the work.

- G 1.4.15.3 The Contractor must take a before picture of conditions prior to removing any items. These photographs are to be in accordance with the Documentation section of the General Notes, named according to the specification section that resulted in removing those items.

Any damage resulting from the work of the contractor and attributable to the execution of the work by the latter must be repaired by him, at his expense. Equipment used for replacements or repairs must meet the criteria for Contractor supplied material as indicated in the Contractor Supplied Equipment and Tools section.

Contractor must protect equipment and adjacent areas from damage. Workplaces should be protected against water ingress, sanding and welding particles, etc. Temporary covers will have to be installed in the workplace.

G 1.4.15.4 Prior to the close out of any item under this specification, the Contractor must afford the TA the opportunity to verify the work has been completed in accordance with the specification. At that time the Contractor must have available all photographs, documents, reports, and trials in relation to the item being closed out as completed.

G 1.4.15.5

Recording of Work in ProgressThe TA may record any work in progress using various means including, but not limited to, photography and video, digital or film.

G 1.4.16

Access for Maintenance, Installation, and Removal.

G 1.4.17

The Contractor must ensure that the CCG Technical Authority and personnel have unrestricted access to the workplace at all times throughout the duration of the contract.

G 1.4.17.1

G 1.4.17.2

All equipment removed as part of this specification remains the property of CCG, unless otherwise specified in certain sections of the specification.

G 1.4.18

Restricted areasThe Contractor must not enter any of the following areas (except to perform work as per specifications): cabins, offices, workshops, engineering office, wheelhouse, control room, washrooms, galley, crew stations, locations recreational areas and other areas where restricted access is indicated by signs.

G 1.4.18.2

G 1.4.19

The Contractor must give the TA 24 hours notice when working in occupied premises or offices. CCG will have sufficient time to move personnel and secure areas.

G 1.4.19.1

Assembly of Components

G 1.4.19.2

The Contractor must ensure that during installation of specified equipment, that parts and assembled equipment are cleaned of smudges, spatter or excess solder, weld metal and metal chips or any other foreign material which might detract from the intended operation, function, or appearance of the equipment. (This would include any particles that could loosen or become dislodged during the normal expected life of the equipment). All corrosive material must be removed. This cleaning must take place before the parts are assembled into the equipment.

Covers, cowlings and components damaged by the Contractor must be replaced with a new CFM cover, cowling, or component.

Where torque specifications are not provided by the manufacturer, the applicable SAE, ANSI, or BS1083 nut and bolt standard torque must be used.

Protection of Equipment The Contractor must take measures to ensure that surfaces and components of equipment installed on the vessel are protected against damage, soiling, and contamination as a result of contracted work.

G 1.4.19.3

G 1.4.20

All electrical and electronic equipment and components must be protected during the contract against physical damage, internal damage, and by the effects of adverse temperatures or other environmental conditions.

G 1.4.20.2

G 1.4.20.3

The Contractor must protect equipment that could be damaged as a result of movement of materials and equipment nearby. The Contractor must also protect equipment from nearby sources of contamination including but not limited to burning, welding, media (sand) blasting, grinding and painting.

G 1.4.20.4

Any damage to surfaces, equipment, furnishings or decor incurred prior to acceptance must be returned to As-Delivered condition by the Contractor.

G 1.4.20.5

All openings in machinery and/or systems prior to connections being made must be kept covered by fitted secure solid inserts or covers at all times.

G 1.4.20.6

G 1.4.20.7

The Contractor must obtain and follow instructions from its sub-Contractors for any special protection required for their equipment during the project work. Such instructions must be made available to the TA.

G 1.4.20.8

Physical protection including but not limited to plastic sheets, fireproof covers, heavy weight material covers, wood plugs, wood encasements and heaters must be used as required.

The Contractor must protect the vessel from the possibility of vermin infestation (insect/mammal/bird). If an infestation does occur during the contract period, the Contractor must bear all costs to ensure the vessel is made vermin free before the vessel's departure and contract completion.

Halocarbon containing Systems All work conducted on Halocarbon containing systems, must be in accordance with the Federal Halocarbon Regulations, 2003 (SOR/2003-289). These regulations are available on the internet here: <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2003-289/page-1.html>

G 1.4.21

Welding

In addition to section 7.16 Welding Certification – Contract; All welding and weld inspection must be in accordance with the CCG Welding Specification CT-043-eg-001. This document will be provided to the Contractor within 48 hours of written request to the TA.

G 1.4.22

G 1.4.22.1

The governing standards for welding of materials less than 3 mm in thickness must be in accordance with the requirements of the CCG Welding Specification CT-043-EG-EQ-001. For materials greater than 3 mm in thickness, the Contractor must meet the following:

G 1.4.22.2

- a) For structural steels greater than 3 mm in thickness, welding must meet the requirements of CSA Standards W47.1 and W59, except as modified by the CCG Welding Specification CT-043-EG-EQ-001.
- b) For structural aluminum greater than 3 mm in thickness, welding must meet the requirements of CSA Standards W47.2 and W59.2, except as modified by the CCG Welding Specification CT-043-EG-EQ-001.
- c) For structural stainless steels greater than 3mm in thickness, welding must meet the requirements of CSA Standard W47.1 and AWS D1.6, and of the CCG Welding Specification CT-043-EG-EQ-001.

G 1.5 Documentation**Text Documentation**

All text deliverables must be accompanied by a PDF file that must contain the complete document. The Contractor must check the quality to verify that the content reflects the same content/formatting as the Master Document file. In the case of changes, a second PDF file that contains only the changed sheets must be supplied.

G 1.5.1

G 1.5.1.1

Data Book The Contractor must provide all documentation generated as a result of specified deliverables, in both electronic and paper formats. There must be 2 paper copies of each document, in two separate binders, as part of the contractors QA program. An electronic copy of all documentation must also be provided to the TA in accordance with the formats described in this specification section.

G 1.5.2

All copies of documents generated as a result of specified deliverables will be referred to as the “Data Book”.

G 1.5.2.2

The Contractor must provide to the TA all the files generated as part of the Data Book prior to the contract being considered complete. The files must be in hard format (CD-ROM, DVD-ROM, Flash Drive / Memory Stick). Each specification item is to have its own folder named according to the specification item. For example “G1.0 General Notes”.

G 1.5.2.3

G 1.5.2.4

Any documentation, media, and reports that are the result of Additional Work must be included as part of the Data Book.

G 1.5.3

G 1.5.3.1

File Naming

The name of the files must include the number of the section of the specification to which it relates, the date and a short description of the content. (example: "G_1.0_2019-03-25_Types Description.pdf")

E-mails

All attached files sent to the TA and IA by email must comply with section G 1.5.3 File Naming of this Specification. The subject of emails containing attachments (deliverable) must contain the # contract - quote item # - date - keywords short description of the content.

G 1.5.4

G 1.5.4.1

File Formatting

All documentation, reports, test results, certificates, or data obtained by the contractor in paper form must be scanned into unprotected, searchable, Adobe PDF formatted files and named according to the File Naming section of this specification.

G 1.5.5

G 1.5.5.1

All reports, test results, certificates, or raw data obtained by the contractor in electronic format must be converted to unprotected Adobe PDF formatted files and named according to the “File Naming” section of this specification. Both the original and the converted copy must be provided as part of the Data Book.

G 1.5.5.2

Photographs

G 1.5.6

G 1.5.6.1

All photographs obtained by the contractor as requested in the specification must be provided in .JPG formatted files at a resolution of at least 640 x 480 and named according to the “File Naming” section of this specification.

G 1.5.7

G 1.5.7.1

Measurements, Calibrations, and Readings.

All measurements, calibrations and readings recorded, must be signed by the person taking the measurements, dated and scanned into electronic format as part of the Data Book.

G 1.5.7.2

G 1.5.7.3

Unless other wise specified the Contractor must record dimensions to a precision of three significant digits in imperial along with the metric equivalent.

The Contractor must provide to the TA current and valid calibration certificates, and control values for all instrumentation used in the Test and Trials Plan, showing that the instruments have been calibrated in accordance with the manufacturer’s instructions. These copies are to be provided as part of the Data Book, under any specification where measurements are required.

Test/Inspection Records and Certificates Test and/or Inspection Records and Certificates are identified as a deliverable in the individual specification item requesting them.

G 1.5.8 Test and/or Inspection Records and Certificates, must be included as a separate section in the Databook and indexed/arranged in numeric order by specification number.

G 1.5.8.2 The Contractor is responsible for maintaining a complete and accurate record of all tests and trials conducted on the vessel and on each piece of equipment. Prior to the commencement of a trial, all relevant documentation and associated test sheets, including shop test data, must be complete and attached to the trials agenda.

G 1.5.8.3 All tests and trials data must be legible both in hard copy and electronic format. If necessary, handwritten records may require transcription into electronic format in order to be acceptable. The original must be signed by the regulatory body, the TA, the Contractor and where necessary, by the sub-Contractors and/or FSR's who witnessed the tests. All the data must be submitted to the TA in accordance with the Documentation section of these General Notes.

G 1.5.8.4 The original records of tests, tests and inspections must be signed by TC, the contractor and, if applicable, the subcontractors or field service representative who attended the tests.

G 1.5.8.5 The Contractor must provide, in paper (2 copies) and electronic format, all copies of the tests, trials and inspection logs.

G 1.6

Drawings

G 1.6.1.1

General

G 1.6.1.2 The Drawings section of the General Notes is intended to be used as a reference for minimum standards where specified deliverables must be drawings.

All drawings will be made on ANSI ANSI-size paper (11 "x 17") at least. The drawings will be sent in DWG format (AutoCAD 2013 or newer), on CD-ROM, and will not be protected by a password. One (1) CD-ROM must be provided.

G 1.7 Manuals**General**

The "Manuals" section of the General Notes is intended for use as a reference for minimum standards where specified deliverables must be manuals.

- G 1.7.1 Each instruction manual and register must be bound in a "D" 3-ring hard cover book with interlocking latches that can accommodate 8-1 / 2 "by 11" sheets. Larger drawings and documents must be accordion folded. The following information must be printed on the cover:
- G 1.7.1.1
- G 1.7.1.2

CCGS Amundsen

Specification identification number

- a) Identification of equipment or systems
- b)
- c) manufacturer of the equipment;
- d) revision number and date.
- e)

- G 1.7.1.3 All sections of manuals must have laminated tabs. The main components of the equipment should be subdivided into separate sections in the manuals.

- G 1.7.1.4 A main index should be at the beginning of each notebook and indicate all the elements included in each section.

- G 1.7.1.5 A list of the names, addresses and telephone numbers of the equipment manufacturers' resource persons must accompany the document for reference after completion of the project for maintenance and information management purposes.
- G 1.7.1.6

- G 1.7.1.7 A copy of the final approved version of the "as-built" drawings must be included in the service manual.

- G 1.7.1.8 The Contractor must provide the Technical Authority with two paper copies of all manuals and data sheets in English and French (one copy of each) of the equipment provided by the Contractor prior to the expiry of the Contract. .

- G 1.7.2 The Contractor must provide four copies to the Technical Authority of all individual DVD manuals and data sheets, in PDF-compatible format, before the expiry of the contract.
- G 1.7.2.1
- G 1.7.3

Operation Manuals – As-Fitted[– Not Used]

[– Not Used]

Maintenance Manuals – As-Fitted[– Not Used]

[– Not Used]

G 1.8 Identification[– Not Used]

[– Not Used]

**G 1.7.3.4
G 1.9 Production diagram**

G 1.8.1 The purpose of this specification is to provide the owner's representatives with a clear schedule of work and completion for the needs of the Coast Guard.

G 1.9.1 The Contractor must provide a bar chart using an application that shows the critical path (MS Project 2010 format or equivalent) that illustrates the anticipated schedule of ship refit work. This chart should show each task in the specification with its start date, duration, and expected completion date.

G 1.9.2 Any critical work sequence must be indicated, with critical tasks likely to delay the refit if it does not meet the scheduled work schedule. These may be labor issues or tasks that can not be performed alongside other tasks.

G 1.9.3 In the event of work affecting the critical path of work, the TA, the TA and the CA are notified immediately. Every effort must be made not to delay the ship's refit. Regular quality assurance procedures must be applied.

G 1.9.4 The bar chart will be updated weekly and in advance of each production meeting to illustrate the actual progress of the refit work and the changes made to the completion date of each item. The Contractor shall include in its chart updates any special work requested on PWGSC Form 1379 indicating the impact this additional work will have on the work schedule.

G 1.9.5 The Contractor must provide a pdf copy and a .mpp copy (MS Project 2010) or newer version of the Bar Chart to the TA and IA no later than three days after the date of contract award.

S 1.0 SERVICES

S 1.1 General

The Contractor is responsible for providing the Confined Space Rescue Service and Rescue Service at a height to intervene with these employees and subcontractors.

S 1.2 Cranes

S 1.1.1

Crane on board the vessel

S 1.2.1

- The ship's crane will be available for the purpose of handling the ship's material, but the contractor shall submit the request to the Chief Engineer at least 24 hours prior to the commencement of the handling.
- a)

Contractor's crane

S 1.2.2

- It is the responsibility of the contractor to verify the load restrictions applicable to the dock where the ship is moored. Lifting slings and equipment will be provided by the contractor.
- a)

S 1.3 Mooring Lines[– Not Used]

S 1.3.1

[– Not Used]

S 1.4 Gangways[– Not Used]

S 1.4.1

[– Not Used]

S 1.5.1

S 1.5 Electrical Power

S 1.6.1

120 VAC electricity and 120 psi compressed air will be provided by the vessel.

S 1.6 Protection of Decks and Lower Walls

S 1.7.1

In order to prevent encrustation of dirt in corridors and protect the floor covering, supply and install Masonite 1/8 "thick on the surfaces of internal bridges in the paths access to work from the outside door to the workplace.

S 1.7 Heating[– Not Used]

[– Not Used]

S 1.8 Worksite Inspections

S 1.8.1 Before the Contractor begins work on the vessel, the TA and the Contractor's Quality Assurance Representative must visit areas where work will be carried out, including access roads. The Contractor's Quality Assurance Representative shall take digital photographs of each area to demonstrate compliance with the requirements of this document. He must then download these photos in JPG format on a CD or DVD. Each photo must be dated and indicate which location on the ship it is. Copies of the CD or DVD must be provided to the TA for reference within 48 hours of the start of the contract period.

S 1.8.2 During the construction period, the contractor will be responsible for the maintenance of the areas of the ship that his personnel uses to access the work areas. Areas should be clean and free of debris, and garbage should be removed daily.

S 1.8.3 Hazardous areas, due to the work provided for in this specification, must be secure and clearly identified by the contractor. Posters must be posted to inform and protect all staff in accordance with the applicable requirements of the Canada Labor Code.

S 1.8.4 At the end of this contract, the Contractor shall ensure that all waste produced as a result of the work of this specification is disposed of and that the vessel is as clean as it was before the beginning of the period. of the contract.

S 1.8.5 Once all known work has been completed and final cleaning has been completed, the Contractor's Quality Assurance Representative will be required to visit all areas of the vessel where work has been completed by the Contractor. Any deficiencies or damage noted shall be recorded and compared to the photographs taken to determine if the deficiency or damage arises from the work performed by the Contractor. If this is the case, the damage must be repaired by the contractor at no cost to the CCG.

S 1.9.1
S 1.9

Fire Protection

S 1.9.2 The Contractor must ensure that insulation, removal and installation of fire detection and suppression systems and related components are performed by a qualified technician. When fire detection or extinguishing systems are deactivated or decommissioned by the contractor during the term of the contract, a qualified technician must re-certify that they are fully functional. The original signed and dated certificate must be delivered to the Technical Authority (TA) and Technical Inspection before the end of the contract.

The Contractor must notify and obtain written approval from the Technical Inspection and the TA prior to disturbing, removing, isolating, deactivating, decommissioning or locking any part of the detection and control systems. extinguishing fires, including heat and smoke detectors.

The Contractor must provide fire protection at all times and therefore also while work is being performed on the vessel's fire detection and extinguishing systems. This can be done as suggested below, only after obtaining the written approval of the TA:

- S 1.9.3 Only disable one part of the system at a time;
 Maintain the system operational using spare parts while the work is in progress;
- a) Use other methods accepted and approved by the TA.
- b) The Contractor must be aware that, if all necessary precautions are not taken when
- c) working on the ship's fire suppression systems, this could result in an accidental
- S 1.9.4 release of extinguishing agents. The contractor will then have to fill and certify, at his expense, containers or systems that have emptied due to such work.

S 1.10 Project Facilities[– Not Used]

- S 1.10.1 [– Not Used]

Safety and Security

FIREFIGHTING SYSTEMS

Scope

10.0

10.1 Perform annual inspection and maintenance of firefighting systems in accordance with Transport Canada requirements.

10.1.A

10.1.A.1 The Contractor must include in its bid all known work according to the lists provided in reference.

10.1.A.2 Labels bearing the name of the contractor, the date and the initials of the person carrying out the inspection shall accompany each system.

10.1.A.3

References

10.1.B

Equipment Data

10.1.B.1

Technical information:

10.1.B.1.1

- a) MinuteMan fixed system: Foam (holding tank under the nozzle)
- b) Firecombat Fixed System: Powder (Aft holding tank) and Foam (Forward holding tank)
- c) Inventory of foam reserves: See annexed reference documents
- d) Kitchen hood fixed extinguishing system: Kitchen Knight II

10.1.B.1.2

10.1.B.1.3 Fire extinguisher maintenance list spring 2019

10.1.B.1.4 List of fixed extinguishing systems

10.1.B.1.5 Lots of foam AFFF 3%

10.1.B.2

10.1.B.2.1 Complete list extinguishers

Drawings

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes.

Drawing Number	DRAWING TITLE	Number of Sheets
08693-20	Fire Control Plan	3

Regulations and Standards

The following Standards and Regulations apply to work carried out in this section;
The Contractor must ensure all work completed in this section meets these
Standards and Regulations as well as any other pertinent Federal/Territorial
Regulation or Standard:

10.1.B.3

10.1.B.3.1

FSM Procedures	Title	Included Yes/No
Publications		
Standards		
NFPA 12 (2018)	Standard on Carbon Dioxide Extinguishing Systems	Non
Regulations		

Statement of Work

10.1.C

10.1.C.1

Anti-defragmentation heat detectors

10.1.C.1.1

Verification of 5 local defragmentation heat detectors 416 Hangar helicopter, 417 hangar workshop, 605 hazardous materials warehouse, aviation fuel pump room and 314 local immersion clothes. (Simplex Grinnel)

10.1.C.2

10.1.C.2.1

Fixed CO2 extinguishing systems of ship and barge compartment

10.1.C.2.2

Maintenance of the fixed fire extinguishing systems must comply with the manufacturer's requirements and in accordance with Transport Canada's regulations (Canadian Shipping Act 2001).

10.1.C.2.3

Cylinders must be uncoupled to avoid accidental discharges during maintenance. Pipes must be blown with dry air, nitrogen or other inert gas.

10.1.C.2.4

The contractor must have at the beginning of each day enough full bottles to blow the ducts throughout the inspection to avoid delays.

10.1.C.2.5

Verify that all timer systems, visual indications, audible alarms and shutdowns of the vessel's ventilation systems are working properly.

Demonstrate that all nozzles and distribution ducts are clear of obstructions. These tests may require the dismantling and sealing of certain parts of the ducts. Each

system must be returned (as far as possible) to its original state of good functioning once the tests are completed at the end of each day.

Check all on-site and remote operation devices, time delays as well as the temperature raise triggers.

10.1.C.2.6 Ensure the tightness and good condition of the flexible hoses connecting the cylinders to the distribution ducts.

10.1.C.2.7 The level of all cylinders in each system should be checked. A label must be affixed to each cylinder indicating its level.

10.1.C.2.8 It is agreed that fire equipment will be accessible and available in case of emergency and that appropriate precautions will be taken when hot work is performed in the

10.1.C.2.9 area protected by the fixed extinguishing system.

10.1.C.2.10 In cases where a fixed cylinder of extinguishing agent is found to be defective, under normal load, or where a hydrostatic test is required, the Contractor will be responsible for removing the cylinder, filling it, returning it to its original location on board, connect it and put it back into service.

10.1.C.2.11 Perform all hydrostatic tests on fixed fire cylinders that are due within the next 12 months according to the list provided.

10.1.C.3

Portable fire extinguishers

10.1.C.3.1

The annual maintenance and inspection of portable fire extinguishers must be in accordance with the manufacturer's requirements and with Transport Canada's regulations.

10.1.C.3.2

10.1.C.3.3 The Contractor shall perform the annual inspection of all portable extinguishers aboard the vessel as per the list provided as reference. The inspection will have to be done on board the ship. If for any reason extinguishers are to be brought outside the vessel, the Chief Officer or Chief Engineer shall be notified.

10.1.C.3.4

10.1.C.3.5 Each fire extinguisher will be removed from its wall bracket and inspected for any abnormality. The pressure gauges and the date of the last hydrostatic test will be checked.

All powder extinguishers with a cartridge must have these checked and weighed.

Labels bearing the name of the contractor, the date and the initials of the person carrying out the inspection must accompany each fire extinguisher.

The contractor will repair, refill any defective found fire extinguisher, down load normal and hydrostatic test as needed. The contractor will be responsible for removing fire extinguishers, filling them and replacing them in their respective locations.

- 10.1.C.3.6 Perform all hydrostatic tests and 6 year maintenance on portable fire extinguishing cylinders that are due within the next 12 months according to the list provided.

- 10.1.C.3.7 It is agreed that fire equipment will be accessible and available in case of emergency. Adequate protection will be taken when hot work is required to complete the inspection.

10.1.C.3.8

Kitchen Knight II Fixed extinguishing system

- 10.1.C.4 The Contractor must perform the complete annual maintenance and inspection of the kitchen fixed system in accordance with the requirements of the manufacturer and Transport Canada regulations.

10.1.C.4.1

- 10.1.C.4.2 The contractor will verify the proper operation of the ventilation stops, visual indications and fuses.

- 10.1.C.4.3 Devices for local, remote and automatic operation must be verified.

- 10.1.C.4.4 The condition of the cylinder should be checked, its level and the date of the last hydrostatic test.

10.1.C.4.5

- 10.1.C.4.6 The contractor will have to install a cylinder compatible with the system if it needs to remove the current cylinder to bring it to its establishment. The cylinder will only be removed if it needs to be recharged or hydrostatically tested.

- 10.1.C.5 The contractor will have to renew the labeling once the inspection has been completed.

10.1.C.5.1

Flight deck fire extinguishing system

- 10.1.C.5.2 Conduct annual inspection and maintenance of fixed flight deck fire suppression systems: FireCombat and Minuteman in accordance with manufacturer's recommendations and Transport Canada regulations.

The Contractor must provide the sampling containers to take a sample of AFFF foam in each system: one in the Minuteman system, one in the FireCombat system and another in each reserves indicated by the Chief Officer (see attached reference document.)

The analytical results of each sample should be provided to CCG.

Smoke and heat detectors

Verification of all smoke and heat detectors.

10.1.C.5.3

Proof of Performance

10.1.C.6

Inspection Points

10.1.C.6.1

10.1.D

All work must be inspected by the IA or delegate.

10.1.D.1

The IA will verify the labels bearing the Contractor's name, the date and the initials of the person who performed the inspection on each system.

10.1.D.1.1

10.1.D.1.2

Testing/Trials

10.1.D.2

The proper functioning of the equipment must be demonstrated to the IA.

10.1.D.2.1

Certification

10.1.D.3

10.1.D.3.1

The Contractor must provide the Chief Officer with two hard copies of the inspection certificates along with the original copy. The contractor will also send an electronic copy of the certificates to the IA and TA.

10.1.D.3.2

Annual Inspection Certificate:

a)

b)

Fixed system MinuteMan: Foam (containing under the nozzle)

c)

FireCombat Fixed System: Powder (Back Container) and Foam (Front Container)

d)

Inventory of foam reserves

e)

Kitchen Hood Fixed Extinguishing System: Kitchen Knight II

10.1.D.4

Fixed CO2 extinguishing system: ship and barge

10.1.D.4.1

10.1.D.4.2

Documentation

10.1.D.4.3

The contractor must provide a complete report that explains the work in detail.

10.1.D.5

The Contractor must provide the IA and the TA with an electronic copy of the report in PDF format.

10.1.D.5.1

The analytical results for each foam batch sample (3) and system (2) shall be provided to CCG.

Training[– Not Used]

[– Not Used]

ELEVATOR AND DUMBWAITER

Scope

Perform annual maintenance and inspection of the vessel's elevator and dumbwaiter.

10.2

References

10.2.A

Equipment Data

10.2.A.1

10.2.B

Equipment characteristics:

10.2.B.1

Elevator : Montgomery, model : VT-3431

10.2.B.1.1

Dumbwaiter : Montgomery, model : VDS-3432

a)

b)

Drawings

10.2.B.2

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

10.2.B.2.1

Drawing Number	DRAWING TITLE	Number of Sheets
DWG CT-37457	Electric Elevator Layout	1

10.2.B.3

10.2.B.3.1

Regulations and Standards

The following Standards and Regulations apply to work carried out in this section;
The Contractor must ensure all work completed in this section meets these Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

10.2.B.3.2

FSM Procedures	Title	Included Yes/No
Publications		
Standards		
CAN/CSA-B44-M90, sec. 12	Safety Code for Elevators	No
Regulations		

Statement of Work**Elevator**

10.2.C Provide labor to carry out the annual inspection and maintenance of the vessel's elevator as directed in section 12 of CAN / CSA-B44-M90.

10.2.C.1 Calibrate and seal the cabin speed regulator.

10.2.C.1.1 Calibrate and seal the counterweight speed regulator.

10.2.C.1.2 Following the work, update the maintenance register of each equipment.

10.2.C.1.3

Dumbwaiter

10.2.C.1.4

10.2.C.2 Provide labor to carry out the annual inspection and maintenance of the vessel's dumbwaiter as specified in section 12 of CAN / CSA-B44-M90.

10.2.C.2.1

Following the work, update the maintenance register of each equipment.

10.2.C.2.2

10.2.C.2.3 Adjust the brake according to the manufacturer's standards.

10.2.D

Proof of Performance

10.2.D.1

Inspection Points

10.2.D.1.1

All work must be inspected by the IA or delegate.

10.2.D.2

10.2.D.2.1

Testing/Trials

10.2.D.2.2

The proper functioning of the equipment must be demonstrated to the IA.

10.2.D.3

10.2.D.3.1

L'AI doit être présent durant les inspections et les essais.

Certification

10.2.D.4

10.2.D.4.1 The Contractor must provide the Chief Engineer with the original copy of the inspection certificates upon completion of the work. The contractor will also send an electronic copy of the certificates to the TA.

Documentation

At the end of the work, the contractor must provide a complete report detailing the work performed, the cause of the failures (if any), the necessary modifications and the replaced parts. The Contractor shall also provide the Chief Engineer and maintenance officer with an electronic PDF copy of the report.

The Contractor must provide within 3 days of the inspection a certificate for each equipment attesting its compliance with the standard, and any inspections specified in standard CAN/CSA-B44-M90, sec. 12.

10.2.D.4.2 The Contractor must provide the IA and the TA with an electronic copy of the report in PDF format.

Training[– Not Used]

10.2.D.4.3 [– Not Used]

10.2.D.5 **LIFEBOATS, DAVITS AND MIRANDA DAVITS**

10.2.D.5.1 **Scope**

10.3 Perform annual maintenance and inspection of both lifeboats and their respective davits, and the annual inspection of the Miranda davit to maintain the vessel's SOLAS certification.

10.3.A

10.3.A.1

References

10.3.B

10.3.B.1 **Equipment Data**

10.3.B.1.1 Miranda davit:

- a)
- b) Manufacturer: Schat-Harding,
- c) Model: MRT 3900;

10.3.B.1.2 Winch type BHY 5300.

- a)
- b) Port/starboard lifeboat davits:

10.3.B.1.3 Manufacturer: Schat-Harding,

- a) Model BE7800
- b)

10.3.B.1.4 Port side lifeboat:

- a) Manufacturer: Watercraft International Ltd.,
- b) Model: 9012934 (Boat number)

10.3.B.2 Starboard side lifeboat:

Manufacturer: Watercraft International Ltd.,
Model: 9012933 (Boat number)

Drawings

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

10.3.B	Drawing Number	DRAWING TITLE	Number of Sheets
	BHY 5300	Sectionnal arrgt of winch bhy 5300	1

Regulations and Standards

The following Standards and Regulations apply to work carried out in this section;
 10.3.B.3 The Contractor must ensure all work completed in this section meets these
 10.3.B.3.1 Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

10.3.C	FSM Procedures	Title	Included Yes/No
	Publications		
	Standards		
	Regulations		
	SOLAS		

10.3.C.1 Statement of Work

10.3.C.2 The contractor must mandate the manufacturer or his authorized representative of Schat Harding (Palfinger) to perform the work or supervise the work as per IMO Circular 1206.

10.3.C.3 The annual inspection of the Zodiac Huriccan 733 will be performed by a certified contractor.

- a)
- b)
- c) The inspection of the Miranda davits and lifeboats includes the following:
- d)
- e)
 - Inspection of limit switches
 - Inspection of controls
 - Inspection of davits
 - Opening winch gearboxes, gears, brakes, clutches, manual levers
 - Cables, pulleys, pulley shaft

Grease fitting

Oil level

Structural inspection of the davit and support equipment

Dynamic inspection with empty lifeboat

- f) Inspection of power units, hand pump, hoses, hydraulic system operation, manual
- g) and normal pump, and normal mode.
- h)

- i) Inspection of both lifeboats, including the following points:
- j)

Steering gear

10.3.C.4 Manometer and all indicators

- a) New release hooks, frame and mechanism
- b)

c) Ration

d) Fluid levels and filters

e) Sprinkler system and air supply

f) Battery, lighting, control system

g) Hook clearance measurements

h) Inspection of doors, door seals and portholes

i) Bilge pump

j) Engine exhaust system sealing and presence of CO2 after lengthy engine operation

10.3.C.5

Replace the hook diaphragm for the two boats. The Contractor shall provide all materials.

10.3.D

10.3.D.1

Proof of Performance

10.3.D.1.1

Inspection Points

10.3.D.2

10.3.D.2.1

All work must be inspected by the IA and the Chief Officer.

10.3.D.3

Testing/Trials

10.3.D.3.1

Tests and trials according to TC requirement.

10.3.D.4

Certification

The Contractor must submit to the IA the original copy of the hook certificates. The Contractor shall also send an electronic PDF copy to the TA.

Documentation

The Contractor shall submit a complete report explaining in detail the work done, cause of failures (if any), necessary changes and parts replaced on the lifeboat.

The Contractor shall also provide an inspection report of the lifeboat launch system.

10.3.D.4.1 The Contractor shall submit to the IA and the TA an electronic copy of the report in PDF format.

10.3.D.4.2 **Training[– Not Used]**

10.3.D.4.3 [– Not Used]

10.3.D.5 **FUEL TRANSFER HOSES**

10.3.D.5.1 **Scope**

10.4

10.4.A Perform annual certification of the fuel transfer hoses.

10.4.A.1 **References**

10.4.B

10.4.B.1 **Equipment Data**

10.4.B.1.1 Description of hoses

- a) Four (4) diesel fuel transfer hoses, each 4" in diameter and 50' long. The working pressure of the hoses is 150 psi.
- b)
- c) A helicopter fuel hose (1½" x 103')

10.4.B.2 Two (2) hoses to fill the boats (1" x 76' each)

10.4.B.2.1 **Drawings**

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

Drawing Number	DRAWING TITLE	Number of Sheets
10.4.B.3	[– Not Used]	

Regulations and Standards

The following Standards and Regulations apply to work carried out in this section;
The Contractor must ensure all work completed in this section meets these Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

FSM Procedures	Title	Included Yes/No
Publications		
RMA IP-11-4	Rubber Manufacturers Association Technical Specification Manual for maintenance, testing and inspection of Oil Suction and Discharge Hose.	No
Standards		
Regulations		

Statement of Work

10.4.C

10.4.C.1

Provide all required material and labour to perform hydrostatic checks and tests on seven (7) fuel transfer hoses (diesel and Jet A 1 fuel).

10.4.C.2

Supply the material, equipment and labour to conduct a hydrostatic test in accordance with the RMA IP-11-4 standard.

10.4.C.3

10.4.C.4

Provide round-trip transportation.

10.4.D

Hoses will be disassembled and reinstalled by the CCG.

10.4.D.1

Proof of Performance

10.4.D.1.1

10.4.D.2

Inspection Points[– Not Used]

10.4.D.2.1

[– Not Used]

10.4.D.3

Testing/Trials

10.4.D.3.1

Hydrostatic test according to publication RMA IP-11-4.

Certification

Provide a certificate for each hose, indicating the company that did the work, the certification number, and the name and signature of the technician in charge.

Certificates must identify the hose in question. Identify the hoses with metal clips in accordance with the attached order: AMD 01, AMD 02, etc.

Documentation

10.4.D.3.2 The Contractor shall submit a complete report explaining in detail the work done, cause of malfunctions (if any), necessary changes and parts replaced.

10.4.D.4 The Contractor shall submit to the IA and the TA an electronic copy of the report
10.4.D.4.1 in PDF format.

10.4.D.4.2 **Training[– Not Used]**

10.4.D.5 [– Not Used]

10.4.D.5.1

Hull and Related Structures[- NOT USED]

UNDERWATER HULL INSPECTION

Scope

11.0

11.1 The Contractor must provide the services of divers to perform the underwater inspection of the hull of the vessel.

11.1.A

References

11.1.A.1

Equipment Data[– Not Used]

11.1.B

[– Not Used]

11.1.B.1

Drawings

11.1.B.1.1

11.1.B.2

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

11.1.B.2.1

Drawing Number	DRAWING TITLE	Number of Sheets
222-H-1	Shell Expansion	1
222-H-101	General Arrangement	3
222-H-131	Docking Plan	1
11.1.B.3		

11.1.B.3

11.1.B.3.1

Regulations and Standards

The following Standards and Regulations apply to work carried out in this section; The Contractor must ensure all work completed in this section meets these Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

FSM Procedures	Title	Included Yes/No
Publications		
Standards		
ACNOR Z275.2	Occupational safety code for diving operations	No

ACNOR Z275.4	Competency standard for diving, hyperbaric chamber, and remotely operated vehicle operations	No

Statement of Work

- 11.1.C Provide the services of divers to conduct an underwater hull inspection of the vessel. The hull, water intakes, bow thruster, propellers, rope guards, rudder, rudder stock and rudder trunk will be inspected for anomalies.
- 11.1.C.1 Provide a camera service to film the entire inspection.
- 11.1.C.2 The work will be carried out to meet the demands and in the presence of the TCMS marine surveyor in order to postpone a 6-month dry dock inspection.
- 11.1.C.3 The Contractor must comply with Canadian Coast Guard Procedure 7.B.1 "Diving Operation" from the FSM.
- 11.1.C.4 The Contractor must comply with the CSA Z275.2 and Z275.4 Diving Standards, as required by the CSST
- 11.1.C.5 The Contractor must ensure that the team that is on site has a minimum of three (3) people including:
- 11.1.C.6
- a)
 - b) an active diver who will be connected to the surface;
 - c) a reserve diver (stand-by divers) ready to intervene;
- 11.1.D a surface aid (tender).

Proof of Performance

11.1.D.1

11.1.D.1.1

11.1.D.2

Inspection Points

- 11.1.D.2.1 All work must be inspected and accepted by the Transport Canada Inspector.

11.1.D.3

Testing/Trials[– Not Used]

11.1.D.3.1

11.1.D.4

[– Not Used]

Certification

Provide a copy of the valid certification of divers before starting work.

Documentation

The Contractor must provide a copy of the inspection video on a USB key, photographs of any damage found during the inspection and a detailed report of the findings. The copy must be provided within 3 days of the inspection.

Training[– Not Used]

11.1.D.4.1

[– Not Used]

11.1.D.5

GALLEY RANGE HOOD CLEANING

11.1.D.5.1

Scope

11.2

Perform annual cleaning of the hood and the galley range hood ventilation duct.

11.2.A

References

11.2.A.1

11.2.B

Equipment Data[– Not Used]

11.2.B.1

[– Not Used]

11.2.B.1.1

11.2.B.2

Drawings

11.2.B.2.2

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

Drawing Number	DRAWING TITLE	Number of Sheets
	[– Not Used]	
11.2.B.3		

11.2.B.3.3

Regulations and Standards

The following Standards and Regulations apply to work carried out in this section;
The Contractor must ensure all work completed in this section meets these Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

FSM Procedures	Title	Included Yes/No
Publications	[– Not Used]	

Standards		
Regulations		

Statement of Work

- 11.2.C Clean and degrease the galley range hood extraction duct up to the extraction fan located behind the emergency generator compartment.
- 11.2.C.1 The duct for a 12" x 32" rectangular section includes a 36' horizontal segment, a 90 degree elbow and a 27' vertical segment. An access panel is installed in the cleaning product storage room and another in the passageway in front of the helicopter hangar and two in the section in the galley ceiling. The Contractor shall open and close the access panels for cleaning purposes. The Contractor shall also remove and replace the ceiling tiles in the galley.
- 11.2.C.2
- 11.2.C.3 The hood and its components shall also be cleaned.
- 11.2.C.4 The Contractor shall leave the galley and the cleaning product storage room in the same condition they were in before the work was started. Also, waste shall be placed in the contractor's container on the dock.
- 11.2.C.5 Work can begin after 6 p.m. and the galley shall be back in service before 5 a.m. the next morning.
- 11.2.D

Proof of Performance

11.2.D.1

Inspection Points

11.2.D.2

11.2.D.2.2 All work must be inspected by the IA

Testing/Trials[– Not Used]

11.2.D.3.3

[– Not Used]

11.2.D.4

Certification[– Not Used]

11.2.D.4.4

[– Not Used]

Documentation

The Contractor shall submit a complete report explaining the work done.

Training[– Not Used]

[– Not Used]

**MODIFICATION OF THE OPENING OF THE STORAGE UNDER
THE STAIR (MAIN DECK FRAME 62+305MM) (OPTIONAL
WORK)**

11.2.D.5

11.2.D.5.5

11.3

Scope

Enlarge the opening in the starboard bulkhead at frame 62 + 305mm on the main deck as shown in drawing # C19-06-122-01.

11.3.A

11.3.A.1

References

11.3.B

Equipment Data[– Not Used]

11.3.B.1

[– Not Used]

11.3.B.1.1

11.3.B.2

Drawings

11.3.B.2.1

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

Drawing Number	DRAWING TITLE	Number of Sheets
C19-06-122-01	MODIFICATION OUVERTURE	1
11.3.B.3		

11.3.B.3.1

Regulations and Standards

The following Standards and Regulations apply to work carried out in this section; The Contractor must ensure all work completed in this section meets these Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

FSM Procedures	Title	Included Yes/No
Publications		

[– Not Used]

Standards		
Regulations		

Statement of Work

Provide material and labor to perform the following work as well as those indicated on drawing C19-06-122-01:

11.3.C

11.3.C.1 The crew will empty the storage room before the work begins.

11.3.C.1.1 Disassemble the finish and all accessories in the heat affected area and retain them for reinstallation.

11.3.C.1.2

11.3.C.1.3 Isolate the work area with tarpaulins to prevent dust and welding gases from spreading in the accommodation. Install an air extractor in the containment space during the work period. The evacuation duct extremity must be routed outside and be located far enough from any air intake to prevent a return of contaminated air inside the ship.

11.3.C.1.4

Supply and install the flat irons as indicated and following all the instructions written on drawing # C19-06-122-01.

11.3.C.1.5

11.3.C.1.6 Remove flat irons as indicated and follow all directions on drawing # C19-06-122-01.

11.3.C.1.7 Cut out and remove the sheet to enlarge the opening in the bulkhead as indicated and following all instructions on drawing # C19-06-122-01.

11.3.C.1.8

Clean the work area.

11.3.C.1.9

Perform cleaning and surface preparation as required by the paint manufacturer on all areas affected by hot work.

11.3.C.1.10

11.3.C.1.11 Repaint all areas affected by hot work according to the paint manufacturer's instructions.

11.3.D

Reinstall the accessories.

Modify and reinstall the finish to fit the finish door to the new steel opening.

Proof of Performance

Inspection Points

All work must be completed to the satisfaction of the IA.

Testing/Trials

11.3.D.1 Prior to painting, inspect all welds with dye penetrant.

11.3.D.1.1

Certification[– Not Used]

11.3.D.2

11.3.D.2.1 [– Not Used]

11.3.D.3

Documentation

11.3.D.3.1

Provide the report of the dye penetrant test.

11.3.D.4

11.3.D.4.1 **Training[– Not Used]**

11.3.D.5

[– Not Used]

11.3.D.5.1

12.0 Propulsion and Manuevering [- NOT USED]**13.0 Power Generation Systems[- NOT USED]****14.0 Power Distribution Systems**

14.1

14.1.A REPAIR OF TRANSIT LEAKS

14.1.A.1

Scope

14.1.B

Repair leaks of identified transits.

14.1.B.1

14.1.B.1.1 **References**

- a) **Equipment Data**
- b)
- c) Marque de commerce des transits :
- d)

14.1.B.2 Roxtec
MCT
BST
Pâte (marin)

Drawings

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

14.1.E	Drawing Number	DRAWING TITLE	Number of Sheets
	Projet 18-221	Ultrasound Inspection of the CCGS Amundsen Transits	26
	F3756-List of Transits to Repair	List of Transits to Repair	3

Regulations and Standards

- 14.1.B.3 The following Standards and Regulations apply to work carried out in this section;
- 14.1.B.3.1 The Contractor must ensure all work completed in this section meets these Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

FSM Procedures	Title	Included Yes/No
Publications		
	[– Not Used]	
Standards		
Regulations		
14.1.C		
14.1.C.1		

14.1.C.1.1 Statement of Work

Repair the leaks of transits identified on the list provided.

- a)
- b) Roxtec: To repair, the first step is to remove all blocks and start the installation again by following all the steps:
- c)
- d)
 - Clean the transit frame of any dust.
 - Lubricate the inner surfaces of the frame with Roxtec Lubricant.
 - Adapt the blocks for the size of the cables.
 - There must be just a 0.1-1mm gap between the two halves of blocks when pressed around a cable.

Lubricate the outer and inner surfaces of the block.

Install them in accordance with the transit installation plan.

After finishing a block floor, insert a stay-flat between each floor.

Once all the blocks have been inserted, lubricate the sides of the wedge and insert it always in front of a stay plate.

f) Tighten the wedge screws while respecting the tightening level of the model.

g)
h) MCT : To repair, the first step is to remove all the blocks and start the installation again by following all these steps:

i)
14.1.C.1.2 Clean the transit frame of any dust.

Lubricate the inner surfaces of the frame with MCT lubricant.

a) Adapt the blocks for the size of the cables.

b) Lubricate the outer and inner surfaces of the block.

c) Install them in accordance with the transit installation plan.

d) After finishing a block floor, insert a stay-flat between each floor.

e) Once all the blocks are installed, insert the compress pads and tighten.

f) Make sure the space above the compress pads is 32-33mm.

g) Lubricate the pad compress and the frame.

h) Insert the wedge and screw until there is only 12 and 15 mm of the screw.

i)
14.1.C.1.3 BST : To repair, the first step is to remove all the blocks and start the installation again by following all these steps:

a) Clean the transit frame of any dust.

b) Lubricate the inside surfaces of the frame with lubricant BST.

c) Use blocks suited to the size of the cables.

d) Install them in accordance with the transit installation plan.

e) After finishing a block floor, insert a stay-flat between each floor.

f) 14.1.C.1.4 Once all the blocks have been inserted, lubricate the sides of the wedge and insert it in front of a stay plate.

a) Tighten the wedge screw.

b)
Paste : For repair, the first step is to remove the paste and start the installation again by following all these steps:

Clean the surface of any contaminant

Install MPACT filter and marine band

Apply MFS Marine Firestop Seals

Smooth the surface with a trowel, knife or damp cloth before it starts to dry.

Proof of Performance

c) **Inspection Points**

- d) An inspection of the transits following the repair must be carried out with AI.

14.1.D

14.1.D.1 **Testing/Trials**

- 14.1.D.1.1 Following repairs, an ultrasonic leak test shall be performed on each repaired transit in the presence of the TA or delegate.

14.1.D.2

14.1.D.2.1 **Certification[– Not Used]**

14.1.D.3 [– Not Used]

14.1.D.3.1 **Documentation**

14.1.D.4

- 14.1.D.4.1 Provide the calibration report of the ultrasound device used to perform the tests following the repairs.

14.1.D.4.2 A test report must be submitted to the TA.

14.1.D.4.3 An update of the original test report must be submitted to the TA.

14.1.D.5

14.1.D.5.1 **Training[– Not Used]**

[– Not Used]

Auxiliary Systems[- NOT USED]

Domestic Systems

15.0 CLEAN AND INSPECT THE PORT SIDE POTABLE WATER TANK

16.0 Scope

16.1 The purpose of the work is to perform the annual maintenance and inspection of the port side potable water tank.

16.1.A

16.1.A.1 References

16.1.B Equipment Data

16.1.B.1	TANK DESCRIPTION	LOCATION – FRAME	CAPACITY	SURFACE FT ²
	Port side potable water	13-27	68.76t	2308
	Starboard side potable water	13-27	68.76t	2308

16.1.B.2 Drawings

16.1.B.2.1 All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes.

Drawing Number	DRAWING TITLE	Number of Sheets
222-H-146	Capacity Plan	1
16.1.B.3		

16.1.B.3.1

Regulations and Standards

The following Standards and Regulations apply to work carried out in this section; The Contractor must ensure all work completed in this section meets these Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

FSM Procedures	Title	Included Yes/No
Publications		

Bulletin technique 04-2007		
Bulletin technique 2015-01		
Standards		
NSF 61/ANSI 61 -2016		
Regulations		

Statement of Work

Provide materials and labor to perform the following work:

16.1.C

General :

16.1.C.1

16.1.C.2

16.1.C.2.1

The Contractor shall certify safe access to each potable water tank, in accordance with Fleet Safety and Security Manual requirements and recommendations. Potable water tanks are enclosed spaces.

16.1.C.2.2

The Contractor shall provide all materials, equipment, parts and tools required to do the work.

16.1.C.2.3

During the work, workers shall wear disposable coveralls and shoe covers over their work clothing to avoid contaminating the tank. New protective clothing must be worn each time the tank is entered.

16.1.C.2.4

All products or materials (e.g.: lubricant, anti-seize products, watertightness seals, caulking, o-rings etc.) used when working must be certified for use in a potable water system according to the ANSI 61 standard. The Contractor shall provide the TA and IA with justifying documents.

16.1.C.2.5

All work shall be supervised by a Field service representative (FSR) of the paint manufacturer. The Contractor shall include a \$10,000 allowance to cover the FSR's travel costs. Travel and meal costs shall be invoiced at actual cost, without overheads or profit. The \$10,000 allowance shall be included in the overall price of the bid and shall be adjusted based on follow-up work, once the final invoice from the representative has been received, along with copies of all supporting documentation attesting to actual costs. The Contractor will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit and/or administrative overhead, in accordance with the meal, and private vehicle allowances specified in Appendices B, C and D of the [National Joint Council Travel Directive](#), and with the other provisions of the directive referring to "travellers", rather than those referring to "employees". Canada will not pay the Contractor any

incidental expense allowance for authorized travel. The FSR shall supervise the application of the paint, as well as the environmental conditions, which he or she shall record in accordance with the manufacturer's instructions for the product. The FSR shall submit a report when work is completed.

The paint currently used in the tank is a combination of the Interline 850 and Interline 925 paints. The new paints shall be compatible with the existing ones.

16.1.C.2.6 All work shall be in accordance with the paint manufacturer's guidelines for preparing and applying their product to potable water tanks.

16.1.C.2.7 Important: No solvent or thinner shall be used in the work.

16.1.C.2.8 **Work description – Initial preparation and cleaning**

16.1.C.3 The port side potable water tanks shall be drained, opened and cleaned. Any cement covering shall be removed (if applicable), the tanks prepared for painting, then closed again upon completion of the work.

16.1.C.3.1

16.1.C.3.2 The tanks shall be washed and cleaned of any contaminant or debris and then wiped dry. For bidding purposes, the Contractor shall plan on removing and disposing of approximately two hundred (200) litres of water and debris.

16.1.C.4

Work description – Initial preparation and cleaning prior to painting

16.1.C.4.1

16.1.C.4.2 For the starboard potable water tank, it is estimated that 10% of paint has lifted.

16.1.C.4.3

Important: The Contractor shall strictly follow CCG Technical Bulletin 04-2007 as well as all the parameters identified in paragraph 3.9 of section 7.A.12 of the Fleet Safety Manual.

16.1.C.4.4

After the surface preparation work, the Contractor shall thoroughly clean each tank of any residue or any other abrasive materials. The Contractor shall empty these residues at a place approved by the regulations of all levels of government: municipal, provincial and federal.

16.1.C.4.5

After the tanks are cleaned of all residue, they shall be inspected by the IA and the Transport Canada Marine Safety (TCMS) expert. This inspection is to ensure that the suction valves and sounding pipes are free of obstruction and that limber holes in the floors, stringers and web frames allow adequate flow. The Contractor is required to advise the TCMS expert when the tanks in question are ready for inspection.

Any defect discovered during these inspections will be dealt with using form 1379.

Description of work – Application of coating (paint)

The contractor shall provide a complete calendar of painting work, including the application. The contractor shall use a suitable solid epoxy-based paint that meets the CA 013 000 ES TE 003 Paints and Coating Standard for potable water tanks found aboard a ship.

16.1.C.5

16.1.C.5.1

The Contractor must ensure that the paint used meets the following criteria:

100% solids epoxy coating.

16.1.C.5.2

Certified "protective barrier material" for use on potable water tanks, as stipulated in the National Sanitation Foundation's "Drinking Water System Components Program – Standard 61."

a)

b)

For the bid, the Contractor shall indicate a price for preparing and painting approximately 10% of 2308 square feet of the surface of the tank.

16.1.C.5.3

16.1.C.5.4

When submitting the bid, the Contractor shall provide the PWGSC contracting authority with the following:

a)

b)

c)

d)

e)

The paint coating it plans to use in its bid

The manufacturer of the coating

Proof that the paint meets the CA 013 000 ES TE 003; Interline 850 (entire tank), Interline 925 (touch-ups and repairs)

Manufacturer's work procedure sheets

16.1.C.5.5

WHMIS Material Safety Data Sheets and product data sheets

a)

b)

The Contractor shall ensure that the paint manufacturer's recommendations are strictly adhered to, in particular, with respect to:

c)

d)

16.1.C.5.6

Preparation of surfaces

Drying and curing conditions (including temperature, humidity, dew-point, ventilation, cure time)

Shelf life of paint

Compatibility with tank materials

On completion of the surface preparation and prior to the first application of the paint schedule, the Contractor's Quality Assurance representative shall provide a written statement certifying that the surface preparation has been completed in accordance with the manufacturer's instructions. Any deviations from those instructions must be noted in the certified statement.

The contractor shall monitor the following parameters during paint application and curing:

16.1.C.5.7 The temperature of the ambient air in each tank shall be constantly monitored during the application and curing period of the paint schedule, using an electronic data recorder. Temperatures shall be recorded hourly and printouts submitted as contract deliverables.

a) Space temperature and relative humidity level in the tank - before work is started. Wet-bulb temperatures of the tank and temperatures of the surfaces being painted - this is to be taken and recorded every four hours during the coating process.

b)
c) Contractor shall note that the paint application shall not take place when the surface temperature is less than three (3) degrees Celsius above the dew point.

16.1.C.5.8 On completion of all painting, the temporary enclosure is to be dismantled, taken ashore and disposed of.

16.1.C.5.9

Work description – Commissioning potable water tanks

16.1.C.6

16.1.C.6.1 On completion of paint application and after a suitable curing period, as recommended by the coating manufacturer, each tank shall be closed up. Manholes shall be equipped with new gaskets supplied by the Contractor, and subsequently secured in place.

16.1.C.6.2

16.1.C.6.3 The CCG Inspection Authority and Technical Authority will both inspect the tanks before they are closed up.

16.1.C.6.4 Once closed up, each tank shall be disinfected in accordance with the CCG Fleet Safety Manual (FSM) Potable Water Quality Guidelines contained in section 3.5 of 7.A.12 prior to filling for testing. Water shall be disposed of in accordance with the regulation in effect and a disposal certificate shall be submitted to the IA and TA.

16.1.C.6.5 Each tank shall be hydrostatically tested with fresh water to the top of its vent pipe. This shall be witnessed by the CCG Inspection Authority, the CCG Technical Authority, and the TC-MSB surveyor. This test may be carried out concurrently with the chlorination treatment specified in the FSM.

16.1.C.6.6

On completion of flushing of the water tanks the Contractor shall arrange for water samples to be provided to an accredited laboratory for analysis and to obtain a potable water inspection certificate.

To obtain these samples, the Contractor shall perform the following:

Each tank shall be filled with potable water to half its normal capacity.

Each tank shall then sit undisturbed forty-eight (48) hours before samples are taken.

One (1) water sample shall be taken from the fresh water supply line used to fill the tanks.

- a)
- b) Two (2) samples shall be taken from the water inside each tank.

- c) The samples shall be taken in the presence of the IA and the TA.

- d)
- e) The Contractor shall ensure that samples are examined for all parameters found in paragraph 3.6 of section 7.A.12 of the FSM as well for other chemicals identified

16.1.C.6.7 as a source of concern on the WHMIS technical data sheets of the coating manufacturer.

Proof of Performance

16.1.D **Inspection Points**

16.1.D.1 11.4.1.1 The Contractor's quality assurance representative, the IA, TA and the TCMS inspector shall perform the following tasks:

- a) Inspect each water tank after the surfaces have been cleaned and prepared
- b) Monitor ambient temperatures and dew points
- c) Monitor surface temperatures
- d) Final inspection of all tanks prior to their being "closed-up"

16.1.D.2

16.1.D.2.1 **Testing/Trials**

16.1.D.3 With the TCMS inspector present, the tank shall be subjected to a hydrostatic test.

16.1.D.3.1

16.1.D.4 **Certification**

16.1.D.4.1 Provide a copy of the laboratory water analysis certificate.

Documentation

16.1.D.4.2 The Contractor shall provide the CCG Technical Authority with four (4) hard copies of the report detailing the work done, defects, repairs performed, measurements and readings taken.

The Contractor shall provide the FSR's report to the IA and the TA. The report shall indicate any non-compliance with the manufacturer's instruction in performing the work.

The Contractor shall also provide a copy of the TC-MSB Division III survey credit to the CCG Technical Authority.

Four (4) copies of the laboratory analyses of water samples shall be provided.

- 16.1.D.4.3 The Contractor shall provide a quality assurance report listing all areas mentioned in this specification that were inspected by the Contractor's quality assurance service and all the places where defects requiring corrective measures were discovered.
- 16.1.D.4.4
- 16.1.D.4.5

Training[– Not Used]

[– Not Used]

16.1.D.5

16.1.D.5.1

16.2

REFRIGERATION SYSTEM ANNUAL INSPECTION AND MAINTENANCE

Scope

16.2.A

16.2.A.1

Perform maintenance and annual inspection of refrigeration and air conditioning systems.

16.2.B

References

16.2.B.1

Equipment Data

16.2.B.1.1

a) Model of domestic and cargo refrigeration units:

b) Domestic : Berg Chilling System WCZ-26-2/0 serial # : W03011A-AH1-1015

16.2.B.1.2

Cargo : Berg Chilling System WCZ-15-2/0 serial # : W03011B-AH1-1015

a)

b)

c)

Model of domestic and cargo refrigeration compressors:

Domestic : Emerson Copeland scroll ZF41K5E-TFD-260;

16.2.B.2

Cargo : Emerson Copeland scroll ZF25K4E-TFD-261;

16.2.B.2.1

Cooling agent (gas) domestic and cargo: R-507A

Drawings

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

Drawing Number	DRAWING TITLE	Number of Sheets
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	[– Not Used]	

Regulations and Standards

The following Standards and Regulations apply to work carried out in this section;
 The Contractor must ensure all work completed in this section meets these
 Standards and Regulations as well as any other pertinent Federal/Territorial
 Regulation or Standard:

16.2.B.3

16.2.B.3.1

FSM Procedures	Title	Included Yes/No
Publications		
	[– Not Used]	
Standards		
Regulations		

16.2.C

Statement of Work

16.2.C.1

Cargo and domestic refrigeration

16.2.C.1.1

- a) For each system, provide material and labor to perform the following work:
- b) Replace the oil (2 USG POE-32 oil supplied by CCG) and filter dryer AOFD-553
- c) POE oil.
- d) Replace the filter cartridges: STAS-967-T contains (2) 48 size drier cores.
 Perform a complete inspection of the systems.
- e) Perform a refrigerant leak test. All piping shall be checked, including in the ceiling
- f) of the main deck passageway. Ensure that they are watertight. Ceiling tiles shall
 be removed carefully for the inspection. They shall be put back once the work is
 complete. Currently, the system has no known leaks.
- g) Check and clean the evaporators and their deicing system.
 Check the evaporator drain and the heating cable system. Ensure that they are free
 flowing. Repair the insulation after this verification.
 Refrigerant gas, if required, shall be supplied by the Contractor using Form 1379.

Check and adjust all operating settings.

Clean of the condensers (shell and tube type) and replace the seals and anodes.

Proceed with the compressor transfer.

Fill out the Maintenance Register Log which is located near the equipment.

h)

i) **Proof of Performance**

j)

k) **Inspection Points**

16.2.D All work must be inspected by the IA.

16.2.D.1 **Testing/Trials**

16.2.D.1.1

The IA or their delegate shall be present during the tests.

16.2.D.2

16.2.D.2.1 **Certification**

16.2.D.3

The Contractor shall submit to the IA an electronic copy of the certificates in PDF format, along with the original. The Contractor shall also send an electronic copy to the TA.

16.2.D.3.1

16.2.D.4 **Documentation**

16.2.D.4.1

The Contractor shall submit a complete report explaining in detail the work done, cause of malfunctions (if any), necessary changes and parts replaced.

16.2.D.4.2

The technician must be certified to the HRAI standard and provide us with his ID number for our records.

16.2.D.4.3

16.2.D.5 The Contractor must provide the IA and the TA with an electronic copy of the report in PDF format.

16.2.D.5.1

16.3 **Training[– Not Used]**

[– Not Used]

16.3.A

16.3.A.1

INSULATION OF DUCTS AND PIPES IN HVAC COMPARTMENT UNITS # 2, 3, 4 AND 5

16.3.B

Scope

Provide material and labor to insulate ventilation ducts and piping on HVAC systems units # 2, 3, 4 and 5.

References

Equipment Data

Insulation material: non-combustible, low flame spread and unable to produce excessive amounts of smoke and toxic products according to the IMO test method Fire Test Procedures (FTP) Code .3.

16.3.B.1

Ventilation air duct (spiro): galvanized steel

16.3.B.1.1

Steam heaters (135 ° C): copper

16.3.B.1.2

Cold water piping for humidifier: copper

16.3.B.1.3

Cooling gas piping (R-407 refrigerant): copper

16.3.B.1.4

Cooling Water Piping (-2 ° C to 31 ° C): Galvanized Steel and Stainless Steel

16.3.B.1.5

16.3.B.1.6

3-way valve: CLORIUS model: L3F-80 / AVM322

16.3.B.1.7

Drawings

16.3.B.2

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

16.3.B.2.1

Drawing Number	DRAWING TITLE	Number of Sheets
EP-DWG-5813A-HGA-002	HVAC GA Comp't Unit 2 & 3	3
EP-DWG-5813A-HGA-004	HVAC GA Comp't Unit 4	2
EP-DWG-5813A-HGA-005	HVAC GA Comp't Unit 5	2
EP-DWG-5813A-SCU-002	HVAC Unit 2	1
EP-DWG-5813A-SCU-003	HVAC Unit 3	1
EP-DWG-5813A-SCU-004	HVAC Unit 4	1
EP-DWG-5813A-SCU-005	HVAC Unit 5	1

16.3.B.3

16.3.B.3.1

Regulations and Standards

The following Standards and Regulations apply to work carried out in this section;
The Contractor must ensure all work completed in this section meets these

Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

FSM Procedures	Title	Included Yes/No
Publications		
	IMO Fire Test Procedures (FTP) Code.3	No
Standards		
NFPA 90A, 90B	Standard for the Installation of Air-Conditioning and Ventilating Systems	No
Regulations		
	Canadian Shipping Act	No

Statement of Work

16.3.C **Provide material and labor to perform the following work:**

16.3.C.1 **Circular ventilation duct**

16.3.C.2

16.3.C.2.1 Insulate all venting ducts (circular) with duct insulation 1 inch thick pre-molded fiberglass with FSK-reinforced vapor barrier + cotton coating and fire retardant glue.

16.3.C.1.2

Quantities in linear feet of circular duct according to diameter has been estimated and must be confirmed by the contractor before ordering the material:

a)

b)

4 "diameter circular duct; total: 6 linear feet

c)

5 "diameter circular duct; total: 10 linear feet

d)

6 "diameter circular duct; total: 34 linear feet

e)

f)

7 "diameter circular duct; total: 34 linear feet

g)

8 "diameter circular duct; total: 32 linear feet

16.3.C.3

9 "diameter circular duct; total: 8 linear feet

16.3.C.3.1

Circular conduit 14 "diameter; total: 4 linear feet

16.3.C.3.2

Large size rectangular ventilation duct (air intake)

Insulate all vent ducts (rectangular) with 1-inch thick FSK-reinforced fiberglass insulation. Insulation will be maintained with 12G self-adhesive nails.

Quantities in linear feet of circular duct according to the diameter has been estimated and will have to be confirmed by the entrepreneur before ordering the material:

Estimated quantity not available: for quotation purposes include 50 m² of area to be insulated.

The final cost will be established on the actual (real) total amount multiplied by the unit cost per square meter provided in Annex J.

- a) **Steam lines and cold water for humidifier supply**
- b) Insulate all steam pipes with duct insulation 1.5 "thick pre-molded fiberglass with FSK-reinforced vapor barrier + cotton coating and fire retardant glue.
- 16.3.C.4 Quantities in linear feet of pipe to be insulated according to the diameter has been estimated and will have to be confirmed by the entrepreneur before ordering the material:
- 16.3.C.4.1
- 16.3.C.4.2
- 1.125 "diameter Copper pipe; total: 76 linear feet
- a) 1.75 "diameter Copper pipe; total: 70 linear feet
- b) 2.25 "diameter Copper pipe; total: 34 linear feet
- c)
- 16.3.C.4.3 Insulate all flanges, valves and steam accessories with insulating covers ISOTEX-AW1720.1 (see data sheet) or equivalent.
- 16.3.C.5 **Seawater pipes**
- 16.3.C.5.1 Insulate all seawater pipes with duct insulation 1 "thick pre-molded fiberglass with FSK reinforced vapor barrier + cotton liner and fire retardant glue.
- 16.3.C.5.2 Quantities in linear feet of pipe to be insulated according to the diameter has been estimated and must be confirmed by the contractor before ordering the material:
- a)
- b)
- 16.3.C.5.3 Steel pipe 3 in outer diameter : 90 linear feet
- Steel pipe 3.5 in outer diameter : 12 linear feet
- 16.3.C.5.4 Insulate all seawater flanges, valves and accessories with ISOTEX-AW1700 insulating blankets (see data sheet) or equivalent.
- a) The quantities of flanges and valves to be insulated according to the diameter have been estimated and must be confirmed by the contractor before ordering the material:
- b)
- c)
- d)
- 7 "outer diameter x 2" thick flange; total: 24
- 3-way valve: 4
- Valve: 11
- Strainer: 4

Proof of Performance**Inspection Points**

16.3.D Insulation inspection prior to the application of the cotton liner and fire retardant glue by IA.

16.3.D.1 Inspection at the end of the work by IA.

16.3.D.1.1 **Testing/Trials[– Not Used]**

16.3.D.1.2 [– Not Used]

16.3.D.2

Certification

16.3.D.2.1

16.3.D.3 All insulation shall be certified by TC (OR, ABS or equivalent accepted by TC) for use on board a vessel. The certificate must be provided before the start of the installation.

16.3.D.3.1

16.3.D.3.2 The insulation of the steam pipes must be certified for use at a temperature of 135°C or more.

16.3.D.4 **Documentation[– Not Used]**

16.3.D.4.1 [– Not Used]

16.3.D.5

16.3.D.5.1 **Training[– Not Used]**

16.4 [– Not Used]

BEVERAGE REFRIGERATOR (OFFICERS' LOUNGE)
(OPTIONAL WORK)

16.4.A

16.4.A.1

Scope

16.4.B

16.4.B.1 Provide materials and labor for the installation of a beverage refrigerator in the Officers' Saloon.

16.4.B.1.1

References

16.4.B.2

Equipment Data

The equipment will be provided by CCG.

Drawings

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

16.4.B	Drawing Number	DRAWING TITLE	Number of Sheets
		[– Not Used]	

Regulations and Standards

- 16.4.B.3 The following Standards and Regulations apply to work carried out in this section;
- 16.4.B.3.1 The Contractor must ensure all work completed in this section meets these Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

FSM Procedures	Title	Included Yes/No
Publications	[– Not Used]	
Standards		
Regulations		
16.4.C		

16.4.C.1

Statement of Work

16.4.C.1.1

16.4.C.1.2 **Remove the existing refrigerator**

16.4.C.1.3 Locate and lockout the electrical supply circuit of the equipment;

16.4.C.2 Dismantle the cooling unit of the refrigerator taking care to empty the equipment of its cooling gas.

Remove the complete equipment with the necessary provisions to avoid damage to the countertop and finish adjacent to the equipment.

Clean the rear area of the unit and make necessary paint repair.

Proceed with the installation of the unit provided by the CCG.

The unit must be connected on a domestic circuit (120VAC, 60Hz).

Proceed with the purchase, installation and finishing around the unit.

- 16.4.C.3 Make the necessary arrangements to rebuild the finish around the new unit once installed.
- 16.4.C.3.1

16.4.C.3.2

Proof of Performance

16.4.C.3.3

Inspection Points[– Not Used]

16.4.D

[– Not Used]

16.4.D.1

16.4.D.1.1 **Testing/Trials[– Not Used]**

16.4.D.2 [– Not Used]

16.4.D.2.1

Certification[– Not Used]

16.4.D.3

16.4.D.3.1 [– Not Used]

16.4.D.4 **Documentation[– Not Used]**

16.4.D.4.1 [– Not Used]

16.4.D.5

16.4.D.5.1 **Training[– Not Used]**

17.0 [– Not Used]

17.1 **Deck equipment**

17.1.A

17.1.A.1 **INSPECTION AND MAINTENANCE OF WINDLASS**

17.1.B **Scope**

17.1.B.1

Perform a complete maintenance of the starboard windlass brake.

17.1.B.1.1

a) **References**

Equipment Data

Windlass model :

Anchor Windlass : Hepburn 75-M-0527; Serial No. C-1083

Drawings

All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

17.1.B.2

17.1.B

Drawing Number	DRAWING TITLE	Number of Sheets
	Equipement Manual	

Regulations and Standards

17.1.B.3

17.1.B.3.1

The following Standards and Regulations apply to work carried out in this section;
The Contractor must ensure all work completed in this section meets these Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

FSM Procedures	Title	Included Yes/No
Publications		
	[– Not Used]	
Standards		
Regulations		
17.1.C		

17.1.C.1

Statement of Work

17.1.C.1.1

17.1.C.1.2

Provide material and labor to perform the following work:

17.1.C.1.3

Disassembly of the windlass brake

17.1.C.1.4

Checking the axes;

17.1.C.1.5

Checking the brake bands;

17.1.C.1.6

Manual cleaning of the drum and brake bands;

Cleaning the threaded rod;

Reassembly of the manual brake system;

The replacement of the following parts must be authorized by the IA and will be treated additionally on form 1379:

- 17.1.C.1.7
 - new brake bands
 - drum machining
 - Axis machining

a) **Proof of Performance**

b)

c) **Inspection Points**

- 17.1.D
 - Prior to closing the equipment, the IA will be required to testify to the condition of the internal components.

17.1.D.1.1

Testing/Trials

- 17.1.D.2
 - The IA or his delegate will be present during the tests.

17.1.D.2.1

Certification

17.1.D.3

- 17.1.D.3.1
 - All hydraulic work shall be carried out by a certified journeyman in hydraulic systems.

17.1.D.4

Documentation

17.1.D.4.1

Provide a detailed report of maintenance, repairs and replaced parts to the TA.

17.1.D.5

- 17.1.D.5.1
 - Training[– Not Used]**

[– Not Used]

Communications and Navigation[- NOT USED]

Control Systems[- NOT USED]

18.0 Scientific, Oceanographic and Hydrographic

19.0 Equipment

20.0 MODIFICATION OF ROOFS OF THE ROSETTE CONTROL ROOM AND GYMNASIUM (OPTIONAL WORK)

20.1 Scope

- 20.1.A Supply material and labor to modify the roofs of the rosette control room and
20.1.A.1 gymnasium. A new stairway to access the roof must also be built and installed.

References

- 20.1.B
20.1.B.1 **Equipment Data[– Not Used]**

- 20.1.B.1.1 [– Not Used]

20.1.B.2 Drawings

- 20.1.B.2.1 All Drawings are listed in the General Notes. The following Drawings are to be considered as Guidance Drawings as defined in the Drawings section of the General Notes .

	Drawing Number	DRAWING TITLE	Number of Sheets
20.1.B.3	2737-18-500	Modification aux toits de la salle de contrôle de la rosette et du gymnase	1
20.1.B.3.1			

Regulations and Standards

The following Standards and Regulations apply to work carried out in this section;
The Contractor must ensure all work completed in this section meets these Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

FSM Procedures	Title	Included Yes/No
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Publications	[– Not Used]	
Standards		
Regulations		

Statement of Work

Provide material and labor to perform the following work as indicated on drawing # 2737-18-500:

- 20.1.C
- 20.1.C.1
 - 20.1.C.1.1 Take precaution as indicated in the dismantling and installation instructions on drawing # 2737-18-500.
 - 20.1.C.1.2 Provide and install the angles on the roof of the control room and gymnasium by following all instructions on drawing # 2737-18-500.
 - 20.1.C.1.3 Provide and install the safety mesh platform on the control room roof by following all instructions on drawing # 2737-18-500.
 - 20.1.C.1.4 Provide, position and install the stair supports on the exterior walls as indicated and following all instructions listed on drawing # 2737-18-500.
 - 20.1.C.1.5 Provide the required equipment and make any modifications to the existing guardrails by following all instructions on drawing # 2737-18-500.
 - 20.1.C.1.6 Perform cleaning and surface preparation as required by the paint manufacturer on all areas affected by hot work.
 - 20.1.C.1.7 Repaint all areas affected by hot work according to the paint manufacturer's instructions.
 - 20.1.C.1.8 Provide and install the protection chains and all the required quilting with respect to the opening in the Rack at the Navigation Bridge.
 - 20.1.D.1 Provide and install the bolted staircase and bottom bearing as indicated and following all instructions listed on drawing # 2737-18-500.

Proof of Performance

Inspection Points

An inspection before the start of hot work should be coordinated with the TA.

An inspection should be made following the positioning (tack weld) of all items before welding completely to demonstrate that the assembly is compliant with the drawing.

20.1.D.1.1

20.1.D.1.2

Welds inspection must be performed at the end of the welding.

20.1.D.1.3

Inspection at the end of the paint step for acceptance before rebuilding the insulation and finishing inside the premises.

20.1.D.1.4

Inspection at the end of all the work must be organised with the TA.

20.1.D.1.5

Testing/Trials

20.1.D.2

NDT on all welding (visual and dye penertant) must be performed by a certified welding inspector.

20.1.D.2.1

Certification

20.1.D.3

Certificates according to the Documentation section of the General Notes.

20.1.D.3.1

20.1.D.4

Documentation

20.1.D.4.1

Provide a report of END results (visual and bleeding) by an AT certified inspector.

20.1.D.4.2

Provide a report of added weights with their center of gravity

20.1.D.5

20.1.D.5.1

Training[– Not Used]

[– Not Used]